
STATEMENT OF
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**UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE**
BEFORE THE
**SUBCOMMITTEE ON INTELLECTUAL PROPERTY
COMMITTEE ON THE JUDICIARY
UNITED STATES SENATE**
“Oversight of the United States Patent and Trademark Office”
MARCH 13, 2019

I. Introduction

Chairman Tillis, Ranking Member Coons, and Members of the Subcommittee:

Good afternoon. Thank you for this opportunity to discuss the operations, programs, and initiatives of the United States Patent and Trademark Office (USPTO). As Chairman Tillis stated upon reestablishment of this Subcommittee: “Intellectual property plays an important role in our nation’s long-term economic success and national security.” I could not agree more. I am honored to be here with you today to share the many changes and initiatives that the USPTO has implemented this past year in pursuing these goals.

The USPTO’s mission is a critical one. It is directed toward fostering innovation and economic growth by providing innovators and entrepreneurs with the protection and certainty they need to raise capital, build their businesses and bring their products and services to the marketplace. During the last year, the Office has implemented many changes that seek to create more certain, predictable and reliable intellectual property rights. I am pleased that our efforts have been recognized. Last month, the U.S. Chamber of Commerce’s Global Innovation Policy Center ranked the United States the number one overall global leader and standard setter for the protection and enforcement of intellectual property (IP) rights. The same study ranked the U.S. second in the world for Patents, Related Rights, and Limitations in its 2019 International IP Index, up from tied for 12th last year and tied for 10th the year before. Similarly, in the 2019 Bloomberg Innovation Index, the United States returned to the top 10, rising from 11th last year to 8th overall this year and ranking best for the strength of its patent activity and high-tech density. With the dedication and professionalism of the employees of the USPTO, we will continue to lead and set the standard for IP protection, which serves the interests of all of its constituents and the public at large.

Our overall goal is to ensure that rights owners and the public alike have confidence in, and can rely on, a predictable and well-functioning IP system. This confidence spurs inventors to invent,

investors to invest, companies to grow and create new jobs, and science and technology to advance. I will continue to work with my team at the USPTO, with Secretary Ross and his team, others in the Administration, this Committee, and our stakeholders to identify and advance policies and initiatives that are working and reassess those that are not.

To attain that goal, we need to maintain a sustainable funding model. We are very pleased that the Administration and Congress continue to provide the USPTO with the authority to spend all anticipated fee collections. This provides us with the resources and flexibility needed to continue: reducing the patent application backlog; shortening patent pendency; improving patent quality; enhancing patent administrative appeal and post-grant processes; fine-tuning trademark operations; engaging effectively internationally; and investing in our information technology (IT) infrastructure. This also enables the USPTO to continue to build, retain and effectively manage the highly educated and talented nationwide workforce it needs to properly serve the stakeholder community.

We work hard to leverage every dollar we receive in fees to best serve our stakeholders. One of our most successful leveraging tools is our award-winning telework program. Approximately 88% of our employees participate in the USPTO telework program. It saves tens of millions of dollars annually in real estate costs. It also saves millions of dollars of commuting costs annually, allows us to continue operations even when the rest of the federal government is closed due to weather emergencies, and allows us to hire – and retain – the most skilled and successful workers from every corner of the United States. For example, we currently have approximately 200 employees working remotely for the USPTO in North Carolina, almost 30 in Delaware, more than 50 in South Carolina, and more than 300 in California. These employees – your constituents – are serving America’s inventors and entrepreneurs each day, while contributing to local economies throughout the United States.

We are also thankful that Congress recently extended the USPTO’s fee setting authority for eight additional years in the Study of Underrepresented Classes Chasing Engineering and Science Success (SUCCESS) Act of 2018. This authority allows the Office to continue to set user fees to more efficiently recoup its operational costs with input from our stakeholders.

The following provides an overview of some of our key programs and initiatives.

II. Patent Operations and Initiatives

Clear Patent Examination Guidance: Subject Matter Eligibility and Written Description

Between 2010 and 2014, the Supreme Court issued a series of decisions – *Bilski*, *Mayo*, *Myriad*, and *Alice* – that significantly impacted patent eligibility law and continue to generate substantial public debate. In the wake of these decisions—as well as numerous Federal Circuit decisions applying what is now known as the *Mayo-Alice* two-step framework—the USPTO has striven to provide guidance to patent examiners and the public on its understanding of these decisions.

The USPTO issued new guidance in a Federal Register notice published on January 7, 2019 revising the procedure at the USPTO for determining whether a patent application claim or patent claim is directed to a judicial exception— a law of nature, natural phenomenon, or an abstract idea— under the first step of the *Mayo-Alice* framework. The revision is two-fold.

First, the new guidance explains that abstract ideas, pursuant to case law, generally fall within one of three groups: mathematical concepts, certain methods of organizing human activity, or mental processes. Second, and pursuant to two centuries of case law, the new guidance explains that a patent application claim or patent claim that recites a judicial exception is not “directed to” the judicial exception if the judicial exception is integrated into a practical application of the judicial exception. The USPTO recently sought public comment on this new guidance, and comments were requested by March 8, 2019. The USPTO previously issued guidance in a Federal Register notice published on April 20, 2018, pertaining to the inquiry into whether an additional element or elements represent well-understood, routine, conventional activity under the second step of the *Mayo-Alice* framework. The USPTO similarly sought public comment on that guidance. The USPTO has trained patent examiners on the April 2018 and the January 2019 guidance and is in the process of ascertaining what further training is appropriate. In addition, in June 2018, the USPTO issued guidance on how to evaluate the patent eligibility of “method of treatment claims” in view of the Federal Circuit’s decision in *Vanda*. The USPTO’s patent eligibility guidance, training materials, and other documents, including frequently asked questions, are available on the USPTO’s website. The guidance is designed to increase the certainty and predictability of the patent eligibility analyses and provide a more consistent analytical framework to guide inventors, practitioners, examiners, and the public in finding the appropriate lines to draw with respect to patent eligible subject matter.

The USPTO also issued additional guidance in the Federal Register notice published on January 7, 2019, for the examination of claims in patent applications that contain functional language, particularly patent applications where functional language is used to claim computer-implemented inventions. The guidance addresses written description and enablement issues under 35 U.S.C. § 112(a), particularly relating to computer-implemented functional claims that recite only a solution or outcome to a problem without reciting how the solution or outcome is accomplished. The guidance further addresses issues related to the examination of computer-implemented functional claims having means-plus-function limitations under 35 U.S.C. § 112(f). The USPTO sought and is reviewing public comments on this new guidance. We have now also implemented training for patent examiners on this guidance.

I will continue to engage stakeholders and the public about ways to reduce the uncertainty around these critical areas of patent law.

Patent Pendency and Inventory

The IP system must be efficient and the USPTO is continuing to work to ensure that patents issue within a timely manner, subject to the statutory guidelines. The timely issuance of patents helps to provide certainty in the marketplace, and helps businesses and innovators make informed decisions on the development and marketing of their products and services.

In FY 2019, the USPTO expects to receive more than 600,000 patent applications. The inventory of unexamined patent applications is currently approximately 550,000 - which is down from more than 750,000 in 2009.

In terms of processing patent applications, the average time to first office action (first action pendency) has been reduced from 25.9 months in January 2009 to a current level of 15.9 months and our goal is to reduce that number to less than 15 months by the end of FY 2019. Average total pendency has fallen from 33.8 months in January 2009 to a current level of 23.7 months and our goal

is to maintain that number at less than 24 months through the end of FY 2019.

Updates to examiner performance evaluation

The USPTO recently informed its examining corps of some important updates, anticipated to take effect in FY 2020, which will bring the examination process in better alignment with the USPTO's goals of providing predictable and reliable patents rights to stakeholders. In particular, these updates revise the evaluation of examiner performance of patent examining duties via the examiner performance appraisal plan (PAP). The updated PAP establishes a roadmap for enhanced patent quality by providing examiners with a list of best practices in the areas of search, clarity of the written prosecution record, and principles of compact prosecution. This roadmap provides a greater emphasis on search by highlighting the importance of searching the inventive concept as disclosed in an application so as to identify the best prior art in the case at the earliest possible time in prosecution.

Patent Quality

Providing high quality, efficient examination of patent applications is key to the issuance of reliable patent rights. The USPTO's actions – whether to reject a patent application or allow a patent application – have a real-world impact on applicants, the public, and the economy.

In general, quality patents are those that issue in compliance with all the requirements of Title 35 of the United States Code as well as relevant case law at the time of issuance and are able to survive challenge down the line. Performing a thorough prior art search to help issue claims of proper scope is an important part of issuing quality patents that can stand up to scrutiny, if challenged. In addition, any action issued by the Office must include sufficient detail so that applicants and the public can better determine the basis for examiner decisions.

The USPTO is focusing on improving examiner searches through the following initiatives:

- Training: The USPTO has evaluated the training offered to examiners with a goal of increasing available training opportunities. This includes training on proper search techniques and search strategies as well as training on search tools, particularly for foreign patents and non-patent literature.
- Providing Additional Resources to Examiners: The USPTO is also providing additional resources for examiners to assist with prior art searches when needed. This includes making available internal experts to help with search strategies based on technology and classification as well as assistance with available search tools. An internal task force is determining how information technology, such as artificial intelligence, can be leveraged to assist with locating and retrieving prior art for examiners. As I discussed last year, we constantly seek ways to improve prior art searching and the quality of examination.
- Exploring New Processes: The USPTO is also testing new processes that can help with enhancing prior art searches, including pilot programs that serve to test these processes. This includes, for example, collaborative search pilots between multiple USPTO examiners as well as between USPTO examiners and examiners from foreign patent offices. The USPTO also recently concluded a pilot program to help examiners identify applications that would

benefit from a pre-search interview, so that any confusion with issues like claim construction can be resolved prior to performing an initial prior art search.

The USPTO is increasing transparency and collaboration between internal and external stakeholders by providing guidance and educational opportunities to external stakeholders. The USPTO's Stakeholder Training on Examination Practice and Procedure (STEPP) program is a 3-day course that provides external stakeholders with a better understanding of how and why an examiner makes decisions while examining a patent application. Based on the success of STEPP, the USPTO now also provides Virtual Instructor Led Training classes, which consist of short 2-hour courses on various patent topics. In addition, the USPTO holds monthly quality chat webinars with external stakeholders on patent quality topics with a substantial portion of the time reserved to answer questions from stakeholders and capture their feedback. Patent quality is a shared responsibility with external stakeholders and continued collaboration will lead to an improvement in the quality of incoming applications.

Examiner Training

Providing training and guidance to USPTO's employees is of utmost importance for supporting high-quality examination. Examiner training is provided for both newly hired and experienced examiners and may be delivered corps-wide or to specific disciplines. Legal training already completed this fiscal year includes extensive training to employees on the examiner guidance issued in January 2019 related to subject matter eligibility. The first phase of this training was completed in February. In addition, training on 35 U.S.C. §112 is currently in process and other training under development for delivery later this year includes training on claim interpretation, restriction, court decisions, and prior art rejections.

The USPTO also conducts Examiner Quality Chats, in a webinar format, to cover a range of patent quality topics and collaborates with stakeholders to provide technical training for examiners to enhance their subject matter expertise. The USPTO's Patent Examiner Technical Training Program provides opportunities for technologists, scientists, engineers, and other experts from industry and academia to voluntarily provide technical training and expertise to patent examiners in-person or virtually from their location. The Site Experience Education program provides an opportunity for commercial, industrial, and academic institutions within the continental United States to voluntarily host patent examiners for technical site visits - organizations who volunteer to host these examiner visits contribute to improving the quality of patent examination by keeping patent examiners updated on the latest technologies and innovations in their field of examination.

Customer Experience

The USPTO is committed to improving the customer experience consistent with the President's Management Agenda. The USPTO has taken steps to better understand the perceptions of the IP community across multiple customer user groups in order to deliver an outstanding experience that is consistent, clear, and intuitive. The USPTO is currently gathering customer feedback data and using the information to continuously improve processes and tools. By measuring customer feedback and then providing transparency on customer experience performance, it provides its customers and stakeholders a voice at the table and motivates business units within the USPTO to work together toward common, customer-oriented outcomes, so that the USPTO remains the global leader in Intellectual Property.

Fee Setting Authority

In September 2018, the USPTO exercised the fee setting authority that Congress recently extended in the SUCCESS Act and began the process of adjusting its patent fees by working with the Patent Public Advisory Committee to host a special public hearing on new proposed patent fees.

These proposed fees were based on a biennial review of our fees that the Agency conducted in FY 2017 where we determined that patent fee adjustments are needed to provide the USPTO with a sufficient amount of revenue to recover its aggregate costs for patent operations. The USPTO anticipates that the proposals will take effect in January 2021, which is three years after the previous adjustments. The USPTO must consider what the financial needs of the Office will be at that time and beyond.

In short, the proposed fees provide the resources and flexibility the USPTO needs to continue reducing the patent application backlog; shortening patent pendency; improving patent quality; enhancing patent administrative appeal and post-grant processes; engaging effectively internationally; and improving our IT infrastructure. These fee proposals will also enable the USPTO to continue to build, retain, and effectively manage the highly educated and talented workforce it needs to properly serve our stakeholder community.

III. Patent Trial and Appeal Board

America Invents Act (AIA) Trial Filings and Ex Parte Appeals

The USPTO's Patent and Trial Appeal Board (PTAB) conducts AIA trial proceedings and adjudicates ex parte appeals of examiners' final rejections. Since 2012, when the AIA trial provisions became effective, the USPTO has received more than 9,700 trial petition filings and has issued more than 4,900 decisions on institution and nearly 2,500 final written decisions within the statutory due dates. Additionally, the USPTO reduced the inventory of ex parte appeals from nearly 13,000 cases in fiscal year 2017 to fewer than 11,000 cases in fiscal year 2018, with a goal of reaching a steady state of 10,000 cases pending at any one time. The USPTO also reduced ex parte appeal pendency in fiscal year 2018 to an average of 15.3 months from an average of 17.8 months in fiscal year 2017, with an ultimate goal of about 12 months.

Issuance of Procedural Improvements and Guidance

The USPTO has made several significant improvements to AIA trial proceedings during the past year for enhanced transparency, fairness, certainty, and predictability.

First, the USPTO published a final rule in Federal Register harmonizing the claim construction standard to match the federal courts. Second, the USPTO issued a request for comments and proposed pilot program on motion to amend practice to give patent owners a second opportunity to amend their claims after receiving feedback. Third, the USPTO released an updated trial practice guide to provide additional guidance on trial procedures such as the use of sur-replies, pre-hearing conferences, institution factors, hearing times, proper use of expert testimony, and motions to strike and exclude. Fourth, the USPTO released guidance to implement the Supreme Court SAS decision concerning partial institution of AIA trials and the Federal Circuit *Aqua*

Products decision regarding the burden of proof for establishing the patentability of proposed amended claims. Finally, the USPTO published two standard operating procedures for the PTAB, one for paneling cases and the second for issuing precedential decisions.

We are monitoring our implementation of the various improvements to ensure optimal usage. Likewise, we are continuing to assess other possible changes to the AIA trial standards and processes. For instance, to manage the proceedings even more effectively, we are endeavoring to issue more precedential decisions and possibly a second update to the trial practice guide.

Ensuring the High Quality of Decisions

The USPTO has taken a number of actions to issue high timely decisions and enhance decisional quality. The PTAB administers weekly legal training to ensure judges, patent attorneys, law clerks, and paralegals are knowledgeable on the latest legal and policy developments. Additionally, the PTAB participated in an intra-agency working group to develop the newly-released guidance for determining subject matter eligibility under § 101 and conducted extensive training on the application of this guidance to ensure its consistent application.

Collaborating with Patent Examiners

The PTAB is enhancing its collaboration with the patent examiners in furtherance of a “one agency” goal. The PTAB is delivering quarterly training to examiners on various topics, such as the law of obviousness, to aid examiners in strengthening their legal analysis and work product. Additionally, the PTAB has conducted two joint studies with Patents. The first study assessed the use of parallel proceedings before the PTAB and patent examiners on the same patent. The second study focused on the frequency in occurrence of prior art and arguments raised in trials that were previously considered by the examiner during the examination of the challenged patent. The results of these studies will be ready to share with the public soon. The PTAB and Patents are continuing to explore ways to engage for education and mutual benefit.

Enhancing Transparency

The USPTO increasingly disseminates data about AIA trials and ex parte appeals to enable data-driven decision making and to better educate stakeholders. As part of this effort, the USPTO publishes monthly statistics about its proceedings. Additionally, the USPTO continues to conduct and publish studies on certain aspects of AIA trials in response to stakeholder feedback. During the past year, the USPTO published studies on motions to amend, expanded panels, and trial outcomes for Orange Book-listed patents.

USPTO also is working to replace PTAB’s legacy IT systems. A new system for AIA trials has already been launched, and the system for ex parte appeals is under development. There will be a follow-on investment to enhance the functionality of the new IT system to keep pace with changing business needs. The PTAB also revamped its website to be more user-friendly, including the addition of features that enable quick identification of new procedures, processes, and precedent.

Finally, the PTAB hosts periodic webinars and participates in various speaking engagements to keep the public abreast of current developments.

IV. Trademark Operations & Initiatives

The USPTO registers marks (trademarks, service marks, certification marks, and collective membership marks) that meet the requirements of the Trademark Act. We create and maintain the federal register of trademarks that now includes approximately 2.4 million registrations. Federal trademark registration provides important benefits to trademark owners that help them to enforce rights in their mark against unauthorized users and to enlist the help of U.S. Customs and Border Protection to exclude counterfeit goods from importation.

The register itself includes notice to applicants, other trademark owners, and our examining attorneys of the registrant's claim of ownership in a mark and allows them to search the availability of marks for registration in the United States.

Trademark pendency and quality have been impressive during the recent period of immense growth. During this time, the USPTO has devoted considerable resources on measures to address inaccurate and sometimes fraudulent claims of use that undermine the reliability of the use-based trademark register. The unauthorized practice of law in trademark matters has grown markedly, and the USPTO has responded by instituting random audits of post-registration maintenance filings to require proof of use for specific goods or services in the registration, obtaining software to aid our ability to detect fake specimens of use, and proposing a rule requiring that foreign-domiciled parties use an attorney who is licensed to practice law in the United States to represent them in trademark matters before the USPTO. The USPTO is exploring additional measures and welcomes the opportunity to discuss them with the public and this Subcommittee.

Performance Goals

For more than a decade, the USPTO has met or exceeded its trademark pendency and quality targets despite sustained growth. Since 2008, trademarks have been registered in less than 12 months from filing an application, on average, with a first action issued between 2.5 and 3.5 months from filing. The USPTO and its trademark stakeholders consider these to be optimal pendency rates.

First and final action "compliance rates" measuring examination quality continue to be high. Customers are filing 99.9% of all new applications electronically and the number of trademark applications processed completely electronically has also increased. This benefits workflow processes, data collection, and file management. The USPTO continues to engage the public to identify ways to efficiently process trademark applications with a goal of requiring all new filings and communications to be electronic in FY 2019.

Managing Growth and Maintaining Pendency and Quality

Trademark application filings historically have averaged annual increases between 6% and 8% during the last 34 years -- with only 4 years of negative growth during that period. Application filings for FY 2018 increased by 7.5%. Although our forecast for FY 2019 was for a 6% filing increase, so far, this fiscal year, our filings have actually decreased by about 2% compared to the same period in FY 2018. We now expect application filings to remain approximately flat for the fiscal year, and forecasts indicate that annual increases are expected to average less than the historical average during the next eight years.

Improving the Accuracy of the Register

For the public and the USPTO to reliably determine whether a mark is available for registration, the trademark register must accurately reflect marks that are in use in the United States for the goods and services identified in the registrations. For several years, the USPTO has been working to improve the accuracy and integrity of the trademark register. Although we have consulted with stakeholders and implemented a number of measures designed to address this issue, more can be done.

There has been a rise in behaviors that undermine the accuracy and reliability of the trademark register. The USPTO has faced a surge of foreign applications during the last few years, particularly from China, in some cases with inaccurate or possibly fraudulent claims of use of the mark for the goods or services specified in the application. Many of these applicants appear to be filing these questionable applications on the advice or with the assistance of foreign individuals and entities who are not authorized to practice law in the U.S. and therefore should not be representing trademark applicants before the USPTO.

Steps taken to address the rise in fake specimens include piloting software to help determine if a photograph submitted as a specimen of use has been digitally altered and actively encouraging lawyers to report suspicious specimens for pending applications. To highlight the significance of use statements to those who sign application and post-registration declarations, the USPTO has improved the readability of the declarations and required the statements in them to be acknowledged by checking a box next to each one. We also have increased the number of post-registration maintenance filings we audit, and the Trademark Trial and Appeal Board is piloting expedited cancellation procedures in cases raising nonuse or abandonment claims. To address the unauthorized practice of law, the Commissioner for Trademarks has issued orders excluding a number of apparently Chinese citizens from appearing before the USPTO in trademark matters. And just a few weeks ago, the USPTO issued a proposed rulemaking to require U.S. counsel for all foreign-domiciled trademark applicants, registrants, and parties to TTAB proceedings. If implemented, the rule would enable the USPTO to more effectively use available mechanisms to enforce foreign applicant compliance with statutory and regulatory requirements in trademark matters.

V. Additional Domestic and International Intellectual Property Policy

The USPTO plays a leading role in promoting strong and balanced protection and effective enforcement of IP at home and abroad. In particular, the USPTO “advise[s] the President, through the Secretary of Commerce, on national and certain international intellectual property policy issues,” and advises “Federal departments and agencies on matters of intellectual property in the United States and intellectual property protection in other countries.” Among other things, the USPTO advocates for global IP norms and understandings and conducts technical assistance and capacity-building programs for foreign governments and U.S. stakeholders through our Global Intellectual Property Academy (GIPA). *See generally* 35 U.S.C. 2(b). Through GIPA, we conducted about 150 in person training activities, serving more than 7,000 individuals, including about five thousand foreign government officials.

Some key developments and activities related to international and other (non-patent or trademark) policy issues are as follows:

Patent Prosecution Highway

The Patent Prosecution Highway, or PPH, is a cooperative initiative that facilitates the timely entry of innovative U.S. products into foreign markets and key trading partners, like Japan, Chile, and Mexico. The USPTO has led the global efforts to promote the cooperative framework, which has benefitted thousands of U.S. inventors. Under the initiative, an applicant receiving a favorable patent ruling in one office may request that another participating office expedite the examination of a counterpart patent application. The PPH has allowed U.S. inventors to expedite examination in foreign IP offices with high patent backlogs, like Brazil. The timely determinations facilitated by the PPH provide greater legal certainty to American businesses and inventors across various international markets.

Technical Assistance to Support Trade Negotiations & Other Trade Initiatives

Currently, the United States has free trade agreements in force with twenty countries and the USPTO provided expert technical advice and support on IP protection and enforcement in connection with the negotiations of all these agreements. The USPTO provides support in relation to implementation of the IP provisions of these agreements. Most recently, the USPTO assisted the U.S. Trade Representative (USTR) in developing the IP chapter of the United States–Mexico–Canada Agreement or USMCA. Signed by the President in 2018, the USMCA currently awaits ratification by Congress. The USPTO is proud of its ongoing role supporting the development and implementation of IP provisions of the U.S. trade agreements, and in ensuring strong and effective protection and enforcement of IP rights critical to driving innovation, creating economic growth, and supporting American jobs.

The USPTO also works closely with USTR and the Department of Commerce to provide support for other bilateral and multilateral trade initiatives including the annual Special 301 Report and various Trade and Investment Framework Agreements (TIFAs) with our global trading partners.

Protection of Industrial Designs Abroad

Industrial design protection has become considerably more important in recent years, fueled by growing needs of innovators not only to create new products, but also to differentiate them from competitors and, in an increasingly interconnected world, to improve user experiences.

The USPTO has led international efforts to ensure designers are able to protect their product designs in a cost-effective manner in key global markets through its work at the ID5 Industrial Design Forum – an incubator for sharing best practices among the five largest design offices from the China, European Union, Republic of Korea, Japan and the United States.

Copyright Policy

The USPTO also advises the Administration and the President on international and domestic copyright policy issues.

The USPTO also provided technical assistance during the past year as the ratification and

implementation processes for Marrakesh Treaty on Blind and Visually Impaired Persons and the Beijing Treaty on Audiovisual Performances were completed.

Domestically, we continue to facilitate public copyright policy discussions and provide technical assistance as needed to Congress in connection proposed legislative reforms. Work in this area during the last year included technical assistance on the Music Modernization Act (MMA).

China-Related Activities

The China Team at the USPTO along with the three IP attachés on the ground in China bring extensive knowledge of and experience with China's intellectual property (IP) system. The USPTO Mission in China also has five local attorneys who specialize in Chinese IP law.

Rights holders have expressed a range of concerns about the IP landscape in China, including bad faith misappropriation of trademarks, infringement of patents, excessive government involvement in licensing transactions, and theft of trade secrets. Consumers are fearful of health and safety risks posed by counterfeit products. The USPTO has responded by presenting a series of China IP Roadshows, which inform rights holders about the most effective ways of protecting and enforcing their intellectual property in China. In 2018, staff visited a wide range of venues, including Nashville, Des Moines, Austin, and New Orleans and more are planned for 2019.

IP Attaché Program

The IP Attaché Program is an important asset that supports the USPTO's efforts to promote strong and balanced protection and effective enforcement of IP rights abroad. The attachés' fundamental role is to provide technical expertise assisting embassy officials and advocate for U.S. IP policy positions for the benefit of U.S. stakeholders with governments in the host region; educate government officials on IP matters, including judges, prosecutors, patent and trademark examiners, customs officials, police and policy makers; assist U.S. stakeholders with IP concerns in the host country or region; and build grass roots support for U.S. policy objectives by conducting public awareness programs on intellectual property with embassy teams.

The USPTO currently has thirteen IP attachés serving in the U.S. and Foreign Commercial Service in ten countries around the world. These positions are based in Rio de Janeiro, New Delhi, Beijing, Guangzhou, Shanghai, Bangkok, Mexico City, Kuwait City, Brussels, Lima, Geneva and Kyiv. Most of these attachés cover a broader region.

We are pleased that the IP Attachés have proven to be effective advocates for U.S. intellectual property in overseas markets. We pledge to work with interagency partners to ensure their contributions continue to serve and advance American interests.

Progress and Potential: A profile of women inventors on U.S. patents

On February 11, the USPTO released a report titled "Progress and Potential: A profile of women inventors on U.S. patents." The report, released by the USPTO Office of the Chief Economist, analyzes the American women named as inventors on U.S. patents between 1976 and 2016. It shows that women still comprise a small minority of patented inventors and highlights the untapped potential of women to spur innovation in the United States. Notably, the report finds that recent gains in female participation in science and engineering occupations and

entrepreneurship are not leading to extensive increases in female inventors earning a patent. In 2016, women comprised only 12% of inventors named on U.S. patents.

Broadening the innovation ecosphere to include women – and other underrepresented groups – is critical to inspiring novel inventions, driving economic growth, and maintaining America’s global competitiveness. The USPTO has undertaken a proactive approach to encourage women, as well as other minority groups, to innovate and secure patents to protect their innovations including through its inventor assistance resources, hosting an annual Women's Entrepreneurship Symposium, supporting Pro-Bono networks around the country and building *pro se* resources in patents to make navigating the patent process more accessible, especially to first time applicants. Resources such as the USPTO’s Patent and Trademark Resource Center Program are located in more than eighty public, state and academic libraries – many in minority and underserved communities – providing a direct link to the community through regular programming, virtual offices hours with USPTO subject matter experts, and librarians trained to assist with IP searching and information.

The USPTO supports dozens of other STEM-related programs and events to provide basic education to young women about intellectual property such as the Girl Scout IP patch, which is administered to Girl Scout troops across the nation, and Camp Invention in school districts in every state and many other programs.

The USPTO will continue to advance the national dialogue around this issue and engage with industry, academia, and other government agencies to drive real change.

VI. Telework

To effectively manage its workload, while maintaining high-quality standards, the USPTO has adopted workforce strategies where employees stay productive and connected regardless of where they are located. The USPTO has been a leader within the federal space creating a nationwide workforce and effectively implementing telework strategies.

The USPTO telework program has provided cost savings by reducing the need for additional office space, enhancing recruitment and retention, fostering greater efficiency in production and management, enhancing the resiliency of the USPTO during continuity events, and providing opportunities for expanded work flexibility. Telework has also allowed the USPTO to more than double the number of employees since 2005 without significantly increasing its real estate footprint. In FY 2018, for example, based on nearly 6,424 full-time teleworkers, the USPTO avoided more than \$49.8 million in rent as a result of its full-time telework programs.

The USPTO’s telework program has also allowed many of our employees to continue to work during weather-related government shutdowns. The National Academy of Public Administration found that USPTO’s telework programs saved the Office an average of \$7 million per year based on work conducted during closures.

The 2010 Telework Enhancement Act allowed the USPTO to initiate a pilot program, the Telework Enhancement Act Pilot Program (TEAPP), which permitted employees to change their duty stations, thus relieving them of a regular reporting requirement to USPTO headquarters, in exchange for an agreement that they would pay their own travel costs for a limited number of

mandatory trips back to the USPTO campus for training and engagement. The USPTO currently has approximately 2,800 TEAPP employees living outside the immediate Washington D.C. metro area in 48 states, including Puerto Rico. We are pleased that Congress has extended the program until December 1, 2020. With this extension, the USPTO will further test larger volumes of trips at one time, the tolerance of employees to pay for travel, additional onsite training offerings, as well as the maturity of the program. As the December 31, 2020 deadline approaches, the Agency will explore all options associated with the future of TEAPP including how the agency will manage travel, as well as the development of internal policies for existing TEAPP employees.

VII. USPTO Regional Offices

The USPTO is actively working to better serve the local innovation economies through its four regional offices in Detroit, Dallas, Denver and San Jose. Among other things, these offices help the USPTO recruit and retain a highly qualified workforce of patent examiners and administrative patent judges. These offices have made our services more easily accessible to those working outside of our nation's capital. The offices also serve as hubs for our IP outreach and education efforts and provide inventors, small businesses, and entrepreneurs easier access to USPTO personnel and resources.

Regional office benefits to the public include walk-in services to obtain general IP information; work stations for searching patents and trademarks; a hearing room to host PTAB proceedings; and interview rooms to connect applicants to examiners working in the region, at headquarters or across the country.

Regional office outreach efforts have included broad-based and issue-specific IP seminars for startups, small business and independent inventors; tech-specific partnership meetings; participation in science, technology, engineering and math (STEM) education events; and working relationships with regional stakeholders including business interests and federal, state and local government officials.

VIII. Education and Outreach

The USPTO is committed to encouraging and supporting future generations of inventors and entrepreneurs in communities across the nation to play an active role in America's innovation economy by highlighting the greatness of American inventors and the benefits that their inventions bring to society. The USPTO does this in collaboration with and the support of Federal agencies, third party non-profits and educational organizations, school districts and universities across the country in order to reach geographically and socioeconomically diverse groups of K-12 students and educators. Such programs include the National Summer Teacher Institute on Innovation, STEM, and Intellectual Property (NSTI) where educators across the U.S. learn information about intellectual property and the USPTO to share with their students, colleagues and districts; Camp Invention (in partnership with the non-profit National Inventors Hall of Fame) where teachers receive training in STEM and intellectual property, an introduction to the patents and trademark systems that teachers take back and use in their own classrooms; and the Collegiate Inventors Competition (in partnership with the non-profit National Inventors Hall of Fame) that brings teams of graduate and undergraduate inventors to meet and discuss

innovation and intellectual property with Hall of Fame inductees and USPTO experts.

Additionally, as administrators of the National Medal of Technology and Innovation, awarded by the President of the United States, the USPTO partners with the National Science & Technology Medals Foundation to recognize inventor excellence and to inspire future generations to become inventors. In 2017, the USPTO supported the foundation's newest program—"An Evening With..."—that brings medal laureates to college campuses around the country. The program makes a personal connection between college students, at the undergraduate and graduate levels, with leading innovators and thinkers who have all been recognized by the White House as our nation's greatest leaders in technology and innovation.

IX. IT Modernization

The USPTO is investing in the modernization of its information technology and retiring its legacy systems. These new information technology tools are built on a modern, flexible, and more stable web-based infrastructure leveraging cloud-based hosting. This allows us to leverage the latest technological advances and supports a distributed national teleworking workforce.

IT operations at the USPTO are at a unique point where we are increasing our focus on stabilization and modernization that will result in improving our systems to realize state-of-the-art technology at our agency.

With this concentration on the foundation of stabilization and modernization, combined with our concurrent effort to leap frog into emerging technologies such as big data, machine learning and artificial intelligence, the USPTO hopes to improve examination and data driven decision making leading to quality patents and trademarks.

New USPTO CIO Jamie Holcombe has a unique opportunity to help the USPTO improve these systems and transition our agency to state-of-the-art technology.

X. Conclusion

Chairman Tillis, Ranking Member Coons, and all members of the Subcommittee, we appreciate your continued support of the goals, priorities, operations and employees of the USPTO. We look forward to working with you to promote the strong and balanced protection of intellectual property rights both at home and abroad.

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