



Patent Public Advisory Committee 2024 ANNUAL REPORT



UNITED STATES
PATENT AND TRADEMARK OFFICE ®



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National Treasury Employees Union
(NTEU, Chapter 245)

November 1, 2024

The President of the United States
The White House
1600 Pennsylvania Avenue, N.W.
Washington, D.C. 20500

Re: The Patent Public Advisory Committee's Fiscal Year 2024 Annual Report

Dear Mr. President:

As Chairperson of the Patent Public Advisory Committee ("PPAC") of the United States Patent & Trademark Office ("USPTO"), it is my honor and privilege to present to you the 2024 PPAC Annual Report. Fiscal Year ("FY") 2024 marks the PPAC's 25th anniversary. To recognize this milestone, the USPTO and the PPAC themed FY 2024 the "year of action," and the USPTO and the PPAC collaborations led to meaningful progress in establishing the USPTO as the Nation's innovation agency. Both the PPAC and the USPTO understand that a well-functioning IP system is one of the keys to driving innovation and invention, which leads to increased global and national competitiveness, economic stability, and entrepreneurial growth.

Under Director Vidal's leadership, the USPTO continues to drive impactful and positive action that strengthens the U.S. patent ecosystem. This year, the PPAC and the USPTO have focused our collective efforts on six (6) key areas: (1) linking patents and innovation to global competitiveness, (2) expanding outreach and education initiatives, (3) reducing unexamined patent application inventory without sacrificing quality, (4) closing the gap between PTAB and patent examiner patentability determinations, (5) maintaining agency financial stability, and (6) assessing the impact of AI as a tool and its impact on innovation. Below are a few highlights from this year.

1. Linking patents, invention, and innovation to national and global competitiveness by increasing the number of diverse participants in the innovation ecosystem. This year the USPTO released a National Strategy for Inclusive Innovation, which aims to ensure that all Americans can participate fully in the innovation and entrepreneurial ecosystems that drive economic growth, stimulate creativity, and expands (advances) problem solving.
2. Establishing the Office of Public Engagement, which supports and coordinates the USPTO public outreach and educational efforts in conjunction with the six Regional Offices and the new Community Outreach Office in Strafford, Maine. The USPTO has also expanded its network of 90+ Patent and Trademark Resource Centers located at select public libraries and Universities around the country. These initiatives strengthen the USPTO outreach efforts in all 50 states.
3. Initiating efforts to reduce the unexamined patent application inventory by focusing on three patent examiner concerns: (1) improving the routing of new patent applications so that examiners receive applications that closely align with their technical and scientific training, (2) extending working hours, as more than 80% of the USPTO examiners telework, and (3) increasing pay – for the first time in over 15 years, the USPTO secured an increase in the special rate table for examiners to recognize their expertise and value. Also, to address increased workload without sacrificing patent quality, the USPTO has also hired over 800 new examiners this year, with more hiring expected next year.
4. Investigating the dynamic between patent examination and PTAB proceedings concerning the differing patentability determinations made by patent examiners and PTAB during IPR proceedings. The PPAC recognizes that patent examination at this volume is complex, and inevitably some granted patents will later be challenged and invalidated at PTAB—understandably disappointing and frustrating for owners of such patents. This year, the USPTO completed a study that identifies meaningful trends, patent characteristics, and opportunities to help close the inconsistency gap between patentability determinations made by patent examiners and PTAB judges. The USPTO is currently assessing how best to make the results of the study public. The PPAC has recommended holding practitioner information and training sessions to advise stakeholders of the findings and steps practitioners may take to lessen the chances of an issued patent facing a successful IPR challenge. The PPAC has also suggested additional studies to assess the role of expert testimony in an IPR proceedings.
5. Ensuring that the USPTO is financially positioned with adequate resources for patent examination and other operations is of nationwide importance. Stakeholders must have confidence that government fees *voluntarily* paid to secure a patent are being used to provide those services and not diverted to other, unrelated government purposes; consequently, USPTO funds should be immune from sequestration.
6. Continuing to serve as a global leader on AI initiatives by releasing guidance regarding AI as an inventor and the expanding role of AI in determining the knowledge of one of ordinary skill in the art.

While the agency has achieved significant progress under Director Vidal’s leadership, there is always more work to be done. There continues to be stakeholder uncertainty and skepticism as to the worth of

the patent right. These concerns arise from (1) Supreme Court decisions upsetting longstanding precedents regarding the right to exclude, (2) America Invents Act (“AIA”) post-grant the USPTO proceedings permitting the adjudication of patent validity without a presumption of validity, and (3) the USPTO implementation of AIA post-grant review proceedings, particularly inter partes review (“IPR”) trials. While the USPTO and the PPAC have limited ability to impact judicial and legislative concerns, the PPAC and the USPTO have worked collaboratively to implement actions to lessen stakeholder uncertainty and skepticism around the USPTO policy and procedure concerning IPR trials and patent invalidity determinations as discussed above.

Additionally, as described in the attached Report, the PPAC and the USPTO have also worked together to seek stakeholder feedback on (1) rulemaking and policy initiatives, (2) fee setting proposals, and (3) improvements in the use of AI as technology support and examination tools. The PPAC looks forward to continued collaborations with the USPTO leadership to continue the good work begun this year to increase the diversity of stakeholders participating in the patent ecosystem and to ameliorate concerns about the strength of the patent right.

For over 25-years, the PPAC has been the link between the USPTO and the community, bringing the voices of the people to the USPTO on IP and patent matters. From its inception, the PPAC has advocated for the effective management of patent user fees and adequate funding to maintain high standards of patent examination, quality, and overall operations. The PPAC has also played a vital role in shaping patent reform, expanding public outreach and education, and assessing information technology system improvements. Through the commitment and dedication of its alumni, the PPAC has been a vital resource in assisting the USPTO in carrying out its important work as America’s innovation agency. Thank you, the PPAC alumni, for 25 years of impactful service.

The PPAC also thanks Director Vidal and Deputy Director Derrick Brent for their leadership. The PPAC also thanks the many employees of the USPTO for their cooperation, assistance, and commitment to the PPAC during the past year.

We greatly appreciate your time in reviewing our Annual Report and look forward to discussing any questions regarding this Report and the PPAC’s activities during the past year or for FY 2025.

Respectfully,



Loletta Darden
Chairperson
Patent Public Advisory Committee
U.S. Patent and Trademark Office

Enclosure: Patent Public Advisory Committee Fiscal Year 2024 Annual Report

Cc: The Honorable Richard Durbin, Chairman, Senate Judiciary Committee
The Honorable Lindsey Graham, Ranking Member, Senate Judiciary Committee
The Honorable Chris Coons, Chairman, Subcommittee on Intellectual Property
The Honorable Thom Tillis, Ranking Member, Subcommittee on Intellectual Property

The Honorable Jim Jordan, Chairman, House Judiciary Committee
The Honorable Jerrold Nadler, Ranking Member, House Judiciary Committee
The Honorable Darrell Issa, Chairman, Subcommittee on Courts, Intellectual Property and the Internet
The Honorable Hank Johnson, Ranking Member, Subcommittee on Courts, Intellectual Property, and the Internet
The Honorable Gina Raimondo, U.S. Secretary of Commerce
The Honorable Kathi Vidal, Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office

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I. EXECUTIVE SUMMARY

I have already intimated my opinion that in the world's history, certain inventions and discoveries occurred ... on account of their great efficiency in facilitating all other inventions and discoveries. Of these were the arts of writing and of printing--the discovery of America, and the introduction of Patent-laws. ... These [patent laws] began in ... this country, with the adoption of our constitution. Before then, any man might instantly use what another had invented; so that the inventor had no special advantage from his own invention. The patent system changed this; secured to the inventor, for a limited time, the exclusive use of his invention; and thereby added the fuel of interest to the fire of genius, in the discovery and production of new and useful things¹(emphasis added). ~ Abraham Lincoln

Since as early as 1790 – the year Congress passed the first Patent Act – a strong patent system was believed to be an essential role of government to encourage innovation and invention. The PPAC and the USPTO have worked collaboratively to continue the necessary work envisioned by the founding fathers to maintain a strong and reliable patent system. The following are a few highlights from this year.

Celebrating 25 Years of the USPTO's Public Advisory Committees: A Legacy of Excellence and Innovation

- Established 25 years ago, the PPAC is comprised of IP leaders with substantial background and achievement from diverse industries.

Rulemaking Activities

- The PPAC appreciates that discussion on the especially complex rulemaking issues of the PTAB are continually evolving and therefore encourage careful consideration and collaboration for balanced solutions.

Being Good Stewards: Finance

- The USPTO is in good financial shape today. The PPAC supports resource allocations to address pendency and IT infrastructure needs. The agency should continue to set success criteria and periodically evaluate new, non-examination spending to avoid unproductive non-examination spending.
- The USPTO and Congress must take steps to resolve sequestration risks and ensure that all fees collected remain in the agency and are spent predominately on the examination and adjudication of IP rights.
- The USPTO must have fee setting authority renewed by Congress in 2026 or sooner.

¹ Lincoln, Abraham, *Collected Works of Abraham Lincoln* Volume 3 (Aug. 21, 1858-Mar. 4, 1860), New Brunswick, N.J.: Rutgers University Press (1953).

The PPAC Outreach, Education, and Inclusive Innovation Subcommittee

- Properly resourced and consistently pursued, the NSII will achieve historic growth in demographic and geographic participation in the national innovation ecosystem *to achieve unprecedented increases in the national economic development and GDP.*

Pendency and Quality

- The USPTO has implemented an aggressive plan to reduce the unexamined patent application inventory that focuses primarily on examiner hiring and training and improving patent application routing systems to ensure examiners are assigned applications that align better with their technical and scientific skill set.

Patent Trial and Appeal Board

- The PPAC encourages the USPTO to (1) release its closing the loop study, (2) consider whether the doctrine of inequitable conduct, as currently applied, is encouraging well-intentioned behavior that ultimately decreases the quality of examination and any resulting patents, and (3) consider whether more robust use of section 325(d), with applicable rules that would encourage patent applicants to highlight a limited number of references during examination, would improve patent quality.

USPTO/FDA Drug Patent & Exclusivity Study

- The USPTO should continue to generate robust, accurate, and unbiased evidence and be an important source of the evidence that informs intellectual property policy discussions.

Artificial Intelligence and Its Impact on the USPTO and Patents

- The PPAC recommends the USPTO continue to explore, utilize, and advance AI as it relates to being a facilitator of invention, the subject matter of invention, and a propelling tool for the USPTO enterprise effectiveness.
- The PPAC congratulates the AI/ET working group for issuing the guidance on “Patent Subject Matter Eligibility, Including Artificial Intelligence.” While many examples are provided in the issued guidance and referenced to additional sources, the PPAC encourages the USPTO to continue to develop a range of examples.

Information Technology Management

- Continued efforts toward strengthening and modernizing that infrastructure are ongoing and necessary to meet current cybersecurity challenges. The PPAC encourages the USPTO to continue its IT modernization efforts while remaining diligent about cost containment.

- The PPAC recommends the USPTO to continue to maintain and improve cybersecurity infrastructure, including its cloud migration strategy.

II. CELEBRATING 25 YEARS OF USPTO'S PUBLIC ADVISORY COMMITTEES: A LEGACY OF EXCELLENCE AND INNOVATION

A. INTRODUCTION

The purpose of the Public Advisory Committees (PACs) is to enhance the USPTO's ability to address the needs of its stakeholders and the PACs have since played a crucial role in advising the USPTO and acting as a vital bridge between the government and the diverse sectors of the innovation economy. The Patent and Trademark PACs have a duty each year to prepare an annual report of the work in patent and trademark matters, respectively, for the President of the United States, the Secretary of Commerce, and the Judiciary Committees of the Senate and House of Representatives.

Each committee consists of nine members who are U.S. citizens representing a broad spectrum of the USPTO users. For the PPAC, this includes a minimum of 25% members from small entity applicants, including one independent inventor, and further includes three leaders from the USPTO recognized labor organizations. The Secretary of Commerce, in consultation with the Under Secretary of Commerce and the USPTO Director, appoints members to three-year terms. Members are eligible for appointment to one additional, consecutive three-year term.



PPAC Public Meeting, September 5, 2024

Per its Charter, the PPAC meets at least twice per year, but typically holds quarterly meetings at the USPTO in Alexandria, Virginia, as well as holding virtual meetings throughout the year. The PPAC engages in deep topical discussions with the USPTO, and oftentimes supplements the discussions with empirical experience, additional observations, and other connections.

B. NOTABLE CONTRIBUTIONS

The PPAC members, designated as Special Government Employees, are positioned with roles that differ from traditional advisory functions. The members are true partners with the USPTO, contributing ideas for seamless engagement between the agency and external stakeholders. Director Vidal and other the USPTO leaders often engage the PPAC in pre-decisional confidential discussions, meeting in executive sessions, extending the conversation to add insights on potential changes and positions. The PPAC also forms subcommittees or project groups to



PPAC Executive Session, May 9, 2024

support specific the USPTO initiatives, enhancing collaboration in the pursuit of continuous improvement. Some examples are as follows.

1. Advocating for Timely Agency Funding and Responsible Fee Setting

From its inception, the PPAC has been a staunch advocate for the effective management of patent user fees, such that the USPTO should always be adequately funded to maintain high standards in patent examination and operations. The PPAC has been a consistent advocate to supplement the USPTO efforts in ensuring that all fees collected from patent applicants and patent holders by the government are appropriately allocated back to the USPTO in a timely manner and not diverted to other agencies. In circumstances where the USPTO proposes adjustments to the patent fee schedule, the PPAC assists in reviewing the proposed changes and provides input on the necessity and impact of such changes. Accordingly, the PPAC supports the fiscal foundation for the USPTO to operate effectively.

2. Shaping Patent Reform and Enhancing Patent Quality and Efficiency

In 2013, three PPAC members, Esther Kepplinger, Steven Miller, and Wayne Sobon, were notably included with the USPTO colleagues at the 65th Annual Honor Awards. The Secretary of Commerce awarded them a Gold Medal, the highest level of award, for their stellar leadership in helping implement the Leahy-Smith America Invents Act, the most significant and extensive reform of the U.S. patent system in decades. Such acknowledgement highlights the partnership between the PPAC and the USPTO.

Moreover, the PPAC has supported the USPTO initiatives to review and enhance patent quality and efficiency. Throughout the years, the PPAC has engaged with the USPTO in brainstorming approaches to manage unexamined inventory of patent applications by improving expediency without sacrificing quality. These discussions formed ideas pertaining to streamlining internal processes, increasing the workforce, and identifying new tools, systems, and employee training methods. Managing such a significant and consequential asset as intellectual property is a highly complex endeavor, and the PPAC continues to partner with the USPTO in continuous pursuit of world-class excellence.

3. Elevating Public Outreach and Education

PPAC has actively participated in the USPTO meetings and events to improve the public's understanding of the patent system. Members have dedicated time to listening and providing context to stakeholders to encourage participation in innovation from all pockets of diverse communities.

4. Advising on Information Technology (IT) System Improvements

Recognizing the rapid evolution of technological capability, the PPAC has advised on the USPTO's IT developments, all towards the common aim to modernize systems with available technology to maximize productivity and efficiency for internal and external

users. Such focus became significantly germane at the advent of the COVID-19 pandemic, where software systems were suddenly heavily utilized by all parties remotely. Operating a large IT system securely and reliably is no easy feat. The PPAC appreciates that it is imperative for the USPTO software systems to keep up with the pace of innovation.

C. CONCLUSION

Over the past 25 years, the PPAC has served as a valuable bridge between the USPTO and the public. The PPAC contributions have demonstrably enhanced the patent system and the advancement of innovation. Through the important work of the USPTO in enacting impactful policies, initiatives and operations, the PPAC’s expertise has undoubtedly been a solid resource to increase understanding of the complex issues facing both government and diverse sectors of industry. At this milestone, the PPAC reflects on the enduring impact of the alumni that came before us and looks forward to its continued role in advising the USPTO toward a future of ongoing success for many more years to come. From the current members of the PPAC, please join us in recognizing our wide network of the PPAC alumni.

PPAC Alumni		
Marc Adler D. Benjamin Borson Margaret Boulware Susan Braden Daniel Brown Steven Caltrider Jennifer Camacho Barney Cassidy Jeremiah Chan Andrew Dillon Tracy Durkin James Ferguson Louis Foreman Stephen Fox Andy Gibbs Mark Goodson Maximilian Grant Carl Gulbrandsen	Clinton Hallman, Jr. Patricia Ingraham Albert Jacobs Paul Jacobs Marylee Jenkins Dean Kamen F. Scott Keif Esther Kepplinger Michael Kirk Howard Klein Bernard Knight William LaFuze Dan Lang Michelle Lee Julie Mar-Spinola Damon Matteo Roger May Valerie McDevitt	Steven Miller Gerrald Mossinghoff Ronald Myrick Lisa Norton Vernon Norviel Rick Nydegger Douglas Patton Stephen Pinkos Kevin Rivette M. Andrea Ryan Jeffrey Sears Christal Sheppard Wayne Sobon Peter Thurlow Maureen Toohey P. Michael Walker David Westergard Katherine White
Current PPAC Members		
Loletta Darden (Chair) Charles Duan (Vice Chair) Earl "Eb" Bright	Henry Hadad Suzanne Harrison Lateef Mtima	Heidi Nebel Marvin Slepian Olivia Tsai

Past and Current Union Representatives		
Patent Office Professional Association: Kathleen Duda (current) Robert Budens Pamela Schwartz Ronald Stern	National Treasury Employees Union Local 245: Catherine Faint (current) Julie Watson	National Treasury Employees Union Local 243: Albertha Jackson Ollie Person Vernon Towler (current) Sharon West Melvin White

KEY TAKEAWAYS
<ul style="list-style-type: none"> • Established 25 years ago, the PPAC is comprised of IP leaders with substantial background and achievement from diverse industries. • The PPAC serves in an advisory capacity to provide valuable external input to enhance the USPTO work.

III. RULEMAKING ACTIVITIES

Building on significant strides made in FY 2023, this year Director Vidal continued her dedication to refining and enhancing the patent landscape through a series of thoughtful rulemaking activities to address emerging issues and to engage with stakeholders effectively and with transparency. The USPTO always solicits stakeholder input on matters of interest to shape the implementation of significant policies, changes, and rules.



The rulemaking process takes approximately one year, comprising two distinct phases— Notice of Proposed Rulemaking (NPRM) and Final Rule (FR). About half a year is spent in the Notice of Proposed Rulemaking (NPRM) phase, where a NPRM is carefully developed and undergoes several tiers of clearances before it is published in the Federal Register with a full 60–90-day public comment period. In the comment period, the public submits written comments and the USPTO often hosts additional engagement events to solicit live comments. Once the public comment period closes, the rulemaking process advances to the Final Rulemaking phase for another half a year. In this phase, all comments received by the USPTO are carefully reviewed and considered in development of the Final Rule. Once the Final Rule is drafted, proper and complete clearances once again occur before it is published in the Federal Register with the proper notice period of 30-60 days before the Final Rule’s Effective Date.

FY 2024: Volume of the USPTO Notices in the Federal Register and Written Comments Received

Type of Notice	Count in FY 2024	Number of Comments
Final Rule	6	N/A
NPRM	9	553
Request for Comments ²	11	194
Guidance	7	90
Total	33	837

² Counts only RFCs with a comment period or announcing a public engagement event; does not count administrative announcements without an invitation for response or engagement

In FY 2024, the USPTO led another active rulemaking year— issuing 32 rule-related notices in the Federal Register and considering hundreds of written comments in response. Of notable interest were:

- Final Rule for Governing Pre-Issuance Internal Circulation and Review of Decisions Within the Patent Trial and Appeal Board

This Final Rule Action makes clear that PTAB judges are to exercise their judicial independence and that the Director is not involved in directing or otherwise influencing PTAB panel decisions prior to issuance. The rules further provide that PTAB management and officers, or employees of the USPTO external to PTAB, are not involved in panel decision-making unless a panel member has requested input. Adoption of any requested pre-issuance feedback is solely within the discretion of the panel. Effective July 12, 2024, this Final Rule Governing Pre-Issuance Internal Circulation and Review of Decisions within the PTAB is the result of 4,300 written comments in response to a July 2022 RFC on Director Review, Precedential Opinion Panel Review, and Internal Circulation and Review of Patent Trial and Appeal Board Decisions, and nine written comments in response to an October 2023 NPRM that took into account those comments. Additionally, the Final Rule on the Director Review process formally published on October 1, 2024, and becomes effective on October 31, 2024. The Final Rule formalizes key aspects of the interim Director Review process and provides, among other things, that a director may initiate a review on the Director’s own initiative, and sets forth the timing and format of a request. The extended time and interest in the rulemaking process for this matter underscores the careful consideration taken by the USPTO over several years in crafting this Final Rule.

- Final Rule on the Motion to Amend Practice and Procedures in Trial Proceedings Under the America Invents Act Before the Patent Trial and Appeal Board

This Final Rule Action provides a patent owner who files a motion to amend (“MTA”) with options to request preliminary guidance from the PTAB on the MTA and to file a revised MTA. Under this rule, when exercising the discretion to raise a new ground of unpatentability, the PTAB may consider all evidence of record in the proceeding, including information identified in response to PTAB-initiated examination assistance. The rule also clarifies that a preponderance of evidence standard applies to any new ground of unpatentability raised by the PTAB. Effective October 18, 2024, this Final Rule considered all six written comments in response to the March 2024 NPRM.

- NPRM on the Patent Trial and Appeal Board Rules of Practice for Briefing Discretionary Denial Issues, and Rules for 325(d) Considerations, Instituting Parallel and Serial Petitions, and Termination Due to Settlement Agreement

This NPRM Action proposes to incorporate into the rules the factors that PTAB will consider in determining whether to institute an inter partes review (“IPR”) or post-grant review (“PGR”) for parallel petitions and serial petitions as well as set forth the framework that PTAB will use to conduct an analysis under 35 U.S.C. 325(d) when

determining whether to institute an IPR or PGR. Originally, an RFC was published in October 2020 and received 822 written comments; an ANPRM followed in April 2023 and received over 14,500 written comments, of which over 3400 were unique. This NPRM published April 2024 is a result of the consideration of the large volume of comments and proposes a subset of topics from that ANPRM. The USPTO is now carefully reviewing over 3900 written comments, of which 110 were unique, received in response to this NPRM.³

- NPRM on Terminal Disclaimer Practice to Obviate Nonstatutory Double Patenting

This NPRM Action proposes to add a condition whereby to overcome double patenting the patentee would need to agree that the patent with the terminal disclaimer will be enforceable only if the patent is not tied and has never been tied through one or more terminal disclaimers to a patent in which any claim has been finally held unpatentable or invalid over prior art. This NPRM takes into consideration 131 written comments received in response to an October 2022 RFC. The USPTO is now reviewing the 349 written comments received in response to this NPRM.

- RFC on the Impact of the Proliferation of Artificial Intelligence on Prior Art, the Knowledge of a Person Having Ordinary Skill in the Art, and Determinations of Patentability Made in View of the Foregoing

In April 2024, the USPTO sought written comments on how the proliferation of AI could affect certain evaluations made by the Office, including what qualifies as prior art, the assessment of the level of skill of a person having ordinary skill in the art, and determinations of patentability made in view of these evaluations. The USPTO also hosted listening sessions to engage on this topic and is now reviewing the 74 written comments it received in response.

The USPTO's consistent efforts in identifying and considering all impacts to any potential change underscores its ongoing commitment to continuous improvement of a complex system. The USPTO continues to prioritize early public dialogue and collaboration to build on these efforts, striving for excellence in its rulemaking processes and ensuring that the IP ecosystem remains dynamic and adaptive to evolving needs.

KEY TAKEAWAYS

- The PPAC appreciates that discussion on the especially complex rulemaking issues of the Patent Trial and Appeal Board Rules of Practice for Briefing Discretionary Denial Issues, and Rules for 325(d) Considerations, Instituting Parallel and Serial Petitions, and Termination Due to Settlement Agreement are continually evolving and therefore encourage careful consideration and collaboration for a balanced solution.

³ Further discussion of this topic can be found in Section VII Patent Trial and Appeal Board of this Annual Report.

IV. BEING GOOD STEWARDS: FINANCE

By statute, the responsibilities of the PPAC on finance include reviewing and advising the Director on the policies, goals, performance, budget, and user fees of the USPTO with respect to patents, holding a public hearing on the USPTO's patent fee proposals, and submitting a written report setting forth the committee's comments, advice, and recommendations following the public hearing.⁴ This section reviews the financial nature of the USPTO's patents operations, discusses key initiatives and challenges that the USPTO has discussed with the PPAC, and provides recommendations that the PPAC has provided to the Director based on the PPAC's review of the USPTO 2024 Annual Financial Report and FY 2025 President's Budget Request.

A. BACKGROUND: HOW THE USPTO FUNDING WORKS

The USPTO's funding structure is unusual among federal agencies, so for those unfamiliar with it, this section briefly provides background on the USPTO's operations and funding model. The USPTO has two distinct programs and sources of funding: Patents and Trademarks. The USPTO is a business-like organization operating in the government environment. While the USPTO is financed 100 percent by its fee collections, Congress must appropriate the fees to authorize the USPTO to spend them. Demand for services drives both revenue and workload for the Patents program. The USPTO uses multiyear projections of revenue and workload estimates to establish its operating plans and budgets. It also uses private sector business tools, such as operating reserve and mid-year spending reviews, to stay operating within its appropriated fee collections. The USPTO monitors Patents and Trademarks financial activity separately. Unlike a private sector business, how the USPTO spends the funds it receives are governed by federal rules, such as spending limitations on travel and purchasing of goods and services.

1. Patent Examination

The primary driver of the USPTO's fiscal needs is the examination of patent applications by the 8,944 Utility and Design patent examiners of the Patent Examining Corps. In FY 2024, the USPTO received 466,000 new UPR (Utility/Plant/Reissue) applications and 59,000 new design applications. Patent examiners granted 327,000 UPR patents and over 44,000 design patents. The core competency of patent examination is central to the USPTO's mission of driving U.S. innovation, inclusive capitalism, and global competitiveness for the benefit of all Americans. Timely and effective examination of patent applications protects innovators and the public, and ensures that issued patents are reliable, trustworthy, high-quality foundations for investment and progress. Examination is also skilled work, demanding technical knowledge, application of legal doctrines, and interpersonal relations with patent applicants to achieve positive outcomes.

Direct costs of the USPTO's Patents program accounted for 70% of FY 2024 expenses (\$3.1B out of \$4.4B), of which 82% (\$2.5B) went to personnel costs. The USPTO further expends resources on facilities, contracted services, and in-house technology that

⁴ 35 U.S.C. § 5(d)(1) (general responsibilities); AIA § 10(d) (responsibilities related to fee setting).

supports the Patent organization’s mission. The Patent end of year operating reserve is approximately \$980 million.

2. The Fee Funding Model

The USPTO patent costs are entirely offset by the fees that it charges patent applicants, patentees, and other users of the agency’s patent-related services; there is no cost to taxpayers. Fees are set to recover both direct service costs and administrative overhead. The USPTO uses time accounting, activity surveys, and cost models to ensure appropriate allocation of expenses. In FY 2024, the USPTO reported fee collections of \$3.7B from its Patents program, accounting for almost 89% of the agency’s total fee collections; trademark fee collections comprise the remaining balance.

Because of this model, the USPTO is often described as “fee funded,” but the fee funding arrangement is subject to at least two important caveats. First, the USPTO requires annual authority through the appropriations process to spend its new fee collections. Collected fees are available to the agency only “[t]o the extent and in the amounts provided in advance in appropriations Acts,”⁵ meaning that Congress must legislatively appropriate the USPTO’s fee collections first. In addition to the operating reserve, a separate Treasury account, established in 2012, exists into which fees collected in excess of the annual Congressional appropriated levels are deposited - the Patent and Trademark Fee Reserve Fund (PTFRF). Fees deposited into the PTFRF are authorized for spending annually in the appropriation and must be reprogrammed before being spent by notifying the Appropriations Committees of the action. Fortunately, Congress has consistently appropriated all fees collected since enactment of the America Invents Act (AIA) in 2011. This was not historically the case. Prior to 2012, \$950M of patent fees remain on deposit in the USPTO’s accounts but are “temporarily unavailable” for use by the USPTO for the past 20 years because the fees have not been appropriated for use.

Second, being a government agency responsive to the public interest, the USPTO does not simply set its fees to recover costs on a service-by-service basis. In the interest of ensuring that the patent system is inclusive and widely accessible, the USPTO has set many fees below cost for patent examination and makes up the shortfalls created by these below-cost fees elsewhere among aggregate fee collections. This paradigm of setting aggregate fee collections in a manner that recovers aggregate costs is statutorily defined in the AIA.

This policy manifests itself in at least two key aspects of the USPTO’s fee structure. First, in accordance with statute, the agency provides a 60% discount on most patent-related fees for applicants and patent owners who qualify as “small entities.”⁶ Indeed, small entities who meet additional requirements may qualify as “micro entities” entitled to an 80% discount.⁷

⁵ 35 U.S.C. § 42(c)(1).

⁶ 35 U.S.C. § 41(h)(1).

⁷ AIA § 10(b), as amended by UAIA sec. 107. See the micro entity section of the USPTO website at www.uspto.gov/patents/laws/micro-entity-status for a detailed explanation of the qualifications for micro entity status.

Additionally, the USPTO has set its entry fees (that is, its fees for filing, search, and examination of patent applications) below the USPTO cost to perform these activities. The setting of entry fees below cost encourages entry into the patent system by all applicants, including small businesses and independent inventors. The cost of examination is subsidized by the payment of issue fees and post-issue maintenance fees paid after a utility patent is granted, both of which are set above the USPTO cost to perform these activities. Indeed, for an undiscounted utility application, the USPTO does not recover its costs for examining an application and issuing a patent until remittance of the second maintenance fee approximately seven and a half years after issuance. The receipt of issue fees and maintenance fees are critical to the sustainability of the fee funding model.

The PPAC has reviewed the fee funding model and endorses it. In the view of the PPAC, reducing the fee barrier to entry into the patent system promotes diversity, equity, and inclusion in innovation, thereby making the patent system accessible for most inventors. The current funding model also aims to ensure that the USPTO has sufficient funds to provide quality services to patent stakeholders.

B. THE USPTO FEES

1. Sequestration

Sequestration is a budget cut, typically across the board, triggered by exceeding budgetary limits established by Congress. The Balanced Budget and Emergency Deficit Control Act of 1985 (BBEDCA) created sequestration and was amended by the Budget Control Act of 2011. The USPTO was subject to its first sequestration in 2013, which made \$147.7M in collected fees unavailable to the agency, even though the funds are still on deposit in the USPTO's Treasury account. To make matters worse for patent owners, the USPTO had just implemented a fee increase right when the sequester happened, so the additional fees collected were immediately made unavailable, negating Congress's intent to make all fees collected available to the USPTO to support agency operations and priorities such as reducing pendency and improving IT performance.

The Fiscal Responsibility Act of 2023 (FRA) reinstated sequestration as part of the debt ceiling deal. Both the PPAC and the USPTO are aware that a sequester is a risk that could happen in the next appropriation cycle, making a portion of next year's fee collections unavailable. In discussions with the USPTO, the PPAC has learned that, through an administrative determination, fees paid by patent stakeholders are not considered "voluntary payments" as set forth in Section 255 of the Balanced Budget and Emergency Deficit Control Act of 1985 (the "1985 Act"). Under the 1985 Act, Voluntary payments are exempt from sequestration. It is not clear to the PPAC why fees paid by patent stakeholders are not voluntary payments as there is no legal requirement to apply for or maintain a patent.

2. Fee Setting

Since enactment of the AIA in 2011, the USPTO has had authority under AIA Section 10

to “set or adjust by rule any fee” it charges for services, in order to recover aggregate estimated costs.⁸ In order to adjust fees under this authority, the USPTO must first notify the PPAC of its proposed fees. The AIA requires the PPAC to hold a public hearing and issue a public written report on the proposed fees, and the USPTO must publish a proposed rule in the Federal Register, notify Congress, provide an opportunity for public comment, and issue a final rule setting the new fee levels.⁹ This authority is currently set to sunset in 2026 and requires Congressional reauthorization.¹⁰

In 2023, the USPTO began a fee setting process. The PPAC held a public meeting and published a [report](#) (attached here as an appendix) on the proceedings of that hearing and on the PPAC’s views on the proposed fees, on August 14, 2023. As discussed in the [report](#), the public commenters and the PPAC were supportive of many of the proposed fee increases, to the extent that those fees would bolster the USPTO’s mission of quality patent examination by giving the Patent Examining Corps more examining time, training, and other resources.¹¹

The PPAC believes that the USPTO is in the best position to accurately forecast patent application future volumes, as well as the costs to run the agency, and therefore can accurately predict the fees necessary to run the agency efficiently and effectively. The PPAC agrees that any fee changes should be to primarily recover costs. While we agree that the agency needs to increase its fees to recover its costs, we also believe there are opportunities to improve the process and make information more understandable and transparent to both the PPAC and the public:

Pendency – patent pendency is a significant issue for the USPTO and a large area of concern for applicants. More discussion of pendency will be undertaken later in the report, however from a financial point of view, tackling pendency is a multi-year effort that will require significant resources from the USPTO now and in the future. The PPAC should continue to work with the USPTO to understand the pendency challenge, the proposed solution(s) the agency is implementing and their associated costs. The PPAC is supportive of the USPTO’s efforts to allocate resources to improve pendency.

IT/AI – In the PPAC reports since at least 2016, the PPAC has been supportive of proposed fee increases, and have stated in previous reports their understanding that a portion of the fee increase would support both tackling pendency and modernizing IT infrastructure. The PPAC acknowledges the USPTO’s ongoing IT initiatives, improvements and investments. We now know with hindsight, that much of the fee increases have largely funded personnel, and specifically the examination corps. There is a more fulsome discussion of IT later in this report, however, the PPAC wants to clarify that the USPTO’s financial focus has largely been on maintaining IT costs to their current levels and are mostly premised on improving examination quality and achieving

⁸ AIA § 10(a)(1)–(2). The USPTO also has authority to set fees for patent services to recover the estimated average cost of providing the service under 35 U.S.C. 41 § (d)(2), and authority to increase fees to reflect changes in the Consumer Price Index under 35 U.S.C. § 41(f).

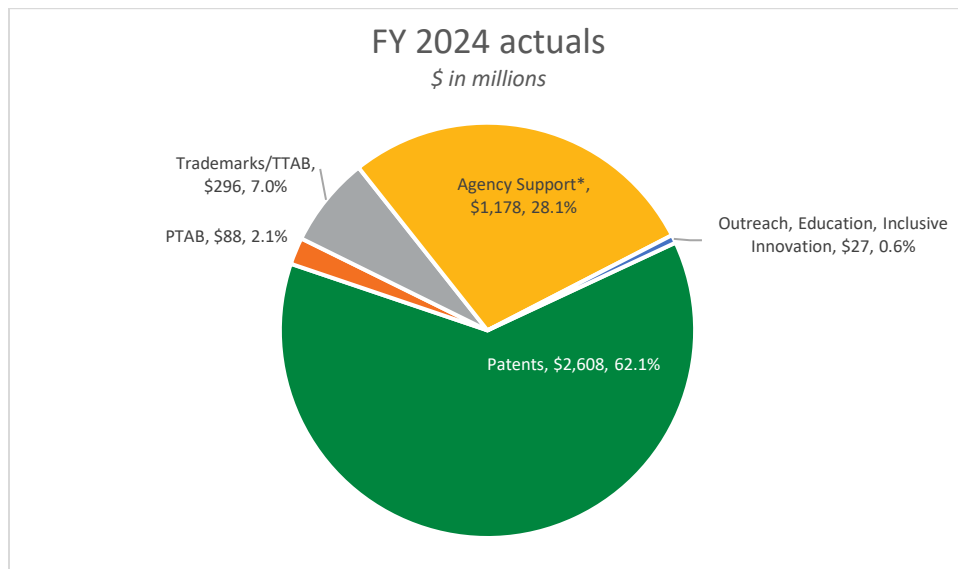
⁹ AIA § 10(d)–(e).

¹⁰ AIA § 10(i)(2), as amended by the SUCCESS Act § 4.

¹¹ PPAC fee report at 3–5.

examination efficiencies from improved search as well as software routing and classification. In the 2023 PPAC annual report one of the key takeaways from the AI section was, “AI has the potential to improve the USPTO search and examination and to and leverage Examiner time more effectively, (sic) however stakeholders should expect it will take years for significant improvement to manifest.” The PPAC believes this is an area for continued discussion, analysis, and advice between the PPAC and the agency. Ideally, continued investment in IT would eventually increase examination output to positively impact pendency and reduce unexamined inventory.

Becoming the Innovation Agency – Director Vidal has successfully rebranded the USPTO as the Innovation Agency and, consistent with Congressional direction, continues to expand inclusive innovation. One of the hallmarks of the USPTO’s efforts under Director Vidal is delivering programming that connects innovators with existing resources that can help inventors as they move along the journey towards funding and commercialization. The PPAC has encountered many questions about whether this mission expansion has taken significant resources away from the examination and adjudication of rights. In FY 2024, less than 1 percent of the agency’s spending and less than 100 employees (out of 13,000+) supported outreach, education, and inclusive innovation related programs. This includes approximately \$1.2 million for the patent pro-bono program and \$16 million for community engagement related costs. The chart below shows the breakdown of FY 2024 spending by program areas.



*Other is comprised of OCIO, OCAO, OCFO and others that enable the USPTO mission.

The PPAC has reviewed the chart and believes the breakdown shows that currently the outreach, education, and inclusive innovation category is extremely small comparatively and is not adversely impacting the core mission performance of the agency, namely examining patent applications. We recognize that the USPTO’s statute (35 U.S.C. 2) has always included sharing information about patents and trademarks with the public. We see the scaling of this work, including establishing the Office of Public Engagement with its modest staff and budget, as keeping with the statute. Further, we expect the USPTO

to establish clear success metrics and evaluate this office’s new work for effectiveness to ensure that the outreach, education, and inclusive innovation category of people and programs does not take money away from the very important work of examination.

KEY TAKEAWAYS AND RECOMMENDATIONS

- The USPTO is in good financial shape today. The PPAC supports resource allocations to address pendency and IT infrastructure needs. The vast majority of patent spending supports examination. The agency should set success criteria and periodically evaluate new, non-examination spending to avoid unproductive non-examination spending.
- The USPTO and Congress must take steps to resolve sequestration risks and ensure that all fees collected remain in the agency and are spent predominately on the examination and adjudication of IP rights.
- The PPAC supports renewal of agency fee setting authority and is committed to working with the USPTO to continuously improve the rationale, transparency and objectives of future fee increases.
- The USPTO’s long-term fiscal stability is vital. Ensuring that the USPTO is financially positioned with adequate resources for patent examination and other operations is of nationwide importance as explained above. In particular, the PPAC recommends Congress:
 - promptly enact appropriations to avoid shutdowns or continuing resolutions that force the USPTO to dip into its operating reserve,
 - appropriate or otherwise find a way forward on the approximately \$950M in unavailable but previously collected patent fees.
- The USPTO must actively avoid sequestration. The PPAC supports that Congress and the USPTO taking preemptive measures to remove the agency from the sequestration process. Patent stakeholders must have confidence that fees voluntarily paid for patent related services are being used to provide those services and not diverted to other, unrelated government purposes.
- The USPTO must have fee setting authority renewed by Congress in 2026 or sooner to ensure the agency can continue to operate at a high level. The PPAC worked with the USPTO through the current fee setting process and is eager to continue working with the USPTO to further improve the rationale, transparency and objectives of future fee increases.
- Resolving sequestration and the voluntary nature of fees paid by patent applicants are questions that remain. The PPAC encourages the USTPO and Congress to mitigate or remove the risk of voluntary patent fees being withheld from the agency.

V. PPAC OUTREACH, EDUCATION, AND INCLUSIVE INNOVATION SUBCOMMITTEE

A. INTRODUCTION

On May 1, 2024, the United States Patent and Trademark Office announced the adoption of the **National Strategy for Inclusive Innovation (NSII)**,¹² as a key component of its implementation of the **Unleashing American Innovators Act**,¹³ and related legislation and policies intended to broaden participation in the American innovation ecosystem. The NSII was developed by the USPTO with support from the **Council for Inclusive Innovation (CI²)**,¹⁴ and “is based on a vision for United States leadership in innovation that will lift communities, grow the economy, create quality jobs, and address global challenges.”¹⁵ The NSII builds upon a broader, preexisting network of the USPTO public outreach and education initiatives, and enhances the targeted effort to engage underutilized and under resourced regions and communities in innovation and intellectual property enterprise.



B. THE NSII POLICY OBJECTIVES AND STRUCTURE: STRATEGIC CORNERSTONES AND RECOMMENDATIONS

The NSII addresses critical participation shortfalls in the American innovation ecosystem. While IP endeavor has been at the forefront of American achievement in science and technology since our nation’s inception, leading research reveals that participation in American innovation is “exceptionally unequal”.¹⁶ As a result, vast reservoirs of American talent remain untapped, to the detriment of our nation’s competitive technological leadership in the global marketplace:

The [U.S.] faces great challenges in addressing demographic, economic, and geographic under-representation in the innovation economy.... It is vital that all sectors of the innovation ecosystem—corporations, associations, nonprofits, governments, and schools—take tangible steps to [enable] every American to gain the skills and experience that will allow them to fully utilize their inventive and entrepreneurial abilities. It is also imperative that in these efforts we define diversity broadly, to include those

¹² <https://www.uspto.gov/initiatives/equity/national-strategy-inclusive-innovation>

¹³ <https://www.uspto.gov/ip-policy/legislative-resources/unleashing-american-innovators-act-2022>

¹⁴ <https://www.uspto.gov/initiatives/equity/ci2>

¹⁵ NSII at p. 4

¹⁶ NSII at p. 6; A recent report by the USPTO indicates that only 12.8% of all inventors named on U.S. patents are women, while a Harvard study revealed that White Americans are three times more likely to become inventors than Black Americans, and that the children of the top 1% of income earners are 10 times more likely to become inventors than children with family incomes below the median. *Id.*

*from rural regions; veterans and military families; retirees; homemakers; persons with disabilities; those who are under-resourced; and those who have educated themselves through non-traditional means, trade schools, community colleges, or work experiences. Without each individual's contribution, the United States will not innovate at its full potential.*¹⁷

As urged in the PPAC 2023 Annual Report, through an affirmative, comprehensive inclusivity strategy, national participation in innovation achievement and entrepreneurship can be dramatically increased. “[S]ignificant increases in U.S. innovation are achievable by...bringing under-represented individuals and communities into the innovation ecosystem.” “[O]ne study finds that “if women, minorities, and low-income children were to invent patented technology at the same rate as white men from high-income households, the rate of innovation in American would quadruple,” [providing] **about \$1 Trillion in potential growth to the United States economy.**”¹⁸

To achieve the directives of the UAIA and as informed by the findings and conclusions of the 2023 PPAC Report, the USPTO has devised the NSII: “To maintain its position atop the economic world stage, the United States must make sustained investments in its most important asset—the American people—by ensuring that every individual—irrespective, for example, of ethnicity, gender, disability, or location—has access to the resources and opportunities to innovate.”

The NSII Four Aspirational Cornerstones and Implementation Recommendations:

Cornerstone I: Inspiring New Generations of Innovators by Expanding, Standardizing, and Scaling preK-12 STEM/Innovation Curricular and Extra-curricular Education; *Specific Recommendations:*

- Standardize and scale youth innovation education, beginning with promoting K-12 level engagement with the innovation cycle
- Provide resources, training, and support to empower educators to teach innovation
- Provide youth coaching, mentoring, and career awareness to foster and support long-term interest and capabilities in innovation

Cornerstone II: Educating and Empowering Innovators through post-secondary Innovation and Entrepreneurship Education and Training; *Specific Recommendations:*

- Expand research opportunities to a broad and diverse set of institutions in higher education

¹⁷ *Id.*

¹⁸ Patent Public Advisory Committee 2023 Annual Report, at p. 34, <https://www.uspto.gov/about-us/organizational-offices/public-advisory-committees/patent-public-advisory-committee-ppacld>. “Throughout the course of the Biden-Harris Administration, the USPTO has [studied] the state of the U.S. innovation ecosystem, including the barriers to full and widespread participation. The result of this study...includes a comprehensive review of the state of U.S. inclusiveness, highlights existing disparities, and explores opportunities to expand U.S. innovation in an equitable way.”

- Foster innovation and entrepreneurship learning/experiences in post-secondary education
- Provide post-secondary mentoring and internship opportunities to enable innovation

Cornerstone III: Advancing Inclusive Innovation by Removing Barriers to Achieving Innovation Ecosystem Demographic, Economic, and Geographic Equity;
Specific Recommendations:

- Encourage and support an inclusive workforce across public and private organizations
- Cultivate innovation more broadly and equitably in organizations that innovate, including academic research institutions

Cornerstone IV: Bringing Innovation to Market through Policy Changes to Promote Widespread and Equitable Access to Start-up and Entrepreneurial Investment;
Specific Recommendations:

- Equitably facilitate IP protection for all innovators and entrepreneurs
- Make entrepreneurship resources and support available to all
- Leverage and expand commercialization support and tech transfer for all

The NSII comprises a comprehensive and coordinated framework through which to attain more widespread and diverse geographic and demographic participation in the innovation to market pipeline, beginning with K-12 level engagement and continuing through support for innovation and related entrepreneurial activity. Through the NSII, the USPTO will promote innovation activity “to bolster economic prosperity, shore up national security, and solve world problems” through American global innovation leadership.

C. THE OFFICE OF PUBLIC ENGAGEMENT: PUBLIC OUTREACH, EDUCATION, AND INCLUSIVITY INITIATIVES

In concert with the NSII, the USPTO has established the **Office of Public Engagement (OPE)**, which generally oversees and implements the USPTO’s public outreach, education, and inclusivity initiatives, and otherwise maintains stakeholder outreach across the IP spectrum.

The OPE operationalizes the NSII and the UAIA:

- Strategically educates the American people, including those new to the innovation ecosystem, about the purpose and value of intellectual property
- Expands outreach and education programs to the underrepresented
- Illuminates the resources available to bring innovation to impact; and
- Defines and manages an agency-wide, customer experience (CX) program

Most of the USPTO public outreach and education initiatives predate the NSII, however, through the OPE, these efforts are now coordinated into a cumulative strategy to effectuate the UNIA and address the specific recommendations referenced in the PPAC 2023 Annual Report. Some of the USPTO key programs that OPE advocates for include:¹⁹

- **The Patent and Trademark Resource Center (PTRC)** (a network of USPTO resource and reference specialists resident in university librarians and providing public education and research support throughout the fifty states)
- **IP eLearning Modules** (free online IP education courses, including Introduction to Patent Protection, Overview of Trademarks, etc.)
- **The Patent Pro Bono Program** (facilitating pro bono legal assistance provided by private practitioners through programs serving 47 states)
- **Innovator Events for Everyone** (collaborating with private and public interest organization to provide public IP education programs, including the Women's Entrepreneurship Symposium Event Series, the Veterans Innovation and Entrepreneurship Program Event Series, and the Intellectual Property and Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Webinar Series, etc.)
- **Patents and Trademarks Free Services** (a comprehensive network of public support options including the Patent Application Assistance Unit (AAU), the Trademark Assistance Center, the Inventors Assistance Center, IP workshops for K-12 educators, the Path to a Patent webinar series, the Trademark Basics Boot Camp series, and the Pro Se Assistance Center)
- **The USPTO Law School Clinic Program** (collaborating with more than fifty law schools nationwide to enhance law student experiential training and public service experience pro bono service while providing pro bono support to under resourced communities)

The USPTO Community Outreach Offices

In compliance with the UAIA directive to promote innovation in historically and currently underserved and underutilized communities through the establishment of four **Community Outreach Offices (COO)**, the USPTO is in the process of establishing its first COO, which will be located in Strafford County, New Hampshire. The Strafford County COO will engage community organizations and local institutions in IP awareness, education, and service initiatives, to increase innovation participation and entrepreneurship within the targeted cohorts. The Strafford County COO will operate within the broader outreach and education program conducted by the OPE.

¹⁹ There are dozens of programs – the specified are a reflective sampling.

KEY TAKEAWAYS AND RECOMMENDATIONS

- The USPTO continues to be successful in increasing its public outreach, education, and pro bono support efforts, and in effectively reaching students, practitioners, and communities in underrepresented geographies and demographics. Through the NSII, as implemented through the OPE and the forthcoming COOs, the USPTO has devised a comprehensive strategy through which to build upon this success, and to achieve the UAIA’s mandate to “unleash every American’s ability to fully take part in the innovation economy.” Properly resourced and consistently pursued, the NSII will achieve historic growth in demographic and geographic participation in the national innovation ecosystem *to achieve unprecedented increases in the national economic development and GDP.*



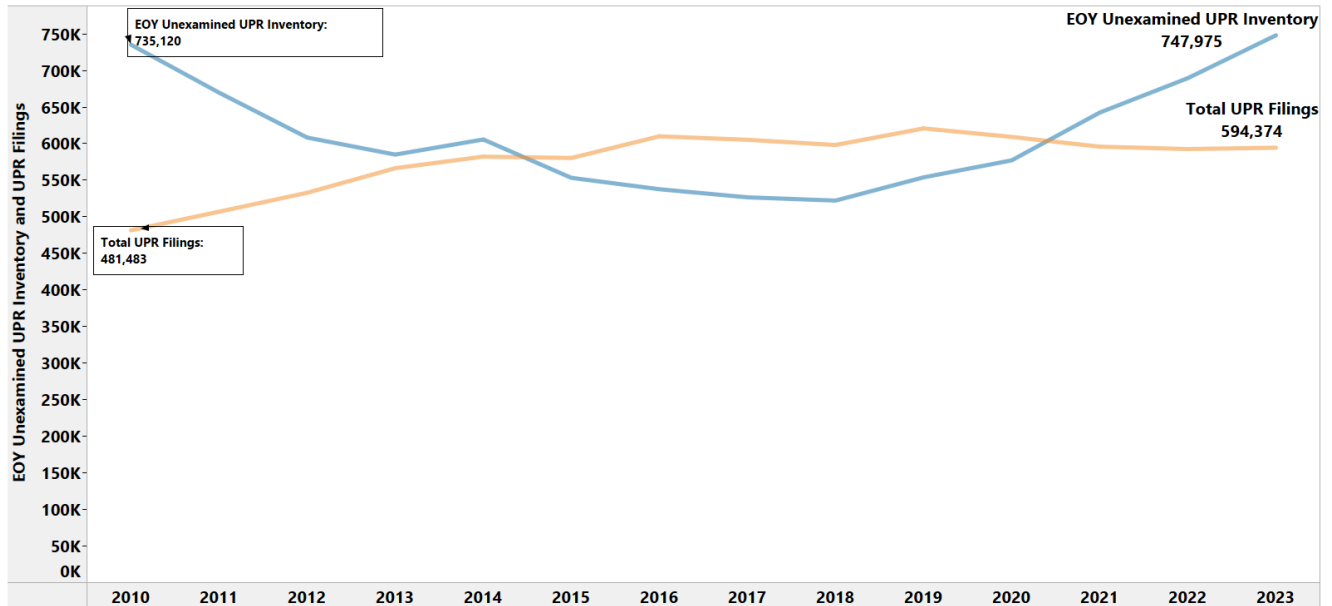
- In conjunction with the OPE’s provision of innovation education and support to the public, the PPAC recommends that the OPE consult and collaborate with target communities and groups to develop *preliminary assessment metrics*, to ensure the efficacy of its present initiatives and to further inform the USPTO public outreach and inclusivity strategies and goals.
- Through the OPE, the PPAC encourages the USPTO to continue to coordinate its network of public outreach and education initiatives, to *maximize program efficiencies and outcomes.*
- In furtherance of the NSII, the PPAC recommends that the OPE *enlist CI2 in coordinating the USPTO’s public outreach and education framework* with private sector IP public education, inclusivity, and entrepreneurial support initiatives to reinforce and enhance the NSII.

VI. PENDENCY AND QUALITY

The USPTO and Trademark is facing an unprecedented inventory of unexamined applications, primarily due to an issue with staffing that was not able to grow to meet the demand for required new output levels. Factors contributing to this issue were changes implemented in 2019 giving Examiners more time for examination of cases due to quality initiatives, higher than expected attrition of patent examiners, and higher demand than anticipated through the COVID-19 pandemic. Addressing this unexamined application inventory will be challenging and the office will need and has adopted a multifaceted approach. Maintaining patent quality and financial stability while resolving these issues will be a monumental challenge. These challenges are discussed below.

As of July 2024, the average number of months from a patent application filing date to the date a First Office Action is mailed by the USPTO is over 19.7 months, reflecting a decrease from the end of FY 2023 when first office action pendency was 20.5 months. The unexamined patent inventory is currently at 796,555 applications and total pendency from filing to final disposition is 26.1 months as seen in the USPTO’s online Patents Dashboard [cite]. Additionally, the USPTO complies with applicable patent term (PTA) adjustment timeframes in 79% of mailed actions and 80% of remaining inventory. Complying with PTA, which extends the life of a U.S. patent to compensate for delays caused by the USPTO during the prosecution of a patent application, not only decreases pendency, but also avoids extending the 20-year terms of issued patents, so the covered invention enters the public domain when intended.

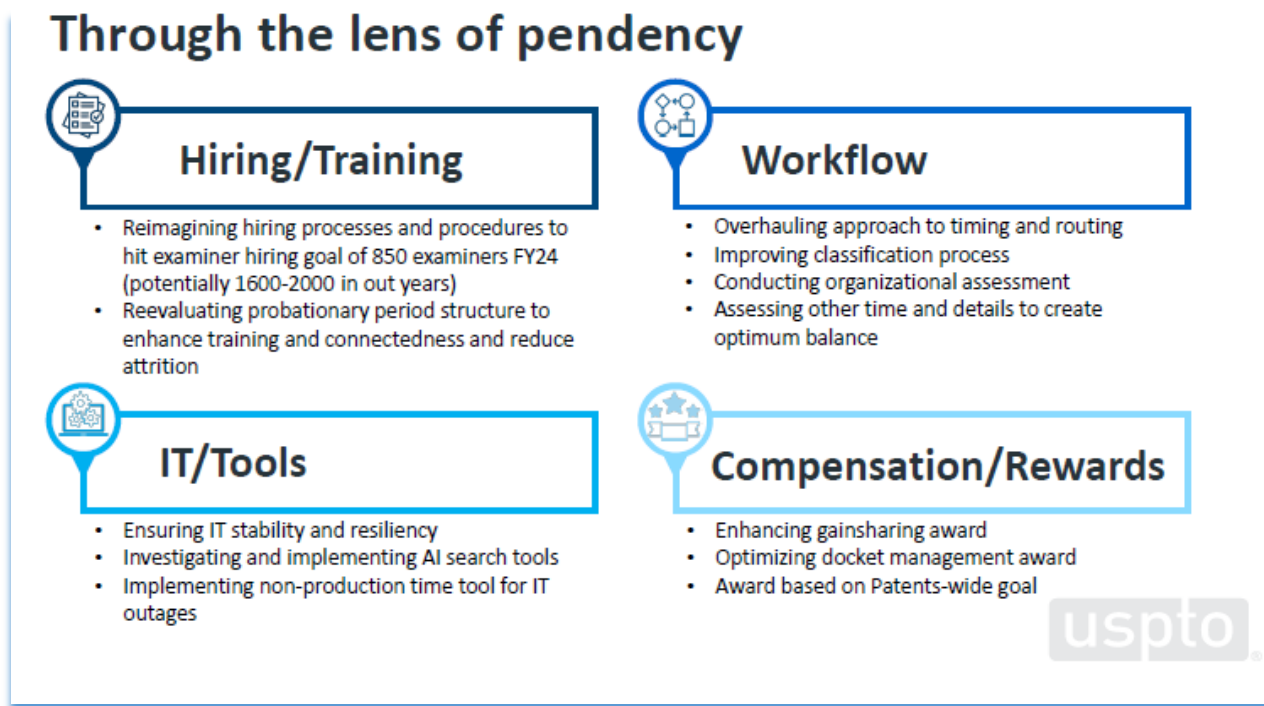
526,000 at the beginning of 2018 to 750,000 at the end of FY 2023. The unexamined inventory is currently at 795,000.



The large unexamined inventory, and subsequent increase in processing time of applications grew were a result of quality initiatives introduced by the USPTO in 2019, which gave examiners more time for quality review of examined applications which went from 10 units per Examiner on average to 8 units.

Another exacerbating factor was that additional examiners were not retained at sufficient rates to account for the unit reductions. During the pandemic, attrition levels increased, and these Examiners were not replaced in light of an expected decrease in filings consistent with economic predictors. The slowdown in filings, however, was more modest and short-lived than expected. This, combined with the increased time allotted per application, as well as the competitive labor market for those with the technical degrees and backgrounds needed for patent examination, has all combined to the unexamined inventory.

During FY 2024 the office undertook efforts to reduce pendency and improve patent quality by impacting four key areas: (1) hiring/training initiatives, (2) improving workflow, (3) use of AI/IT tools, and (4) compensation and rewards as shown in the following graphic.



A. HIRING AND TRAINING

The USPTO has informed the PPAC and is aware that to effectively chip away at the pendency backlog, they need more patent examiners working on applications every day. They are focusing on increased hiring and also decreasing attrition of the examining corp. In particular, they are prioritizing hiring more patent examiners and the PPAC has contributed advice and strategies to help.

In fiscal year 2023, the Patents business unit (“Patents BU”) hired 644 patent examiners, and this fiscal year, they have onboarded 853 hires as of August 30, 2024. Next fiscal year, they are aggressively looking to hire an even larger number of patent examiners. Their target is 1600 examiners onboarded by September 30, 2025.

To ensure the success of their hiring initiatives, the Patents business unit created a cross-cutting team to undertake a whole-agency approach to reimagine hiring process. This team includes members from Patents, OHR, OCFO, and OCIO. The Hiring team addresses the entire life cycle of examiners from the initial USA Jobs application through senior primary examiners.

The PPAC has been advised that already, this team has updated the Patent examiner job announcements based on plain language principles, to address applicant feedback that previous announcements were difficult to understand. Vacancy announcements tied to technical fields refer to “comparable STEM backgrounds” for better accessibility to everyone in STEM. Recruitment bonuses of \$20,000 are also possible for new employees in highly competitive backgrounds such as Computer Engineering.

Moreover, once the applicants have accepted an offer from the USPTO, they are establishing multiple touch points prior to their official hiring date. “Accepted Day!” is one of the first engagement initiatives recently launched to develop initial connections to patents and potential peers who will be starting on the same date. Once employees are on-boarded, a key incentive to retention at the start of a career is engagement and building a connection to the agency. In the first four months, new Examiners enter the Patent Training Academy where they are trained in labs where they work together and build a sense of belonging with their peers and trainers. The USPTO is looking to improve their learning concepts for the training academy, by introducing different learning techniques and exploring a hybrid training model.

Proper training of new examiners is also critical to the success of the USPTO. The USPTO has delivered to new examiners approximately 423,400 hours of onboarding education in FY 2023. They are also adjusting that education and reimagining the way our Patent Training Academy works, with the goal of keeping examiners more engaged, more connected to our mission, and ultimately more likely to stay in their jobs for years to come.

Upon completion of their four-month residency in the Patent Training Academy, new examiners transition to their permanent division where they receive continued individualized on-the-job training from their supervisor and other senior examiners who serve as mentors. Examiners also work with their supervisor and senior examiners in their art unit to gain expertise in examination practice. Additionally, technical training is available through multiple options such as TTOD-technical training on demand and the Patent Examiner Technical Training Program (PETTP), which provides examiners an opportunity to receive relevant technical training and expertise from technology experts.

The USPTO also provide numerous training opportunities for more experienced examiners. For example, the Site Experience Education (SEE) Program enhances the

technical expertise and engagement of employees through technical conferences, on-site visits and interfacing with industry leaders and PETTP. Beyond these formal training programs, peer collaboration (one-on-one and through groups such Quality Enhancement Meetings) and mentoring opportunities are also available and promoted. Mentoring programs include the Patents Mentoring Connection, Aspiring Manager Program, and Sankofa Network. The PPAC strongly supports and encourages these initiatives.

B. IMPROVING WORKFLOW

- 1. Overhauling approach to timing and routing of newly filed applications**
- 2. Improving classification process**
- 3. Conducting organizational assessment**
- 4. Assessing other time and details to create optimum balance**

Improving workflow is a significant part of the initiative. This will address the concerns with the current processes for determining examination time, routing, and classification of inventions. With regard to timing and routing, the USPTO implemented a pilot based on “skill sets” to gather survey feedback on what examiners perceive to be the factors that determine overall complexity of a defined skill set. The pilot findings suggest efficacy in using skill sets as an appropriate clustering method for assigning work and differentiating examination time. The next steps include working with POPA to refine skill sets and budget for options to implement a simplified process for assessing and assigning applications based on skill sets. With regard to classification, examiners, as a group, spend thousands of hours annually addressing classification related issues. Leveraging AI for classification is currently being explored to lessen the burden on examiners. For FY 2024 the USPTO developed an AI autclassification tool and associated models. The next steps include training of models to obtain greater accuracy.

To ensure the USPTO’s success in meeting its goals to reduce pendency, the Office has also issued an RFQ on February 26, 2024, and awarded a contract for vendor services to conduct an organizational assessment and provide informed recommendations regarding the (a) Structure and collective organizations of all offices within the Patent Business Unit; and (b) Patents management structure, processes, and responsibilities. The PPAC fully supports these initiatives.

C. USE OF AI/IT TOOLS

- 1. Ensuring IT stability and resiliency**
- 2. Investigating and implementing AI search tools**
- 3. Implementing non-production time tool for IT outages**

IT outages have adversely impacted efficiency, the ability to do work, and at times

employee satisfaction. The USPTO was affected by the global CrowdStrike outage incident which further impacted Examiner’s time and it was estimated that the office lost up to 80,000 plus hours of time before the situation was resolved. The USPTO implemented the measures to address these and are discussed in the AI/IT section of this report. Additional measures included administering an IT satisfaction survey to all Patent Business Unit employees to determine baselines for assessing the impact of IT outages, particularly with respect to patent searching, DAV, and OC.

Other initiatives included to address IT outage impact include:

- a. Relying on OCIO to provide 99% resiliency for all mission essential functions during established business hours
- b. Balancing IT stability and resiliency with business process changes through cross-product line collaboration between the Patents Business Unit and OCIO and creating strategic test plans for major components
- c. The USPTO also plans to investigate and implement greater use of AI search tools. These efforts include:
 - Efforts to increase AI usage of existing MLTD and Sim Search –Analysis of data and focus session underway to support PSAI training development 2024
 - Potential Pilot for Enhanced Search (synonyms, CPC recommendations) 2024
 - Potential limited pilot launch for Design Vision, and 2024, full release mid FY 2025

D. COMPENSATION AND REWARDS

- 1. Enhancing gainsharing award pilot**
- 2. Optimizing docket management award**
- 3. Award based on Patents-wide goal**

The enhanced gainsharing award pilot includes semi-annual award payouts, and award starting at 103% production with increases in 1% increment production achievements. As of midyear of FY 2024, Patents has produced 2,000 more PUs than the same time in FY 2023. The USPTO also introduced the Patents-wide pendency initiative (One for One) during FY 2024, which as initially planned would have paid a \$1,500 award for all patents employees if the Patent Business unit mailed out 262,000 first actions in the second half of FY 2024. The 262,000 number represents 20,000 more first actions anticipated based on past fiscal years production. In view of the CrowdStrike outage, which significantly reduced examination hours, the target was subsequently lowered to 255,000 first actions mailed. The Patents Business Unit far surpassed this goal, mailing over 259,000 actions in the second half of the year, a dramatic increase of nearly 18,000 first actions compared to the 2nd half of FY 2023, despite the CrowdStrike outage of FY 2024.

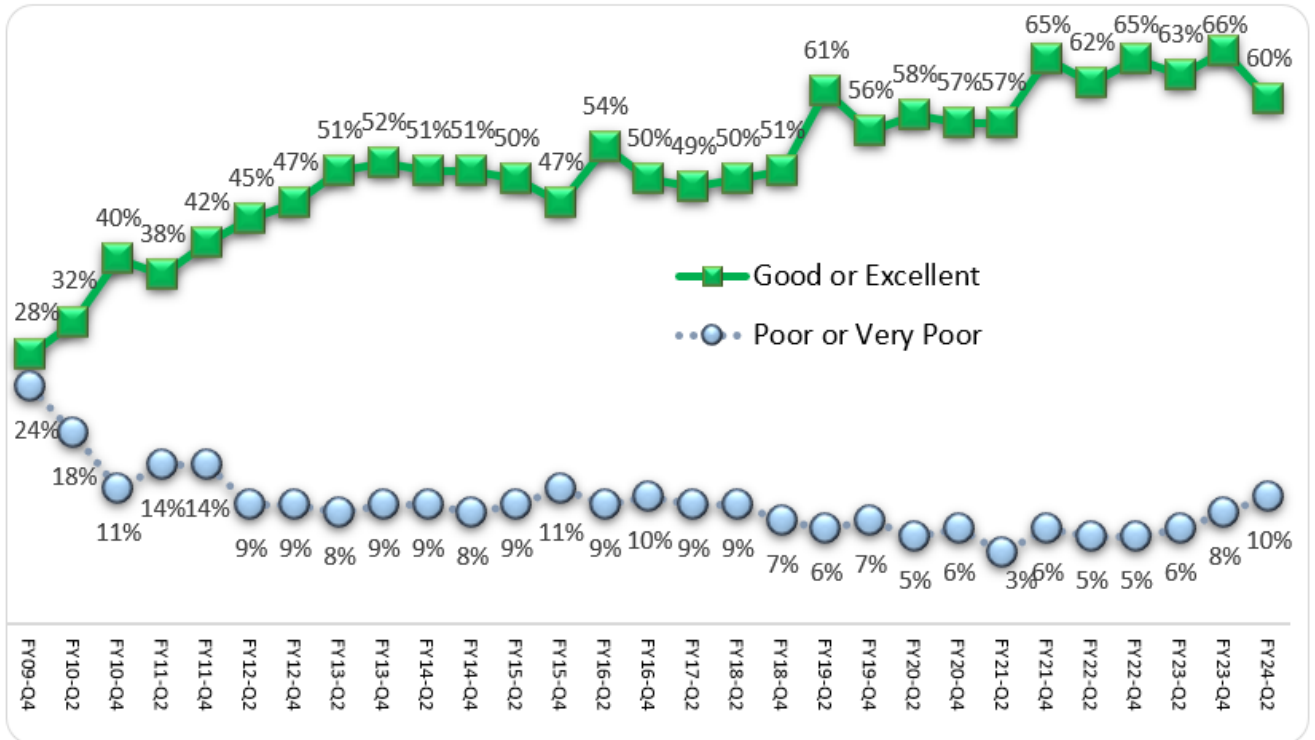
The USPTO allows an examiner to earn 0.25%-0.75% per quarter for docket management performance as well as a supplemental payment of 0.5%-1.0% payable at the end of the second quarter of the fiscal year. This docket management award structure should be optimized to make it more effective.

Finally, in 2024 the USPTO implemented the first action date order award (“FADO”) for supervisors which provides an award opportunity based on the percent of first actions directed to the corresponding number of oldest cases available to act upon. The USPTO should continue this incentive in 2025.

Quality

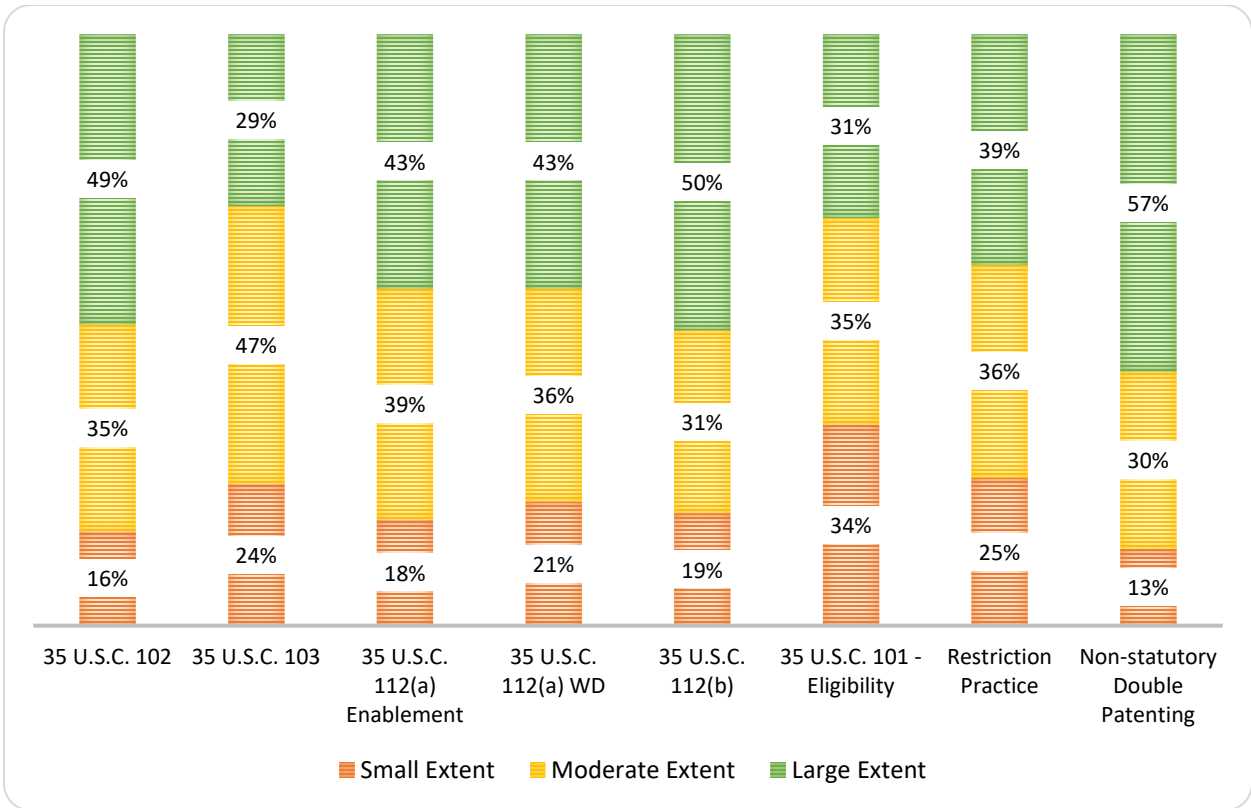
Maintaining patent quality in an era of mass hiring and training will be a challenge. Training a new Examiner takes time from senior Examiners and further exacerbates the pendency issues. It typically takes 2-4 years for an Examiner to be fully trained and meet full time Examiner examination expectations. Currently the External Quality Perceptions Survey indicates a Net Promoter Score (NPS) of 50 and at targeted performance; however, there has been an eight (8) point drop from FY 2023 Q4 results. Keeping quality up while reducing the unexamined inventory will be a challenge. To address this concern, the Office of Patent Quality Assurance (OPQA) has implemented efforts to monitor art units for consistency of rejections to look for deviations from the norms.

Current quality statistics show the percentage of customers reporting quality as good or excellent fell from 66% to 60% and the percentage of customers reporting quality as very poor or poor increased from 8% to 10%. While good or excellent ratings are remaining relatively high (60% or better for six consecutive surveys), there is a slight trend upward of poor or very poor ratings.



The percentage of customers citing quality is improving (15%) is the lowest level reported in the past 15 years. Historically, the average is 24%.

Consistent with typical trends, 35 USC 103 rejections remain the largest opportunity for improvement. The graph below shows overall perceptions of patent quality.



Per the graph above, only about half (48%) of customers state examiners are correct most or all of the time. Customers that report examiners being correct most or all of the time are seven (7) times more likely to rate overall quality as good or excellent. 29% of customers stated recent 103 rejection met their expectations to a large extent; a decline of 10 percentage points from the FY 2023 Q4 survey.

Finally, the Patents business unit created a Pendency Oversight Strategy Team (POST) tasked with overseeing ongoing pendency initiatives and developing a long-term plan address our current pendency challenges. The PPAC strongly supports this initiative as it will be key to oversee all initiatives and to monitor the success or lack thereof for the many strategies.

KEY TAKEAWAYS and RECOMMENDATIONS

- The Patent Office is experiencing an unprecedented unexamined inventory that will require a multi-faceted approach to manage, including massive hiring, which adds significant compensation costs and case inventory examination challenges. The PPAC recommends the USPTO continue to monitor and balance hiring needs against the Office’s financial stability consistent with the Office’s core mission of issuing robust and reliable patents.
- Care must be taken with additional hires to ensure that training (which will require additional work for current Examiners) is not curtailed, particularly in light of the current small declines in patent examination satisfaction.

- Previous Patent Examiner incentives to increase workload and turnaround and additional investment in IT have shown limited success, although gainsharing award and 1:1 did increase production slightly, and 2023 was the first production increase since 2019 and largest since 2015. The PPAC recommends the USPTO to continue to explore additional incentive alternatives.
- Patent Quality continues to be undermined by the PTAB invalidation rate, remains over 50% for claims that are reviewed in Post Grant challenges, and the PPAC recommends the patent office to continue to study this trend and publish all data on conclusions that are reached, which will help educate stakeholders as to likely causes for invalidation and help to close the loop.

VII. PATENT TRIAL AND APPEAL BOARD

As prescribed by the U.S. Constitution, article I, section 8, the USPTO issues patents to promote innovation. The patent system fosters innovation by encouraging the public disclosure of ideas in exchange for the grant of exclusive rights for a limited time. Simply stated, the prospect of securing these exclusive rights provide a basis for investment. Inventors and investors contribute their time and money for research and development, ultimately to bring the results of such research to market. The patent system is, therefore, a driver for both jobs and prosperity. To do so, however, both inventors and investors must have confidence in the patent right. The system works effectively when the USPTO issues and maintains robust and reliable patents.

In 2011, Congress passed the Leahy-Smith America Invents Act (AIA), which established the Patent Trial and Appeal Board (PTAB). Among other duties, the PTAB conducts two types of post-grant proceedings under the AIA: post-grant reviews (PGRs) and inter partes reviews (IPRs). PGRs may be based on any statutory grounds challenging validity but must be brought within nine months of patent grant. IPRs, on the contrary, may be brought anytime but must be based on challenges to novelty or non-obviousness on the basis of patent or printed publications. These proceedings are intended “to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.” H.R. Rep. No. 112-98, pt. 1, at 40 (2011), 2011 U.S.C.C.A.N. 67, 69; see also S. Rep. No. 110-259, at 20 (2008).

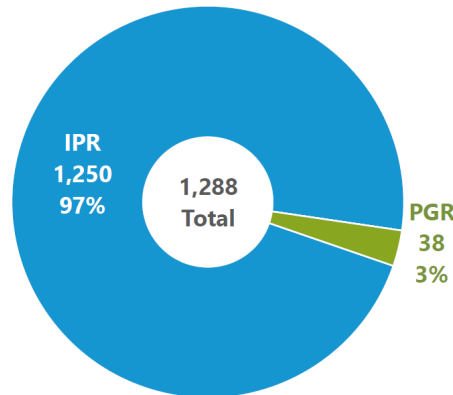
IPRs are often sought later during a patent’s term, after innovators have invested in the development and commercialization of the claimed technology based on the existence of the granted patent right. The late timing of IPRs and perception of increased invalidity determinations have led to disruption in patent holder’s expectations and their enjoyment of quiet title. This, in turn, has led some IP stakeholders to perceive increased ambiguity and uncertainty in the patent system.

The PPAC appreciates that the USPTO has been working on reducing potential negative public perception of the patent system based on post-grant proceedings. PTAB has been largely addressing public perception by being very active in stakeholder outreach, and providing proposed rules, guidance, and precedential opinions to give more clarity around practice and predictability in post grant proceedings. Activities have included rule-making around motions to amend, Director Review, expanding opportunities for practitioners to practice in these proceedings, and discretionary denials of institution in AIA proceedings, including rules for serial and parallel petitions and 35 U.S.C. 325(d) considerations. This report will focus on the discretionary denial and 325(d) proposed rules later in this section.

Another main driver of public perception are annual statistics published by the USPTO around post-grant proceedings. The vast majority of post-grant proceedings filed to date have been IPRs, and this trend has continued over the last year.

Petitions filed by trial type

(FY24: Oct. 1, 2023 to Sept. 30, 2024)



Trial types include Inter Partes Review (IPR) and Post Grant Review (PGR).

The proportion of IPR petitions to PGR petitions is particularly noteworthy for two reasons. First, IPR petitions may be more prevalent because they can be filed at any time during the patent term following the PGR nine-month window and are often triggered by a challenger being sued for infringement, which usually occurs years later. The PPAC has received feedback from certain stakeholders that the timing causes IPRs to be much more disruptive to the expectations of investors and inventors, particularly for the independent or small-entity inventor. Second, more than 80% of IPR proceedings have parallel litigation in federal district court; although, it is worth noting that of patents asserted in district court patent infringement litigation, only about 20-30% are challenged in AIA proceedings.²⁰ IPR proceedings were designed by Congress to be a less expensive alternative to district courts. In practice, some stakeholders have reported to the PPAC that parallel proceedings in both district court and before the PTAB have increased the costs and burden of patent litigation. Current jurisprudence and the USPTO guidance, as well as stays and estoppel in district court, are positive steps to help ensure that the AIA proceedings function as intended. The PPAC applauds the USPTO for initiating the proposed PTAB rule-making and encourages the USPTO to continue to study IPR proceedings to meet the objectives of Congress.

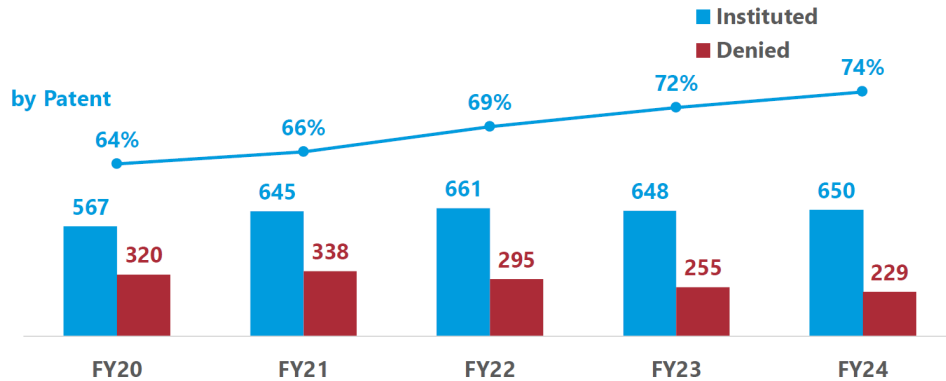
A. PTAB STATISTICS ON IPR INSTITUTION RATES AND FINAL WRITTEN DECISION RESULTS

Institution rate “by patent” for FY 2024 was 74%, which was an increase from last year and a continuation of a trend of increased institution by 10% over the past five years, as illustrated below. These increased institution rates should continue to be monitored and studied.

²⁰ See, e.g., RPX report at <https://www.rpxcorp.com/data-byte/the-overlap-between-patents-asserted-in-district-court-and-challenged-at-the-ptab/> (June 1, 2023) (stating that “district court litigation has remained a key driver of PTAB proceedings, as 79% of the patents challenged in IPR petitions were first asserted in district court” and also “[o]f the roughly 25,010 patents that have been the subject of complaints filed in district court from September 16, 2011 through May 26, 2022, just under 7,020 of those patents, or 28%, have been hit with subsequent petitions for IPR.”)

Institution rates by patent

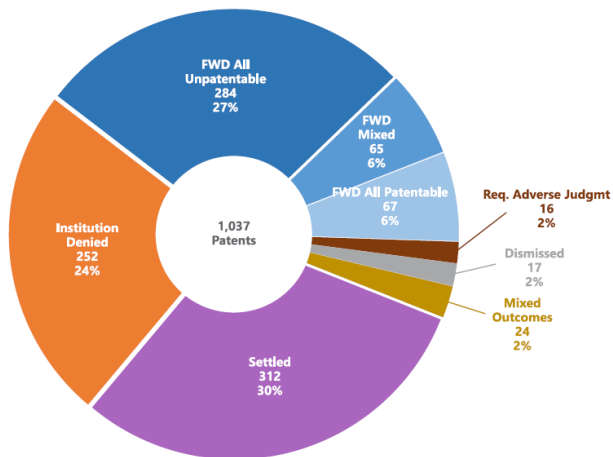
(FY20 to FY24: Oct. 1, 2019 to Sept. 30, 2024)



In relation to all outcomes in AIA proceedings, as seen below, about 39% of patents with AIA challenges ending in FY 2024 resulted in final written decisions (FWDs). Beyond those, about 24% resulted in denials of institution, about 30% settled before reaching FWDs, and about 6% terminated or were dismissed for other reasons. When looking at FWDs “by patent,” of the 39% of the patents reaching FWDs (416), about 68% of those resulted in all challenged claims being found unpatentable, approximately 16% resulted in mixed results (some claims found unpatentable, with other outcomes, e.g., denial of institution or found patentable, for the remaining challenged claims), and approximately 16% resulted in all claims upheld.

Outcomes by patent

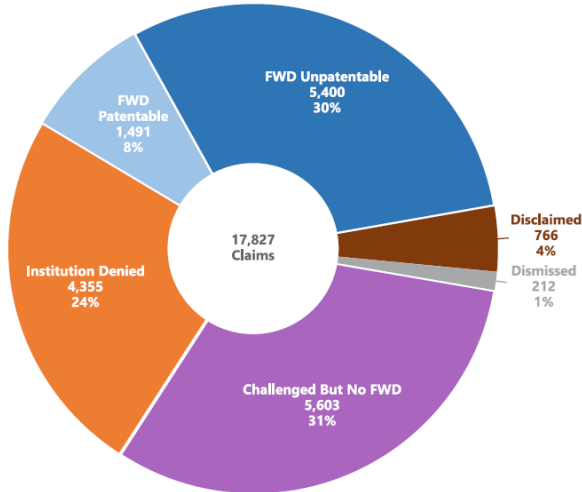
(FY24: Oct. 1, 2023 to Sept. 30, 2024)



FWD patentability or unpatentability reported with respect to the claims at issue in the FWD. “Mixed Outcome” is shown for patents receiving more than one type of outcome from the list of: denied, settled, dismissed, and/or req. adverse judgement only. A patent is listed in a FWD category if it ever received a FWD, regardless of other outcomes.

With respect to final written decisions per patent claim, the results are even more negative for patent holders. Of the instituted cases that resulted in final written decisions, 78% of the claims were found unpatentable in at least one FWD while 22% of the claims were found patentable.

Outcomes by claim challenged (FY24: Oct. 1, 2023 to Sept. 30, 2024)



If one includes all PTAB decisions, looking only at institution denials and final written decisions (excluding settlements and other terminations), once a patent claim is challenged, a patent holder has about a 48% chance that their claim will be invalidated in a final written decision. Similarly, when looking at the same decisions by patent, there is about a 52% chance that either all or some of the challenged claims will be invalidated. In cases that are instituted and reach final written decisions, when looking by patent, the likelihood a patent will be upheld by the Board in its entirety is 16% of those final written decisions, or, when looking by claims challenged, that a claim will be upheld is 22% in final written decisions. The data presented discusses the likelihood of success before the PTAB for challenged patents. When looked at in this way, such statistics may be concerning with respect to the public perception of a robust and reliable patent right; however, the data also shows that less than 0.03% of all currently active patents have faced a PTAB challenge. For example, in FY 2023 there were 3.8 million patents in force, 1,117 patents (0.03%) were involved in a PTAB case. Of the 1,117 patents, 392 of those lost one or more claims in a final written decision and 133 (0.0035%) lost all claims. While this data may be disappointing and frustrating, the USPTO is working to improve patent owner success before the PTAB.

This year, the USPTO completed a study that identifies meaningful trends, patent characteristics, and opportunities to help close the inconsistency gap between patentability determinations made by patent examiners and PTAB judges. The results of the study and the PPAC recommendations are discussed in more detail below.

The most consistent topic of feedback from the public and/or stakeholders to the PPAC has been around the reliability and the durability of the patent right. While patent examination will never be perfect and some patents will inevitably issue that should not have issued, patent owners, as well as investors and other stakeholders, are understandably frustrated when an issued patent is later determined to be invalid. The USPTO considers every PTAB decision as an opportunity to learn and now has sufficient data to identify meaningful trends and opportunities to improve examination. In prior the PPAC reports from 2021-2023, we referred to this data exchange as “closing the loop.” the PPAC remains hopeful that, over time, increased data exchange will support high quality examination and in turn decrease petition grants and invalidity decisions in post grant proceedings.

On this point, the PPAC is aware that the USPTO is close to issuing its findings on what learning can be derived from reviewing the prosecution records of patents where an independent claim was invalidated during an IPR proceeding in calendar year 2021. At a high level, from the PPAC’s perspective, there are three findings worth noting. First, the studied challenged patents had different characteristics than a patent from the general population, including more complex prosecution histories and/or a high number of prior art citations. Second, over 90% of the grounds in the studied challenges relied on at least some prior art not previously of record during examination; almost half of the newly introduced prior art being beyond what an examiner would identify in a reasonably expected field of search, which follows given the disparity in resources (e.g., limited amount of time to conduct a prior art search) for an examiner during prosecution versus an accused infringer during a post grant proceeding. Third, new evidence that was not introduced during prosecution, such as expert testimony and experimental testing, are often present in IPRs.

The PPAC encourages the USPTO to use these helpful findings to study how to improve patent quality and decrease invalidation at the PTAB. For example, the USPTO should study and consider:

- Ways to encourage patent applicants to say more about references and cite fewer irrelevant or marginally relevant pieces of prior art during prosecution. Perhaps, this could be achieved by revised guidance concerning what constitutes inequitable conduct and the duty to disclose under Rule 1.156.
- Whether prior art references that are the basis of IPR invalidations that would not come up under normal search techniques would actually be considered by those skilled in the art for obviousness purposes (i.e., whether hindsight in entering the analysis), and/or, how to improve search techniques to capture such art.
- Whether expert testimony is being used in a manner consistent with the statute that IPR challenges are “only on the basis of prior art consisting of patents or printed publications.”

While all three of these bullet points are important areas of study, the PPAC report will focus on one key area of opportunity: ensuring that all relevant art is cited and considered

during initial examination. The 2023 PPAC report cited a recent study of PTAB invalidations and found that over 90% of the grounds in the studied challenges relied upon some prior art that was not cited during initial examination.²¹ While it is unclear whether some of this art was cumulative, the fact remains that any incentives to ensure that the most relevant prior art is identified and considered during initial patent examination would improve overall patent quality and the strength of the right granted to inventors. One important way to ensure that the most relevant prior art is presented during initial examination is to incentivize patent applicants, who are most familiar with the technology, to identify and highlight this art during initial prosecution.

B. THE PPAC RECOMMENDATION ON USING 325(D) DISCRETIONARY DENIALS TO DRIVE HIGH QUALITY PATENT EXAMINATION AND IMPROVED CONFIDENCE IN A ROBUST & RELIABLE PATENT RIGHT

Section 325(d) provides an excellent vehicle to enhance the quality of patent practice and improve public confidence in the patent system.²² Under section 325(d), the USPTO may deny an IPR petition if the same or substantially the same prior art or arguments were previously presented to the USPTO. In 2023, the USPTO published an Advanced Notice of Proposed Rulemaking (ANPRM) regarding certain considerations for discretionary denials of institution and received a record 14,530 comments in response.²³ In April 2024, the USPTO issued its related Notice of Proposed Rulemaking (NPRM) and received another 3,929 comments.²⁴ The PPAC acknowledges and applauds the USPTO's consideration of the received comments and its continued efforts to improve.

The statutory language of section 325(d) aligns with what applicants control during prosecution, i.e., an applicant can decide what prior art and arguments are presented during initial examination. The PPAC encourages the USPTO to avoid moving away from that alignment, as suggested in both the NPRM and recent decisions. More specifically, the NPRM and recent decisions seem to indicate that instead of allowing petitions to be denied if art or arguments were *previously presented*, the art or arguments must have been *meaningfully addressed*.²⁵ The PPAC notes that applicants have no control over what art and arguments will be meaningfully addressed by the USPTO during examination, and, thus, have no recourse against such a requirement. Examiners may consider art, but not meaningfully address it in an Office Action. Moreover, this approach seems to abandon the USPTO's responsibility to consider the art presented to it

²¹ 2023 Annual Report of the Patent Public Advisory Committee (PPAC) at 30, available at <https://www.uspto.gov/sites/default/files/documents/PPAC-2023-Annual-Report.pdf>.

²² See 35 U.S.C. § 325(d).

²³ Advanced Notice of Proposed Rulemaking on Discretionary Institution Practices, Petition Word-Count Limits, and Settlement Practices for America Invents Act Trial Proceedings Before the Patent Trial and Appeal Board, 88 Fed. Reg. 24503-18 (April 21, 2023).

²⁴ Notice of Proposed Rulemaking on Patent Trial and Appeal Board Rules of Practice for Briefing Discretionary Denial Issues, and Rules for 325(d) Considerations, Instituting Parallel and Serial Petitions, and Termination Due to Settlement Agreement, 89(77) Fed. Reg. 28693-706 (April 19, 2024).

²⁵ See, e.g., Notice of Proposed Rulemaking at 28693-706; *Advanced Bionics, LLC v. Med-El Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (designated precedential Mar. 24, 2020); *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (designated precedential Aug. 2, 2019 (§ III.C.5, first paragraph)).

to ensure meaningful examination, and, thus, implicitly abdicate a key examiner responsibility.

The PPAC acknowledges that giving applicants full protection from IPR challenges under 325(d) against all references listed in an information disclosure statement (IDS) may not be a reasonable resolution, especially where the Rule 56 duty of disclosure incentivizes submission large volumes of art.²⁶ An IDS listing hundreds of references risks that key art may not be fully considered by the examiner. Such a system of absolute protection could also encourage applicants to list art without presenting it in a way most helpful to examiners. Nonetheless, if the USPTO cannot meaningfully consider all references cited by applicants, it raises the question of whether improvements can be made to current practices to drive high-quality patent examination and thus provide a reliable and robust patent right.

The PPAC proposes a reasonable, middle-ground approach that balances applicants' need for quiet title with the USPTO's need to focus its resources to provide high-quality patent examination. This approach provides a modified section 325(d) framework, intended to instill public confidence that patent examination is yielding robust and reliable patents and that IPRs are being appropriately employed. The proposed framework could help ensure that applicants are identifying, and examiners are considering, key prior art during initial examination. As a result, patents of inappropriate scope would be caught early in the process during examination, leading to robust and reliable patents on which applicants and the public can rely.

Under the proposed framework, the USPTO would promulgate a new rule allowing applicants to draw attention to up to a certain number of specific prior art references cited during prosecution (e.g., ten with the basic application fee, with the possibility of more with the payment of additional fees). In exchange for the applicant's work in scrutinizing the art to identify key references, the rule would preclude instituting an IPR based on those references or references with the same or substantially the same disclosure. While this approach could be taken for all post-grant proceedings, the Office may consider using this framework initially for IPRs only, given that the earlier timing of PGRs within nine months of patent grant avoids the same fundamental policy issues. The PPAC encourages the USPTO to consider the consequences of an IPR-only approach, including whether it would drive greater utilization of PGRs and if so, whether that would present issues for the USPTO or its stakeholders.

The PPAC recognizes that historically patent applicants have been hesitant to characterize/highlight certain references, or limit the number of references submitted, over concerns about violating their Rule 56 duty of candor. To address any concerns about increased allegations of inequitable conduct based on calling out only certain references, the USPTO could incorporate a provision in a section 325(d) related rule that allows applicants to attest during prosecution (e.g., on Form SB/08) that their identification of references is exclusively for purposes of section 325(d) and does not constitute a statement on, or representation regarding, the materiality of those or other

²⁶ See 37 C.F.R. § 1.56.

references. More generally, however, the PPAC recommends that the USPTO study whether the doctrine of inequitable conduct as currently applied does more harm than good with respect to patent quality. For example, such a study may conclude that providing more guidance over what the USPTO considers “intent to deceive” under applicable case law may encourage patent applicants to more directly highlight and characterize key references, particularly if this meant that section 325(d) would reduce the risk of IPR years later.

Because the lists of identified references under the proposed section 325(d) framework would be limited in number, examiners could reasonably provide full consideration to each and every one, which would lead to higher-quality patents. And patent applicants would be incentivized to not only cite a reference but also to actively search and highlight a reference during examination to ensure full 325(d) consideration. Given the importance of adequate initial examination, the USPTO could encourage examiners to use any resources deemed necessary to ensure that key references are considered, and that granted patents have been thoroughly examined and are of appropriate scope. These resources may include, for example, input from supervising examiners, PTAB judges, or members of the reexamination unit.

The patent system’s ability to continue incentivizing innovation requires that the USPTO embrace practices that offer confidence in the quiet title and quality of the patents it grants. The proposed framework could help restore such confidence, by assuring that granted patents hold a threshold value of being immune from IPR attacks and by giving applicants more control in the process. The greater confidence in the patent right would lead to increased innovation, job creation, economic growth, and global competitiveness for domestic industry. Of course, third parties could still challenge the validity of such patents based on considered art in federal district court, a system in place since our country’s founding that provides due process to both patent challenger and holder alike.

Given the great importance of robust and reliable patents, the PPAC appreciates the USPTO’s consideration of the proposed framework and any other potential means for ensuring balance and reliability in the patent system. The PPAC encourages the USPTO to carefully consider the impact of any actions it may take as to post-grant proceedings, and to continue working with the public to balance interests and determine suitable solutions. If applicants are reassured that their inventions will receive a thorough examination and that their granted patents will carry the value that comes from quiet title, they will trust the patent system to protect their innovations, recover their investments, and refuel their innovation engines.

KEY TAKEAWAYS

- The risk of some or all patent claims challenged in IPRs being invalidated remains significant. The USPTO should continue to study and release data to improve patent quality and decrease PTAB invalidations, and identify key areas for future study based on this data. Particular areas of focus may include search capabilities, potential for hindsight bias, and the use of expert testimony during IPR proceedings consistent with statutes.

- The PPAC encourages the USPTO to consider whether the doctrine of inequitable conduct, as currently applied, is encouraging well-intentioned behavior that ultimately decreases the quality of examination and any resulting patents.
- The PPAC encourages the USPTO to consider whether more robust use of section 325(d), with applicable rules that would encourage patent applicants to highlight a limited number of references during examination, would improve patent quality.

VIII. THE USPTO IS AN IMPORTANT SOURCE OF EMPIRICAL DATA IN SUPPORT OF PATENT POLICY- PPAC APPLAUDS THE JUNE 2024 RELEASE OF THE USPTO/FDA DRUG PATENT & EXCLUSIVITY STUDY

Patent policy in the U.S. should be based on robust, accurate, and unbiased data. Recently, patent policy discussions have been based on data that is either misleading or inaccurate, particularly with respect to pharmaceutical patent practices. These narratives have informed policy discussions in Congress and within the Administration that the total period of patent exclusivity for pharmaceutical products was unjustifiably long.

Over time, questions have emerged regarding these published criticisms of biopharmaceutical patenting practices, the reliability of the supportive evidence, and the suitability of these criticisms in driving policy reform. Senator Thom Tillis, Ranking Member of the Senate Judiciary Intellectual Property Subcommittee, underscored this point in letters to the FDA and the USPTO regarding concerns with underlying data in certain published reports. Senator Tillis's letters note that "several of the main sources driving the narrative that patents are to blame for high drug prices do not appear to meet [the] fundamental criteria" of being "based on accurate facts and data from reliable, unbiased sources" and that "[b]oth drug pricing, and matters of patent law and policy that impact the development of innovative medicines, are too important to rely on sources whose accuracy and reliability are in question."²⁷ In particular, Senator Tillis highlighted an analysis of Initiative for Medicines, Access & Knowledge (I-MAK) data that showed that I-MAK generally refused to make its underlying data on alleged patent numbers available, but apparently counted patents protecting a sponsor's drug to include abandoned patent applications, patents held by third parties, patents that expired after actual generic launches, and patents that do not cover the approved product or the approved method of using it.²⁸ The highlighted analysis noted that I-MAK also incorrectly equated the expiry date of the last patent associated with a medicine with the expiry of the alleged "monopoly" on the product, without considering whether those later patents had any impact on generic entry or the ability of a generic to launch.

Based on concerns about the underlying data, Senator Tillis requested that the USPTO and FDA conduct an independent assessment to study data from several data sources about patenting practices in the pharmaceutical industry. On June 7, 2024, the USPTO and FDA published its responsive report entitled **Drug Patent and Exclusivity Study**. As stated in the Executive Summary of this report, the purpose of the study was "to provide a baseline approach that researchers and policy makers can use in future analysis for examining the number of years from the time a New Drug Application (NDA) is first approved until the first launch of a generic. Using publicly available the USPTO and FDA data, the report applies this approach to case studies of 25 NDAs."

²⁷ Letter from [Sen. Thom Tillis to Dr. Janet Woodcock and Mr. Andrew Hirshfeld](#), at 1 (Jan. 31, 2022); See also [Letter from Sen. Thom Tillis to Dr. Robert Califf and Mr. Andrew Hirshfeld](#), at 1 (Apr. 1, 2022) ("[S]ources are based on opaque methodologies, and appear to contain inaccurate or incomplete information that may be misleading policymakers").

²⁸ See Adam Mossoff, [Unreliable Data Have Infected the Policy Debates Over Drug Patents](#), HUDSON INST. (Jan. 2022).

The study includes a number of important findings:

1. **The studied products did not have unusually long periods of market exclusivity.** The report shows a range of “from about 3 to about 16 years” of market exclusivity for the 25 NDA products examined. (p. 5 of report). This range of market exclusivity is far less than the statutory patent term of twenty years from patent filing and, in most instances, less than the fourteen-year limit on patent term restoration provided by the Hatch-Waxman Act under 35 U.S.C. 156. This is also consistent with academic studies indicating the average exclusivity period of a pharmaceutical being about 13 years overall.
2. **Continued innovation, and patents based on these innovations, did not extend market exclusivity on the studied products.** Following initial approval of a drug product, researchers often seek to improve therapies through novel disease treatments, formulations, combinations and dosing regimens to benefit patients. As stated in the Executive Summary of the report, “[t]he study explores whether continued innovation of a marketed drug, which results in follow-on patents, such as patents granted for a change to a patented drug product or a method of use after the issuance of an earlier patent, resulted in extended market exclusivity for the product beyond the expiration of the earlier patent(s).” (p. 5 of report). There is no evidence presented in the report that any such later filed patent on continued innovations extended earlier patents; rather, as stated in the report, “[i]n some of these examples, the data indicates that a generic competitor drug was approved and launched, while later patents directed to follow-on innovation and listed in the Orange Book were still in force... In other cases, later patents may have claims directed only to specific aspects of the NDA holder’s drug product, and may not block a generic from launching a competing product once the earlier patents have expired.” (p. 5-6 of the report).
3. **Counting the number of pending or abandoned patent applications is not meaningful data for determining duration of product market exclusivity.** As noted in the report, “This study includes only granted patents and does not include pending or abandoned applications. Abandoned applications do not result in granted patents, and thus, do not pose a barrier to competition. This study also does not discuss pending patent applications, because they are not listable in the Orange Book and may never become patents, and if no patent is granted, there is no enforceable right. As a result, the total of all abandoned and pending applications is not a meaningful metric.” (p. 13 of report).
4. **Counting the number of patents or regulatory exclusivities is not a precise measure of duration of market exclusivity.** “The results illustrate that simply quantifying raw numbers of patents and exclusivities is an imprecise way to measure the intellectual property landscape of a drug product because not every patent or exclusivity has the same scope. For example, one patent could contain different sets of claims directed to: (1) a pharmaceutical product, (2) a method of using the product, and (3) a process for manufacturing the product. Alternatively, separate patent applications could have been filed for each aspect of the invention,

resulting in issuance of three patents instead of one patent. Thus, simple counts of patents can be misleading when every patent is counted equally, because the number of patents does not provide a clear picture of the landscape without a review of the scope of the claims in each patent.” (p. 57 of report)

5. **Having more than one patent that covers a product is common across different technologies given that multiple innovations may be found in a single product or its use.** “With respect to multiple patents that cover a single product, multiple patents associated with a single marketed product are not unique to the pharmaceutical industry and are a common practice in many innovative industries, especially for complex products” (p. 58). Pharmaceutical companies are scarcely represented on the Intellectual Property Owners Association’s listing of the Top 300 Patent Holders in 2023 (published January 2024), indicating that allegations that this industry obtains too many patents are misleading.

In our 2023 report, the PPAC requested that the USPTO and FDA complete this report so that accurate data can be used by decision makers to inform patent policy proposals, as well as be the basis for future academic scholarship. The PPAC applauds the USPTO and FDA for completing this report and providing accurate empirical data for these purposes. The PPAC hopes this approach will continue in the future to make sure that accurate data is the foundation of sound innovation policy in our country.

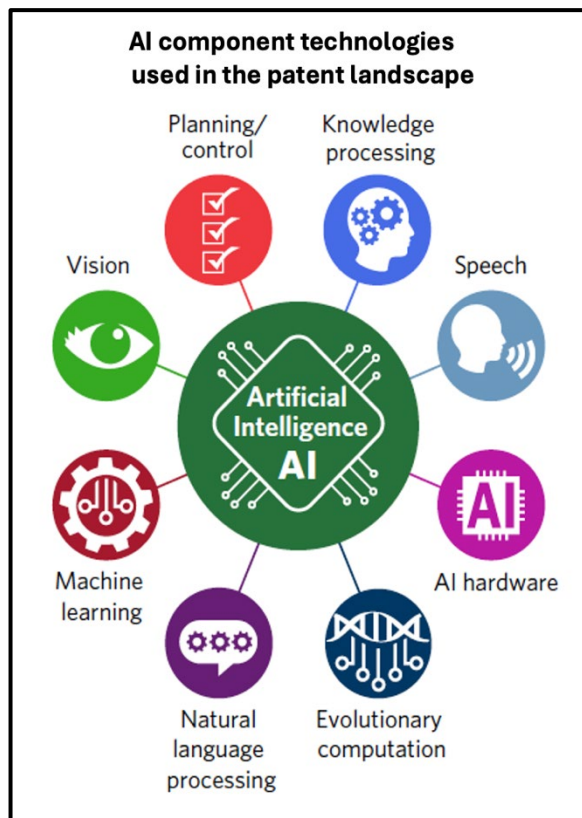
KEY TAKEAWAY

- The USPTO should continue to generate robust, accurate, and unbiased evidence and be an important source of the evidence that informs intellectual property policy discussions.

IX. ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON THE USPTO AND PATENTS

A. ARTIFICIAL INTELLIGENCE - THE EVOLVING BIG PICTURE

Over the past year Artificial Intelligence (AI) has been a topic of increasing U.S. and worldwide interest which has constantly been in the news. Notably, Large Language Models and Generative AI systems such as ChatGPT and Claude have been headlining topics of discussion from classroom to boardroom and beyond. AI in general is a transformative technology which combines the power and capability of advanced computing and computer science with robust data sets to enable rapid problem solving.²⁹ Beyond definitions, artificial intelligence has emerged as a very broad field. AI is multi-component discipline encompassing a spectrum of technologies ranging from predictive analytics and machine learning to deep learning and neural networks, to large language models and generative AI. While it is evident that AI is diffusing into all aspects of American life, it is particularly



clear that AI is becoming intertwined and catalytic in invention and innovation. While the USPTO has not adopted a formal definition of AI, it recognizes that all broad components of AI technology have direct applicability to patents and the USPTO in driving the invention and innovation mission of the United States³⁰.

B. ARTIFICIAL INTELLIGENCE AND ITS APPLICABILITY TO THE USPTO

Over the past year the USPTO has increased its active engagement with artificial intelligence. It has substantively continued to examine how best to address, integrate and approach AI technology, to not only drive and expand patenting and innovation in America, but also to enhance their operational mission.

²⁹ As set forth in 15 U.S.C. 9401(3), "AI is a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. Artificial intelligence systems use machine- and human-based inputs to perceive real and virtual environments; abstract such perceptions into models through analysis in an automated manner; and use model inference to formulate options for information or action."

³⁰ Figure 1 from *Inventing AI: Tracing the diffusion of artificial intelligence with U.S. patents*, Office of The Chief Economist, IP Data Highlights, No. 5, October 2020.

During the past year, the USPTO has engaged with AI in three ways, which include: (1) AI as contributor to the inventive process, (2) AI as subject matter for invention and (3) AI as facilitative tool for enhanced enterprise workflow. The USPTO issued a request for comments “Regarding the Impact of the Proliferation of Artificial Intelligence on Prior Art, the Knowledge of a Person Having Ordinary Skill in the Art (PHOSITA), and Determinations of Patentability Made in View of the Foregoing.” The USPTO issued four guidance documents to date in 2024³¹. As related to AI and workforce development the USPTO responded to the White House Executive Order (EO) on AI with staffing and appointment of a Chief Artificial Intelligence Officer (CAIO). Relatedly, the USPTO addressed training requirements and competencies of examiners and staff aimed at the long-term development of a workforce that is embracing and developing facility with this new technology. Finally, outreach that the USPTO has undertaken to engage with the public on AI and Emerging Technologies (ET) are summarized.

C. AI AS CONTRIBUTOR TO THE INVENTIVE PROCESS

Artificial intelligence has great ability to sift through massive amounts of information, synthesize answers and develop potential solutions to questions posed. Despite this capability, it is now firmly established that only humans can be inventors and authors and be granted patents and copyrights. To clarify the patentability of inventions where AI plays a role, on February 13, 2024 the USPTO issued an official guidance entitled “Inventorship Guidance for AI-Assisted Inventions.”³² This guidance explains that “while AI-assisted inventions are not categorically unpatentable, the inventorship analysis should focus on human contributions, as patents function to incentivize and reward human ingenuity,” continuing that “patent protection may be sought for inventions for which a natural person provided a significant contribution to the invention.” Specifically, the guidance provides an overview of the recent Federal Circuit decision in *Thaler vs. Vidal* and its applicability to joint inventorship; provides an assessment of the inventorship of AI-assisted inventions and its impact on patentability, and concludes such inventions are not categorically unpatentable due to improper inventorship if one or more natural persons significantly contributed to the invention; provides guidance and principles for determining the inventorship of an AI-assisted invention; and explains the impact of the inventorship determination for AI assisted inventions on other aspects of patent practice. In conjunction with issuing the guidance document the USPTO issued useful examples to assist the public and examiners on the application of this guidance in specific situations.

D. AI AS SUBJECT MATTER FOR INVENTION

Artificial intelligence as subject matter for invention is a hot topic and an increasingly active area for patent filing. In the 5 years from 2018 to 2023, the number of annual AI patent applications increased by 33%, rising from almost 76,000 to just over 101,000 by 2023. Over the same period, the share of all patent applications submitted to the USPTO

³¹ 89 FR 34217

³² <https://www.federalregister.gov/documents/2024/02/13/2024-02623/inventorship-guidance-for-ai-assisted-inventions>

that contain AI grew from 19% to about 23%³³. Relatedly, in the 5 years from 2018 to 2023, the number of annual AI patents increased by 38%, rising from almost 54,500 to just over 75,200 by 2023. Over the same period, the share of all patents granted by the USPTO that contain AI grew from 18% to about 24%.

In 2024 the USPTO AI/ET working group focused on subject matter eligibility of AI-related inventions, in response to the executive order, stakeholder feedback and the growth in AI-related filings. On July 17, 2024, the USPTO issued a Guidance Document entitled “2024 Guidance Update on Patent Subject Matter Eligibility, Including Artificial Intelligence.”³⁴ This document was issued to assist the USPTO personnel and stakeholders in evaluating subject matter eligibility of claims in patent applications and patents involving inventions related to AI technology. The update also provided a new set of examples intended to assist the USPTO personnel in applying the subject matter eligibility guidance to AI inventions during patent examination, appeal and post-grant proceedings. The guidance document incorporated feedback from stakeholder discussions and recent Federal Circuit decisions on patent subject matter eligibility. This guidance in particular incorporated and addressed the “two-step analysis” of subject matter eligibility, Step 1 analyzing eligibility under the four accepted invention categories related to process, machine, manufacture or composition of matter, and Step 2 applying the Supreme Court's two-part *Alice/Mayo* analysis to identify claims that are directed to a judicial exception and to then evaluate if additional elements of the claim provide an inventive concept³⁵. In particular, the guidance document provided a discussion of how to evaluate whether a claim recites a judicial exception such as an abstract idea (*i.e.*, mathematical concepts, certain methods of organizing human activity, and mental processes), and whether the claim as a whole integrates the exception into a practical application. The guidance document then provided many practical examples across a range of fields.

E. AI AS A FACILITATIVE TOOL FOR ENTERPRISE WORKFLOW

Artificial intelligence also has a significant role in enhancing the efficacy and efficiency of the USPTO operations. With over 650,000 patent applications being filed yearly, the complexity of prior art analysis continues to grow to levels that tax examiner workloads. As such the USPTO has continued to roll out and expand AI search and comparison capabilities such as MLTD (More Like This Document) and Similarity Search within the PE2E search tool.

Additionally, the USPTO has invested in training its workforce. The PPAC particularly commends the USPTO for investing and facilitating growth of human capital. The USPTO has developed a technical training on demand (TTOD) program to continue to advanced knowledge regarding AI overall, technologies involved and how best to utilize

³³ Data is based on the 2023 update of the Artificial Intelligence Patent Dataset (AIPD 2023) that identifies which of 15.4 million U.S. patent documents published from 1976 through 2023 contain AI. An article describing the AIPD 2023 is available and can be cited as: Pairolero, N., Giezy, A., Torres, G., Islam Erana, T., Finlayson, M., and Toole, A. 2024. The Artificial Intelligence Patent Dataset (AIPD) 2023 update.

³⁴ 89 FR 58128

³⁵ *Mayo Collaborative Services Inc. v. Prometheus Laboratories Inc.* (2012) and *Alice Corp. v. CLS Bank International* (2014).

them throughout the agency. The TTOD program began in FY 2017 with 145 courses selected by the SPEs in Technology Center (“TC”) 2100. By FY 2021, all utility TCs had courses on the site and the total offerings exceeded 775 classes, organized by TC and CPC classification symbol. As of FY 2023, TTOD had 1,160 courses. As of today, in FY 2024, TTOD features 1297 courses. Because of the growth in AI filings, the TTOD catalog has adopted a strong focus on AI. As of FY 2021, there were 40 courses related to AI. In response to changes to docketing and the continued diffusion of AI across more technology fields, the catalog grew to 158 AI-related courses in FY 2022 (+295% year-over-year), expanding both the breadth and depth of the available offerings. The growth continued in FY 2023, with 192 AI related courses available, that were viewed over 1300 times, by examiners in every utility TC. Currently, in FY 2024, the USPTO employees have access to a library of over 200 (and counting) AI-related courses.

Another important advance has been the AI Resource Portal. In FY 2024, the USPTO launched the AI Resource Portal, as an internal information access intended for all the USPTO employees. The portal provides curated training paths for employees from general fundamentals in AI to specialized highly technical curriculum based on their needs and interests.

In addition, each TC hosts an annual Tech Fair to provide technical training on topics typically examined in their TC. TCs also frequently schedule individual presentations throughout the year. Examiners from any TC can attend any Tech Fair event that is relevant to them. Attendance at these events is voluntary. The AI focused Tech Fair sessions have increased due to the growing interest and impact of AI. In FY 2022, the 2100/2400/2600 Tech Fair had 15 sessions focused on AI (+67% year-over-year). In FY 2023, TC Tech Fairs included 24 sessions focused on AI (+60% increase from FY 2022). In FY 2023, the total number of attendees was 7171 across the 24 sessions. In FY 2024, the USPTO employees attended approximately 19 live presentations on AI-related technologies ranging from AI-powered image and speech processing to the latest advances in large-scale generative AI through Tech Fairs. Each presentation in FY 2024 had an average attendance of over 400 employees. The PPAC strongly endorses these efforts and urges their continued growth and support.

To advance the USPTO’s public outreach and collaboration in fostering the development of AI tools in the IP ecosystem, the USPTO sponsored a Kaggle challenge entitled “Explainable AI for Patent Professionals.” In this challenge public entrants competed in generating Boolean search queries that effectively characterized collections of patent documents. The PPAC commends and encourages the USPTO for this outreach activity in AI. The PPAC members actively took part in this Kaggle challenge, with the team earning a silver medal for finishing in the top 5% of all teams. The PPAC encourages posting of additional challenges which are win-wins for all yielding valuable AI advances and engaging the public too.

F. ADDITIONAL AI OUTREACH ACTIVITIES BY THE USPTO

To gain additional information about artificial intelligence as subject matter for invention, as well as a tool to foster invention and facilitate enterprise operation, the USPTO

conducted a series of in-person as well as web-based public engagements. In March of 2024, the USPTO conducted two events: (1) “Inventorship guidance for AI-assisted inventions (virtual, 3/5/24) ,”³⁶ and (2) a “Public Symposium on AI and IP” (virtual and Los Angeles, 3/27/24) webinar on recent “Guidance on Use of Artificial Intelligence-Based Tools in Practice Before the USPTO” (3/5/24 and 3/27/24, respectively).³⁷ In May of 2024 the USPTO conducted a “Public webinar on recent Guidance on Use of Artificial Intelligence-Based Tools in Practice Before the USPTO” (virtual, 5/27/24).³⁸ In July of 2024 the USPTO conducted a listening session on the “Impact of the proliferation of AI on prior art and PHOSITA (virtual and Alexandria, VA, 7/25/24).³⁹ The PPAC strongly supports these outreach sessions and encourages their continuation.

KEY TAKEAWAYS and RECOMMENDATIONS

- Artificial Intelligence continues to grow in terms of technology, capability and applicability across fields in the United States. As the agency of invention and innovation, the PPAC recommends the USPTO continue to explore, utilize and advance AI as it relates to being a facilitator of invention, the subject matter of invention, and a propelling tool for the USPTO enterprise effectiveness.
- While statute, case law, and guidance provide that invention remains a human activity, nevertheless, the PPAC encourages the USPTO to continue to examine and dissect how AI, as it evolves, may foster invention.
- The PPAC congratulates the AI/ET working group for issuing the guidance on “Patent Subject Matter Eligibility, Including Artificial Intelligence,” addressing a technical and intricate area. The PPAC agrees that this type of clarification of potentially patentable matters which are complex, operating on the edge between what may be considered the concrete versus abstract, should continue to be pursued for additional clarification. While many examples are provided in the issued guidance and referenced to additional sources, the PPAC encourages the USPTO to continue to develop a range of examples.
- The PPAC recommends the USPTO to continue to issue and refine guidance documents as nuances of artificial intelligence mechanisms, algorithms and operation continue to be revealed.
- Investing in continued training of the USPTO personnel - from examiner to staff to administrator - is essential to ensure continued issuance and stewardship of optimal, robust, quality patents, in an increasingly complex interdisciplinary technical area, while facilitating organizational efficiency and effectiveness.

³⁶ <https://www.uspto.gov/about-us/events/inventorship-guidance-ai-assisted-inventions-webinar>

³⁷ <https://www.uspto.gov/about-us/events/guidance-use-artificial-intelligence-based-tools-practice-uspto>

³⁸ <https://www.uspto.gov/about-us/events/public-symposium-ai-and-ip>

³⁹ <https://www.uspto.gov/about-us/events/impact-proliferation-ai-prior-art-and-phosita-listening-session>

X. INFORMATION TECHNOLOGY MANAGEMENT

The USPTO's Information Technology (IT) systems provide the stable and resilient infrastructure critical to every aspect of the agency's work. Work that is conducted by over 13,000 employees, each of whom depend on a secure and dependable IT support 24/7. The USPTO also has been in the forefront of developing and using Artificial Intelligence (AI) to enhance IT capabilities to improve the reliability and durability of the patent right. The Chief Information Officer (CIO) and team members ensure that all aspects of the USPTO's work can be accomplished efficiently and on budget.

The PPAC's work with respect to IT related to three main topics: IT modernization, cybersecurity, and user experience (UX) testing of public services.

A. IT MODERNIZATION

Over the last several years, the USPTO has modernized many of its IT services for patents. These improvements have included Patent Center, the Public Patent Search Tool, AI tools for the Patent Examining Corps such as More Like This Document (MLTD), and improvements to the USPTO's website such as the addition of a Virtual Assistant. These services have replaced legacy tools such as EFS-Web and Public/Private PAIR. The USPTO is also continuing to migrate IT services, where appropriate, to cloud infrastructure in order to improve resiliency and system performance.

These IT upgrades are part of an agency IT strategy to contain costs while providing effective and high-quality patent IT services to the Patent Examining Corps, applicants, and the public. In its FY 2025 budget, the USPTO has decreased its IT budget by approximately 1% compared to FY 2024, and the agency projects an IT budget that grows \$1 billion less than inflation over a 10-year period (2021–2030). In its FY 2026 proposed budget, the USPTO anticipates modest increases over its FY 2025 projections, resulting from government-wide pay increases. IT spending is still expected to remain well below inflation.

The PPAC applauds these IT cost containment measures and the USPTO's continued modernization efforts and recommends that the USPTO continue to modernize its technology to ensure the resiliency and usability of its internal and external IT services. It is noted that these improvements and IT cost containment measures have not translated into an avoidance of patent fee increases, but as noted in the 2023 PPAC fee setting report, those fee increases were largely driven by external legal changes, namely an increase to small- and micro-entity discount rates in the Unleashing American Innovators Act of 2022 and across-the-board federal employee pay raises. To the extent that further IT improvements can be made that translate into lower costs and enhanced access to the patent system, the PPAC encourages the USPTO to consider such efforts.

B. CYBERSECURITY

The security of patent IT systems is of critical importance. Patent applicants depend on secure computing systems to maintain secrecy of unpublished applications and for

reliable interactions with the Patent Examining Corps, they in turn depend on secure systems for performing their examination work, and the public depends on accurate and reliable access to official agency information. Moreover, it is a whole-of-government initiative, pursuant to Executive Order 14028 among other things, for agencies to comply with federal cybersecurity standards.

It is the PPAC's understanding that the USPTO's IT services for patents comply with the relevant cybersecurity standards, and that cybersecurity remains a top priority. It is also the PPAC's understanding that many of the USPTO's IT modernization efforts are intended in part to provide enhanced cybersecurity.

Several events from this year are worth discussion in this regard. First, on July 19, 2024, a faulty update from cybersecurity company CrowdStrike caused systemwide outages and computer crashes worldwide, affecting over 8,000 the USPTO computers. The USPTO IT services worked diligently to resolve the issue, restoring service completely by July 25. The PPAC commends the USPTO for its efficient response to this situation that arose beyond the agency's control, but notes that the required resolution time would have translated to delays in application processing and examination. The incident strengthens the urgency of improving cybersecurity measures to avoid future outages.

Second, between March 19 and July 30, 2024, a coding error in the USPTO software resulted in incorrect patent term adjustment computations for an estimated 1 percent of patents issued during that time period. The USPTO corrected the error and provided a waiver of fees for contesting patent term adjustment determinations based on the programming error.

There were also two incidents of erroneous release of non-public patent information. Between February 5 and March 29, 2024, a programming error in Assignment Center inadvertently exposed patent application titles and serial numbers, such that unauthorized persons could potentially access them. The error was discovered on March 28, 2024 and was corrected the next day.

On August 1, 2024, the USPTO learned from a stakeholder that Patent Center was erroneously exposing information from unpublished patent applications, through certain Assignment's search functions. Unpublished applications that had a recorded assignment between December 2, 2017 and August 1, 2024 were affected, and the exposed information included owner and inventor names, filing dates, and application numbers and titles. The USPTO responded by disabling assignments functionality within Patent Center on August 1.

These errors are troubling and the USPTO's rapid responses to them are commendable. It is notable, however, that the exposures of assignment data and patent term adjustment error were not cybersecurity flaws, but rather programming issues in the USPTO systems. These highlight the need for more extensive testing of IT services, particularly by external applicants and users, especially given the fact that one such flaw was identified by an external stakeholder. Accordingly, these incidents highlight the need for more robust external user testing protocols, for which the PPAC has offered recommendations below.

C. USER EXPERIENCE TESTING

In rolling out upgraded IT services over the last few years, the USPTO has made substantial investments in user experience (UX) testing of those services. UX testing of an IT service involves having users, akin to those who would actually use the service in production, work through tasks on the service to report with feedback on how effectively they could accomplish their desired tasks. This testing is important for flushing out errors or bugs in the service, and it is also critical for making the service as user-friendly and accessible as possible.

Currently the USPTO performs several layers of UX testing, including internal testing within the agency and soliciting ongoing feedback. For substantial changes, such as the introduction of Patent Center, the USPTO incorporated additional layers of limited beta tests and feedback.

The Patents business unit would like to develop additional opportunities for UX feedback and testing of its publicly available products such as Patent Center or in the future the Public Patent Search Tool, as they are improved or changed in the future. In that regard, the PPAC is considering recommendations to do so. As part of the process, the PPAC consulted internally, with relevant agency officials, and also with the Trademark Public Advisory Committee to identify recommendations and best practices.

The resulting recommendations will be presented to the Patents business unit in a report that is currently being written by the PPAC. The report will identify additional opportunities and roles for UX testing that the USPTO can incorporate in its IT development as appropriate, and it will propose a committee structure and roles within the PPAC to encourage public and external engagement with the UX testing process. The PPAC looks forward to continuing to work with the USPTO on making its patent IT services as functional and user-friendly as possible for patent applicants, inventors, researchers, and diverse members of the public who use and rely on these services.

KEY TAKEAWAYS and RECOMMENDATIONS

- Information technology at the USPTO is a critical resource for accomplishing key goals of a robust and reliable patent system, and for serving customers and users of the USPTO services.
- Continued efforts toward strengthening and modernizing that infrastructure are ongoing and necessary to meet current cybersecurity challenges.
- The USPTO has opportunities to engage with the diverse range of users of its public IT services, in order to enhance user experiences with those services.
- The USPTO should continue its IT modernization efforts while remaining diligent about cost containment.
- The USPTO should continue to maintain and improve cybersecurity infrastructure, including its cloud migration strategy.

- The USPTO should expand upon its current practices of UX testing for public IT services.

GLOSSARY OF ABBREVIATED TERMS

ABBREVIATION	DEFINITION
AAU	Application Assistance Unit
AI	Artificial Intelligence
AIA	Leahy-Smith America Invents Act
AIPD	Artificial Intelligence Patent Dataset
ANPRM	Advance Notice of Proposed Rule Making
BBEDCA	Balanced Budget and Emergency Deficit Control Act
BU	Business Unit
CAIO	Chief Artificial Intelligence Officer
CI²	Council for Inclusive Innovation
CIO	Chief Information Officer
COO	Community Outreach Offices
CPC	Cooperative Patent Classification
CX	Customer Experience
DAV	Docket and Application Viewer
EO	White House Executive Order
ET	Emerging Technologies
FADO	first action date order
FDA	U.S. Food and Drug Administration
FR	Final Rule
FRA	Fiscal Responsibility Act
FWD	Final Written Decision
FY	Fiscal Year
IDS	Information Disclosure Statement
I-MAK	Initiative for Medicines, Access & Knowledge
IP	Intellectual Property
IPR	<i>Inter Partes</i> Review
IT	Information Technology
MLTD	More Like This Document
MTA	Motion to Amend
NDA	New Drug Application
NPRM	Notice of Proposed Rulemaking
NPS	Net Promoter Score
NSII	National Strategy for Inclusive Innovation
OC	Official Correspondence
OPE	Office of Public Engagement

OPQA	Office of Patent Quality Assurance
PETTP	Patent Examiner Technical Training Program
PGR	Post-Grant Review
PHOSITA	Person Having Ordinary Skill in the Art
POPA	Patent Office Professional Association
POST	Pendency Oversight Strategy Team
PPAC	Patent Public Advisory Committee
PSAI	Patent Search Artificial Intelligence
PTA	Patent Term Adjustment
PTAB	Patent Trial and Appeal Board
PTFRF	Patent and Trademark Fee Reserve Fund
PTRC	Patent and Trademark Resource Center
RFC	Request for Comments
SBIR	Small Business Innovation Research
SEE	Site Experience Education
SPE	Supervisory Patent Examiner
STTR	Small Business Technology Transfer
TC	Technology Center
TTOD	Technical Training on Demand
UPR	Utility/Plant/Reissue
USPTO	United States Patent & Trademark Office
UX	User Experience



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Ms. Darden is the Visiting Associate Clinical Professor and Director of the IP and Technology Clinic at The George Washington University Law School, where she has been since August 2022. Previously, Ms. Darden was an Associate Clinical Professor (with tenure) and Director of the IP Clinic at Suffolk University Law School for six years. Before joining Suffolk University, Ms. Darden worked for Sachnoff & Weaver, where she was a Partner and Patent Prosecution Department Chairperson. Prior to joining Sachnoff & Weaver, Ms. Darden was Chief IP Counsel for a small consumer products company, where she managed the company's IP prosecution and litigation portfolios and pioneered a strategy for strategically using and creating IP assets to enhance the company's competitive strength. As a law professor, Ms. Darden has taught IP survey, trademark law and practice, and patent law and practice. Ms. Darden is also a C-IP² Scholar at the George Mason University Center for Intellectual Property x Innovation Policy, where her scholarship focuses on the protection and preservation of IP rights for creators and inventors. She is also a member of the Giles S. Rich American Inn of Court. Ms. Darden is serving her first term and second year as a PPAC member.



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Ms. Harrison is the Founder of Percipience LLC, a board-level advisory firm focused on managing and developing IP strategy, quantifying and mitigating IP risk, and increasing IP value capture. Ms. Harrison was previously a Director with Inflexion Point Strategy, an IP investment bank providing IP transaction assistance, and was the CEO and Founder of Gathering2.0, the first online community to increase information transparency and efficiency in the patent transaction market. She is also the co-author of three published books, each of which takes an in-depth look at the concepts of intellectual asset management and highlights the winning strategies used by large companies to maximize the value of their IP. Ms. Harrison is serving her first term and third year as a PPAC member.



HEIDI NEBEL

Ms. Nebel serves as the Managing Partner and Chair of the Biotechnology & Chemical Practice Group of McKee, Voorhees & Sease, PLC. Ms. Nebel has over 29 years of experience obtaining patents and designing IP strategy in the areas of biotechnology, chemicals, and pharmaceuticals. She serves as an advocate for her clients and believes that the best results come from working in close association with the USPTO examiners. Her clients include over 40 universities and research institutions, as well as fortune 500 companies around the world. She is also an active member of ChIPs®, a nonprofit organization that advances and connects women in technology, law, and policy. Ms. Nebel is serving her first term and third year as a PPAC member.



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Mr. Hadad is Senior Vice President & Deputy General Counsel, Innovation Law, at Bristol Myers Squibb, where he is Chief Intellectual Property (IP) Counsel, leading a team supporting the company's efforts to discover, develop and deliver groundbreaking treatments for patients with serious unmet medical need. He was previously Chief IP Counsel at Schering-Plough Corporation and held roles at Johnson & Johnson and in private practice. During his legal career, Mr. Hadad has represented the innovative biopharmaceutical, generic, medical device and consumer goods industries, with a focus on IP procurement, litigation, transactions and policy in the United States and internationally, and is an active member of numerous IP educational, policy and advocacy organizations. Mr. Hadad is a passionate advocate for a strong and predictable IP system that drives innovation across all technologies, and in developing a diverse and inclusive pipeline of future leaders in the IP profession and the innovation ecosystem. He is a board member of the Intellectual Property Owners (IPO) Association, served as its President (2018-2019), and is currently chair of its Amicus Committee. Mr. Hadad holds a B.S. in Biology from Haverford College and a J.D., *cum laude*, from the American University, Washington College of Law. Ms. Hadad is serving his first term and second year as a PPAC member.



OLIVIA TSAI

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EARL "EB" BRIGHT

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**UNITED STATES
PATENT AND
TRADEMARK OFFICE**



FEE SETTING REPORT

August 14, 2023

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Background

The USPTO is entirely funded by fees collected from its users and does not rely on the federal government's tax revenues. In the Leahy-Smith America Invents Act of 2011 (AIA), the USPTO was granted the authority to set its own fees, but only after following a structured process of collecting and considering public input. Following a biennial fee review conducted within the agency, the USPTO sent a fee adjustment proposal to the PPAC on April 20, 2023. As provided by the statute, the PPAC held a public hearing on May 18, 2023, at the USPTO in Alexandria, Virginia and collected public input both at the hearing and in the form of written submissions. This PPAC/USPTO Fee Setting Report reflects the PPAC's views after considering the written submissions and hearing testimony. After considering this Report, the USPTO will issue a Notice of Proposed Rule Making (NPRM) including a fee proposal incorporating any revisions made to reflect the PPAC's input. After collecting and considering further public reaction to the NPRM, the USPTO will issue a Final Rule specifying adjusted fees. It is currently expected that the new fees will go into effect in 2025.

The fee adjustment includes targeted adjustments to assignments, continuing applications, design patents, PTAB fees, significant increases to accelerated design patent examination fees, and surcharges for request for continuation, excess claims, patent term adjustment, terminal disclaimer and unintentional delay petitions. There is also a 5% across the board inflation adjustment. And finally, there is a request for another 5% across the board increase.

Criteria for Analyzing the Fee Adjustment Proposal

In preparing its recommendation on the USPTO's fee adjustment proposal, the PPAC has considered the appropriateness of both the aggregate proposed fee increase and the individual fee increases.⁴⁰ Assessing the aggregate proposed fee increases involves considering the USPTO's overall needs to fulfill its mission of supporting the country's innovation system, including the need to maintain a robust operating reserve. At the last fee setting hearing, which occurred in 2018, there was much discussion of improving the USPTO IT infrastructure to both assure its operational reliability and help examiners improve patent quality. That same need exists today, as the cloud migration program is only about 20% complete. Fulfilling both the public and the Director's interest and commitment to increase reliability and certainty in the patent system will require continued improvements to both the examination and PTAB processes. And finally, the PPAC reviewed the current context the USPTO finds itself in. First, the Unleashing American Innovators Act (UAIA) of 2022, signed into law December 29, 2022, reduced barriers to entry into the patent system by increasing small and micro entity discounts. As a consequence of new, higher discounts, the USPTO will collect significantly less fee revenue going forward relative to baseline estimates. In the fiscal year 2024 budget it is estimated to amount to a \$600 million fee reduction. Second, the USPTO was required to provide a 4.8% pay raise starting in 2023. Additionally, in the FY 2024 budget, an additional 5.2% pay raise was included as part of an all of

⁴⁰ It should be noted that there were a number of both written and oral comments challenging the USPTO's authority under the statute to conduct the fee setting process. The PPAC has neither the ability nor the standing to make a legal determination as part of our role in the fee setting process. We have turned over all documentation regarding these challenges to USPTO legal.

government requirement. Thus, the USPTO finds itself depleting its required reserve balances due to both Congress and required government raises.

Whether the aggregate fee increase makes sense depends upon whether, whether USPTO is prioritizing the right expenditures to fulfill its mission, and whether it is operating efficiently. It is also appropriate to consider the life cycle costs of getting and maintaining a patent and evaluating the incentive effect on applicants. The impact of costs on applicants, particularly small inventors, is an important factor in the assessment. It is important to both PPAC and the USPTO that price does not significantly inhibit an inventor's willingness to seek patent protection. Increases proposed for individual fees as well as newly introduced fees can be judged based on fairness, their effect on applicant behavior, and whether they are in fact likely to raise expected revenue.

Overall Public Sentiment

Overwhelmingly in both oral and written comments, the public wanted more a more reliable and durable patent right emanating from examination. Many mentioned they would be supportive of a fee increase if it was used by the USPTO to provide that increased reliability and certainty. In general, many commenters were supportive of an inflationary adjustment. In the oral comments, there were a number of references to patient advocates requesting that patents be weakened or eliminated in favor of reduced drug pricing. While the healthcare challenges and unmet medical needs of patients are both heartbreaking and compelling, this is both a misguided and ill-informed understanding of the relationship between patents and drug pricing. The availability of reliable and durable patents is the necessary foundation to billions of dollars of research investment into tomorrow's cures. Patents are vital part of the solution to today's unmet medical needs, not the problem. Furthermore, there are a number of other more relevant considerations, which are out of scope of this report, that affect drug pricing.

Aggregate Fee Increase

The PPAC supports this fee increase. The current fee proposal contained two separates, across the board fee increase. The first was a 5% inflation adjustment. As mentioned above, the USPTO has already included a 4.8% pay increase in 2023 and is looking at another 5.2% pay increase in 2024.

The PPAC does not support this fee increase. The second across the board fee increase of 5% was designed to front load fees in order to reduce the reliance on maintenance fee renewals. The PPAC does not support this fee as we believe it places an undue burden on individual inventors and small businesses.

After Final Consideration Pilot (AFCP-a 2.0)

The PPAC views this fee as problematic as it requires paying the fee without any guarantee of an interview. We suggest that the USPTO consider either of the following proposals:

- a. Don't require a fee unless you can guarantee the applicant will get an interview
- b. Alternatively, don't pay the fee until the applicant does get an interview

If either case were to be enacted, then PPAC would support the fee increase.

Assignments

Previous assignment recordation fees were eliminated by the USPTO in 2014, however since then, there has been an increase in frivolous recordation submissions. This fee increase was viewed as one potential way to reduce such submissions. **The PPAC is against this fee** as ensuring transparency of ownership is key to patent data integrity, and we do not recommend USPTO to impose a fee that would provide an impediment to keeping assignment data up to date.

Continuing Applications

Continuing applications provide a high value mechanism for companies and inventors to keep a potential patent application in process over a longer period of time. **The PPAC supports this fee with the following modifications:** Drop the year three provision and only make applicable for year 7 or after. Three years is too short of a period, as there may not yet be an office action, particularly if the case was filed via the PCT or in art areas with significant backlog, or other information from which to evaluate the need to file one or more continuations.

Design Patents

The PPAC does not agree with this fee. PPAC believes that the USPTO should prioritize pendency issues before applying fees here, as many design patent users are already paying expedited fees given the long pendency backlog issues currently happening. Perhaps these issues could be addressed by a law change to implement maintenance fees.

Excess Claims

The PPAC is supportive of this fee increase with the following caveat: It is clear that the public wants more certainty that an increased fee will be spent on examination and/or giving the Examiners additional time to evaluate such cases.

Extension of Time (EOT) for Provisional Applications

The PPAC is supportive of decreasing EOT fees for provisional applications.

Information Disclosure Statement (IDS)

The PPAC is supportive of this fee increase, however we note that if Congress would reform inequitable conduct rules, this by itself may largely affect applicant behavior. With current inequitable conduct case law, there is undue pressure on practitioners to cite every possible reference or risk the practitioners right to practice or the enforceability of the case. The PPAC recommends a legislative proposal to

change this pressure. Also, if additional fees are paid, we suggest the additional money should go towards allowing Examiner's more time to consider the additional references.

Patent Term Adjustment

This fee is proposed to cover the USPTO cost of a patentee requesting the adjustment of the patent term of their patent. **The PPAC is generally supportive of this fee with the following caveat:** If the USPTO made the adjustment mistake, then the applicant shouldn't have to pay, if not, then applicant should pay the fee.

Patent Term Extension

This fee increase fee proposal is for patentees seeking to extend the patent term under 35 U.S.C. 156 in conjunction with the Food and Drug Administration/U.S. Department of Agriculture approval process. **The PPAC supports this fee in principle**, however we suggest the USPTO consider if such a large jump in fees is optimal, particularly the initial fee given start-up companies may be resource constrained.

Request for Continued Examination

This fee increase raises the fee for a first RCE by 10% and splits the current fee for second and subsequent RCEs into an increased fee for a second RCE and a new, higher fee for a third and subsequent RCE. **The PPAC supports this increase** as this allow the costs of continued examinations to be recovered directly from those applicants requesting multiple RCEs, instead of relying on other fees to subsidize the costs. The proposal continues to set the first RCE below cost.

Suspension of Action

This fee increase creates a tiered system in which the fees for subsequent suspensions are charged at a higher rate. This fee increase would not affect fees for suspensions of action requested at the time of filing a CPA or RCE. **The PPAC supports this fee increase** as the fee increases encourages efficient applicant behavior and examination and costs associated with suspension of action should not be subsidized by other fees.

Terminal Disclaimer

The PPAC does not support this fee increase. The stated justification is that an earlier terminal disclaimer submission permits the USPTO to reduce unnecessary examination costs, reduce appeal costs, provide greater certainty for the public, and promote overall efficiency of operations. PPAC does not agree that a fee increase will achieve these objectives. Furthermore, the fee increase will place an unfair burden to filers with limited resources. The increase will pressure such filers to give up patent term in exchange for a less expensive more compact prosecution while those with more resources can wait to see if they need to file a terminal disclaimer until allowable claim scope is identified.

Unintentional Delay Petitions

The PPAC supports this fee increase. The fee increase for a petition with a delay less than or equal to two years is designed to offset the costs of processing the petition. The creation of a higher tier aligns with increased costs to the USPTO when deciding a petition with a longer delay.

AIA Trial Fees

The PPAC supports this fee increase. The costs associated with IPR have continued to increase as a result of recent court cases and higher operating costs caused, in part, by inflation.

The AIA fee increase supports aggregate cost recovery for USPTO operations.

Word Count

The PPAC does not support this fee, as the fee increase favors well-resourced petitioners. Even if the small inventor is granted the same number of words, the expense to prepare longer, responsive papers is a significant burden. We believe the USPTO should set a reasonable word limit, and if the petitioner needs additional words, the petitioner can request additional words with the appropriate showing of cause.

Director Review of PTAB Decisions

The PPAC does not support this fee. Director review should be encouraged to ensure that all PTAB decisions are consistent. Adding a fee for this previously free service, may adversely affect individual inventors and small company applicants.

Conclusion

To support its role in the country's innovation system, the USPTO requires adequate funding. Timely, high-quality search and examination require an appropriately compensated work force with adequate time to complete the same, supported by state of the art and reliable IT infrastructure. The lack of reliability and certainty of the patent right has led to growing frustration among the public. The more prevailing view is that innovation is hindered by uncertainty about which patents are in fact valid. This has led to more litigation, consuming valuable and limited resources for both inventors and companies.

As noted above, the PPAC has not supported some individual fee increases and has asked for further refinement for others. It is believed that the PPAC unsupported fees will negatively impact individual inventors and could incentivize them to abandon the patent system completely, no longer seeking to protect their inventions. This is not helpful to our nation's goal of increasing our economic and technological competitiveness.

The PPAC views the biennial fee review process as successful in providing the USPTO the autonomy it needs to set its own fees, while importantly considering input from the public. The USPTO is in the best position to assess its own needs and balance the tradeoffs in setting individual fees. The PPAC notes with appreciation the efforts of the USPTO staff in conducting the biennial fee review and developing the fee proposal that we have reviewed. The PPAC also thanks all of those in the public who submitted comments and participated in the hearing on May 18th. We hope that the end result will be a fee structure that addresses the user community's concerns as well as expectations regarding the USPTO's operations and functionality providing the capabilities that the USPTO needs to fulfill its goal of providing reliable and certain patent rights.

