AIPLA

Testimony of

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Subcommittee on Intellectual Property

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I. Introduction

Chairman Leahy, Ranking Member Tillis, and distinguished members of the Intellectual Property Subcommittee, I appreciate the opportunity to present the views of the American Intellectual Property Law Association (AIPLA) on “Improving Access and Inclusivity in the Patent System: Unleashing America’s Economic Engine”. We are grateful for the time, resources and leadership you and your staff have devoted in recognizing the importance of this issue to the future of our nation’s innovation system, and for your continued attention to the challenges that need to be addressed and overcome if we are to continue to thrive as a nation of innovators.

My name is Angela Grayson. I am a technology lawyer. I am the rare woman of color who is also a registered patent attorney. I have been in the field of patent law for two decades, having started my career as a patent examiner at the United States Patent and Trademark Office (USPTO). I practiced law for almost 15 years as an intellectual property attorney for large multinational companies including Pfizer, Eli Lilly, DuPont, and Walmart. About 5 years ago, I transitioned from corporate America, in favor of small business ownership, and I presently own the technology law boutique PRECIPCE where I have the pleasure of supporting, encouraging, and empowering science and technology startups in the specialty chemical, pharma, software, and medical device fields. I have had the privilege of participating in nearly every aspect of our nation’s innovation ecosystem, and it is from this experienced, diverse perspective that I come before you today. I am here to represent the views of AIPLA, where I presently serve as Chair of the Diversity in IP Law Committee.
Founded in 1897, AIPLA is a national bar association with approximately 8,500 members engaged in private and corporate practice, in government service, and in the academic community. AIPLA’s members represent a wide and diverse spectrum of individuals, companies, and institutions involved directly or indirectly in the practice of patent, trademark, copyright, and unfair competition law, as well as other fields of law affecting intellectual property. Our members represent both owners and users of intellectual property. AIPLA’s mission is to promote an intellectual property system that stimulates and rewards invention, creativity, and investment while accommodating the public’s interest in healthy competition, reasonable costs, and basic fairness.

II. The Problem: Challenges in Innovation

In recent years, objective indicators reveal the United States’ standing in innovation is changing. For the second consecutive year, China has outpaced the United States in patent filings. According to Daren Tang, World Intellectual Property Organization Director-General "It's not as if filings from the traditional parts of the world like the U.S. or Europe have decreased, it’s just that the rate, the acceleration, has become a lot stronger in Asia." Our nation’s leading agencies, namely the U.S. Department of Commerce and the United States Patent and Trademark Office have proposed a national strategy to counter this surge. In 2020, the USPTO announced the strategic need to develop new ways to expand American innovation, and to that end, the National Council

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1 See [https://www.caixinglobal.com/2021-03-03/china-beats-us-in-patent-filings-for-second-straight-year-101669845.html](https://www.caixinglobal.com/2021-03-03/china-beats-us-in-patent-filings-for-second-straight-year-101669845.html), accessed April 2021. ("China has captured the top spot in 2020 among international patent applications for the second consecutive year, a United Nations ranking released Tuesday shows, demonstrating once again how Asia is leading the tech innovation in the new normal.")
for Expanding American Innovation (NCEAI) was born. The Council’s role is to strategize new ways to expand American innovation by tapping into the strength of our nation’s diversity and find ways to increase the opportunities for all Americans to participate in innovation. AIPLA is a member of the Council, represented by our Immediate Past President, Barbara Fiacco. I also participate as a member of one of the Council’s Working Groups.

III. Ecosystem Barriers to Innovation

Data show that diverse teams achieve better results. Yet, women, socially disadvantaged individuals, and economically disadvantaged individuals comprise a small fraction of innovators who apply for and obtain patents. This suggests that their innovative potential is underutilized or not acknowledged. The differences in the number of inventors in these underrepresented communities in the private and public sector have been reported in recent studies. For example, women are more likely to be listed as inventors on patents granted to public or not-for-profit organizations. Private firms account for the majority of patenting in the United States. However, the percentages of members of underrepresented communities are lower in private firms that in other inventor-organizations. Therefore, supporting and expanding participation by women and minorities in innovative activity specifically targeting private firms may help offer a solution to improve women and minority inventorship rates. Research from Opportunity Insights, a

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2 https://hbr.org/2016/11/why-diverse-teams-are-smarter
Harvard University research team, confirms disparities in opportunity across gender, race, and income. The researchers found that women, in particular, may be considered “lost Einsteins” — people who would have contributed valuable inventions had they received early exposure to innovation and inventor role models. The research suggests that harnessing this underexploited talent could spur innovation and drive growth. Unfortunately, despite wide recognition that diverse teams drive additional business value, in practice many businesses fail to capitalize on their underutilized human assets to drive higher returns. Women and underrepresented communities present substantial underutilized value. Systematically engaging them in the innovation ecosystem will have a great positive impact for these individuals, their employers, and the American public as a whole.

In 2012, the National Bureau of Economic Research (NBER) published a paper entitled “Why Don’t Women Patent?”, which highlights a significant gender gap in patent inventorship, showing that women inventors comprised just over 10% of inventors (where at least one inventor is a woman) listed on U.S. origin patents issued in 1998. The paper additionally proposed that closing this gender gap among women Science and Engineering degree holders would

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5 According to Bell et al. (2017), if women, minorities, and low-income children were to invent patented technology at the same rate as white men from high-income (top 20%) households, the rate of innovation in America would quadruple. See http://www.equality-of-opportunity.org/assets/documents/inventors_summary.pdf. (accessed March 1, 2018).


increase commercialized patents by 24% and GDP per capita by 2.7%. Patents with at least one woman inventor accounted for 18.8% of patents through 2010 and increased to 21.9% through the end of 2019, at the current rate, it will be 2072 and beyond before women are awarded as many STEM patents as men. The underrepresentation of women and minorities in patenting is a complex problem. Reports suggest the use of patenting as a proxy for inventing and assumes that because women and minorities are not patenting, they are also not inventing. However, as the testimony from the “Lost Einstein” hearings in 2019 before the IP Subcommittees of both the US House of Representatives and Senate demonstrated, although there certainly could be better representation in STEM fields from women and minorities, they are present and are inventing. Women and minorities are engaging in innovation. However, many do not take the next step to patent. Even if they are interested in patenting, they may face other barriers.

In addressing our nation’s innovation shortfalls through the lever of diversity, it is imperative to do so in a systemic fashion. We believe that as a community, we need to actively 1) acknowledge the creativity and ingenuity of diverse populations of innovators and entrepreneurial support organizations and providers (ESOs), 2) empathize with the challenges faced by diverse populations and work to remove those barriers, and 3) activate resources,

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8 Id. at 2.
both human and material, of which diverse populations may be unaware or may lack the confidence to use.

**A. Acknowledge Creativity and Ingenuity That Diversity Brings**

The saying goes, “Diversity is being invited to the party, but inclusion is being asked to dance.” Before any strategy can be executed that incorporates diverse innovators from the perspective of race, gender, or ethnicity, it is important to acknowledge the value of the diverse individual. To someone who has grown up with their value being reinforced at every turn, this may seem an unnecessary step in the framework. However, speaking from personal experience as a woman of color, and having worked with women and people of color in both large and small enterprises, reminding individuals of their worth and value in our innovation ecosystem is time well-spent. Recognizing their diversity and the creative value their diversity provides can pay creative dividends in the future.

For example, at AIPLA, we fulfill much of our mission through organized committees. AIPLA has roughly 60 administrative and substantive committees which provide education to our members and formulate proposed positions for the Board of Directors to consider adopting on behalf of the Association. One of those committees is the Diversity in IP Law. As Chair of the Committee, our mission is to effectively serve AIPLA members from diverse backgrounds, to

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11 Vernā Myers is a Harvard-trained lawyer and founder of The Vernā Myers Company. Ms. Myers is also currently the VP, Inclusion Strategy at Netflix. Ms. Myers has done hundreds of hours of diversity and inclusion training, written numerous books on diversity and inclusion, and is widely regarding as a leading DE&I expert in the business and legal community. See [https://www.vernamyers.com/about-verna/](https://www.vernamyers.com/about-verna/) accessed April 2021.
encourage the professional growth of our members, and to embrace and celebrate the diversity of our membership. We think it is important to celebrate and *acknowledge* our racial, gender, and ethnic differences, because these differences can catalyze creativity, and diversity of thought. Our Committee is not limited to diverse professionals. We think it is important to welcome everyone willing to embrace the value diversity can provide, and we strive to create a safe space in our Committee for our members to be both seen and heard, recognizing such a safe space may not exist in our members’ professional workplaces. This year alone, our Committee has planned and provided programming to educate our membership around topics including, but not limited to, Diversity, Equity, and Inclusion. Our programming is not simply about *educating*, but also about *acknowledging* and *celebrating* our diversity, because we believe by doing so, we can catalyze and unleash our own creativity and value to the clients we serve.

**B. Empathize with Creators to Uncover Hidden Potential**

We as intellectual property professionals believe it is important that everyone participating and contributing to the innovation process is recognized and valued for that contribution. As an example, in-house professionals can employ empathy to identify women and people of color who may be hidden. In my personal experience, when you work closely with diverse project teams, it can be important to engage in a little due diligence to pressure test any inventorship determination that does reflect the project team as a whole. Frankly, looking at invention disclosures with a critical, *yet empathetic* eye, can work to uncover
hidden and Lost Einsteins. It can have the effect of working to empower underrepresented individuals in the innovation ecosystem. The expressions “representation matters,” and “if you can see it, you can be it,” are examples of empathic approaches to innovation. Understanding the challenges faced by innovative women and people of color can help in assessing and elevating innovation through these individuals drive our nation’s economic engine.

We also believe it is beneficial to better understand the participants in the innovation process, which is why we support the “Inventor Diversity for Economic Advancement Act (“IDEA”) Act of 2021. The voluntary information collected by the USPTO may be evaluated and studied and could be useful in developing various ways to address where the system may not be sufficiently serving inventors in underrepresented communities.

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Invention and creation have been a priority of our nation since its founding. Article I Section 8, Clause 8 of the Constitution of the United States provides [The Congress shall have power] “to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”\(^{13}\) However, the opportunities for all Americans to hold patents did not always exist.\(^{14}\) While our country’s laws have evolved, psychological barriers to participating in the innovation system may remain. The USPTO\(^{15}\), the legal community\(^{16}\), states, and other players in the innovation ecosystems have amassed many resources for innovators. However, simply because a resource exists does not mean the intended recipient will discover or use it.

When the Lost Einsteins hearings took place before this Subcommittee in 2019\(^{17}\), it was shocking to hear in some of the testimony that a number of women and inventors of color believed few resources, both legal and financial, could assist them in their quest to protect their intellectual property. We believe substantial resources do exist to assist inventors. For example, as will

\(^{13}\) https://constitution.congress.gov/browse/article-1/section-8/clause-8/

\(^{14}\) See The Colorblind Patent System and Black Inventors by Shontavia Jackson Johnson, Published in Landslide Vol. 11 No. 4, 2019 by the American Bar Association


\(^{15}\) USPTO Patent Pro Bono Program for independent inventors and small businesses

(https://www.uspto.gov/patents/basics/using-legal-services/pro-bono/patent-pro-bono-program) accessed April 2021

\(^{16}\) AIPLA Special Committee on Pro Bono (https://www.aipla.org/committees/probono) accessed April 2021

be discussed later in more detail, the USPTO has launched a Patent Pro Bono initiative where the Office provides information and a list of various referral organizations throughout the U.S. that can provide pro bono assistance to inventors.\textsuperscript{18} Many organizations and associations also provide legal assistance to inventors and innovators. For example, AIPLA has a Special Committee on Pro Bono designed to liaise with the USPTO and provide information to innovators. Organizations like Volunteer Lawyers for the Arts\textsuperscript{19} are dedicated to artists and creators, and in recent years, some have expanded their volunteer services to include patent and trademark support.

One popular and high-impact program for small business is the Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) programs. These U.S. government programs are designed to provide early-stage businesses with non-dilutive capital to solve a government agency problem. The award is administered in three phases, and the awardee company can elect to retain the intellectual property resulting from the research. Several agencies also provide additional “Technical and Business Assistance” (TABA) funding, authorized in the 2019 John S. McCain National Defense Authorization Act\textsuperscript{20}. This supplemental funding can help entrepreneurs with IP strategy, IP landscape, and in some cases patent-drafting expenses.

Many other public-private, government, state, and legal organizations do their part to help in sharing their time, talent, and resources to remove barriers in

\textsuperscript{18}USPTO Patent Pro Bono Program for independent inventors and small businesses (https://www.aipla.org/committees/probono) accessed April 2021
\textsuperscript{19}Volunteer Lawyers for the Arts https://vlany.org/ (accessed April 2021)
\textsuperscript{20}TABA: Supplemental SBIR/STTR (https://bbcetc.com/federal-funding/tab-supplemental-sbir-sttr-funding-you-might-not-know-about/) accessed April 2021
our innovation ecosystem. However, a disconnect still remains particularly with respect to helping women and people of color learn what resources, both human and material, are available to assist them. Outreach, education and awareness are so vitally important.

IV. Diversity in the Legal Community

In the legal community, we hear time and again about the need for diverse attorneys to work with diverse innovators, meaning we must be actively committed to diversifying the intellectual property bar. Using diverse intellectual property professionals to engage with diverse innovators can inject a sense of understanding, cultural familiarity, and a feeling of relatedness among diverse innovators.

For example, corporate legal departments can support R&D efforts by engaging more women to:

- Use diverse legal providers to model the value of diversity of thought and bring additional disruptive ideas into the innovation process;
- Conduct innovation forums focused on the inclusion of women in the innovation process;
- Encourage R&D leaders to create racial, ethnic, and gender-inclusive teams where diverse experience and backgrounds can create novel, non-obvious solutions;
- Facilitate the creation of synergistic situations where teams of gender-diverse backgrounds interact and innovate together creating highly innovative solutions garnering more forward patent citations; and
Identify diverse inventors and diverse legal providers as role models and mentors for others. Diverse legal providers can help in-house teams see opportunities from a new perspective. For example, many companies and industry groups have begun to host women-focused innovation fora, which dovetail with supplier diversity efforts. These kinds of fora help companies find suitable minority suppliers, and also tap into findings that consistent successful innovation requires diverse thought and a solid understanding of the target consumer. These are both areas where minority or women-focused fora and networks can help individuals with relevant knowledge connect, collaborate, and innovate.

Intellectual property requires highly skilled professionals. In an effort to improve the number of diverse legal providers, the USPTO has recently published a request for comments on proposed administrative updates to the General Requirements Bulletin for Admission to the Examination for Registration to Practice in Patent Cases Before the United States Patent and Trademark Office (GRB). There are three categories of technical and scientific qualifications for applicants: Category A for specified bachelor’s degrees; Category B for other bachelor’s degrees with technical and scientific training; and Category C for practical engineering or scientific experience, which may be demonstrated by passing the Fundamentals of Engineering test. The USPTO evaluates the criteria for applicants to sit for the registration examination on


an ongoing basis, and based on this ongoing evaluation, the USPTO is looking into changing the criteria to: add common Category B degrees to Category A, accept advanced degrees (i.e., master’s and doctoral degrees) under Category A, and accept a combination of core sciences under Options 2 and 4 of Category B, provided one of the core science courses has a lab component.

According to a recent study\(^\text{23}\), qualified women are unnecessarily excluded from patent bar membership by the current USPTO scientific and technical requirements. This paper explores and criticizes the obstacles prohibiting women from equal representation in the patent bar and proposes possible solutions to include more women to the bar. Specifically, the author argues that the USPTO can foster greater inclusion and innovation in the U.S. patent system by: (1) expanding the enumerated technical degrees that automatically satisfy the scientific and technical requirements for patent bar eligibility; (2) removing the undue requirements regarding program accreditation (for computer science degrees) and coursework; and/or (3) implementing an apprentice model as an alternative path to patent bar eligibility\(^\text{24}\).

In furtherance of the discussion about the possibility of revising the patent eligibility criteria, scholars have argued\(^\text{25}\), as to design patents, the USPTO applies its eligibility rules too strictly as to those professionals who may only wish to draft design patents. The argument has been that, while chemical

\(^{23}\) See “The Patent Bar Gender Gap: Expanding the Eligibility Requirements to Foster Inclusion and Innovation in the U.S. Requirements to Foster Inclusion and Innovation in the U.S. Patent System” by Mary Hannon (https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=1056&context=ipt) accessed April 2021

\(^{24}\) Id.

engineers can prosecute both utility patents and design patents, under the current rules, industrial designers are not eligible to sit for the patent bar to prosecute design patents, even though the USPTO actively recruits industrial design professionals and architects as design patent Examiners. The argument further provides the USPTO’s rules produce a substantial disparate impact on women’s access to a lucrative part of the legal profession, and furthermore, poses a barrier to women who wish to work with other women in patenting their designs. By requiring those seeking to practice design patent prosecution to have science and engineering credentials, the majority of whom are men, she argues that the USPTO’s rules disadvantage an entire pool of women patent professionals26 who could be working with women innovators. AIPLA is currently reviewing the USPTO’s proposed changes and may provide comments in the coming weeks.

As an organization, we have served to support diverse professionals for decades27. Our mission at AIPLA is to “lead and serve a diverse IP community by enhancing knowledge and shaping the future of IP law.” We accomplish this mission through our committees, such Women in IP Law, Diversity in IP Law, Mentoring, and Special Committee on Pro Bono, to name a few.

26 Id.
We have commissioned white papers exploring the pay disparity impacting women in IP Law, and each year we launch an economic survey that examines the economic aspects of intellectual property law practice, including individual billing rates and typical charges for representative IP law services. Our most recent economic survey indicates overall, the percentage of women in IP law responding to the survey has continued to hover around 20%, and the largest minority group other than women has consistently been the AAPI community (Asian American and Pacific Islander). Recent AIPLA Economic Survey data further reveal the percentage of private firm partners to private firm associates broken out by diverse groups. For example, the data shows 15% of private firm partners are women while 19% of associates are women. The data indicates 0.6% firm partners are African-Americans while 3.8% of associates are African-Americans. For the AAPI community, the ratio is higher, wherein the AAPI community makes up 5.1% of firm partners while 3% of firm associates are AAPI community members. And roughly 1.5% private firm partners are of the Latinx community while 1.5% of associates are Latinx.

Our Association is also committed to ensuring a pipeline of diverse legal talent. The Foundation for Advancement of Diversity in IP Law (formally known as the AIPLEF, which we helped co-found with the ABA-IPL Section more than two decades ago) supports members of underrepresented racial and ethnic groups in their pursuit of careers in intellectual property law in the United States. The Foundation's programs work toward:

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• Increasing the awareness of the IP profession among underrepresented racial and ethnic groups and supporting their participation in the IP profession;
• Providing financial support to individuals from underrepresented racial and ethnic groups who demonstrate an interest in a career in IP law; and
• Accelerating development of a more diverse IP professional community through networking, counseling, and mentoring efforts aimed at fostering career advancement of individuals from underrepresented racial and ethnic groups.

AIPLA agrees more work needs to be done to remove unnecessary barriers and obstacles in order to increase the number of women and diverse professionals in the patent bar.

V. Patent Pro Bono Access For Diverse Innovators

The patent prosecution process is not easy for the novice to navigate. It will come as no surprise that cost is a substantial barrier to our patent system for many diverse innovators, even though many inventors understand that a significant step to protecting their innovation is to obtain a patent. According to Mark R. Privratsky and Jennifer McDowell\(^\text{30}\), when faced with the complex and sometimes expensive process of patent prosecution, many low-income inventors conclude that they must proceed pro se or not at all. Fortunately, many inventors apply the same resolve and determination they used to conceive their inventions and tackle the problem head-on. Despite the

\(^{30}\) See Ethical Representation of Every Client: Paying or Pro Bono by Mark R. Privratsky and Jennifer McDowell published at AIPLA Annual Conference, October 2015
substantial efforts the USPTO has made to educate independent inventors and to make the system more accessible, an inventor may nevertheless find the patent process confusing and complicated. Diverse innovators may be more likely to give up when trying to navigate the patent process on their own. As one way to address this need, patent pro bono was born.

The Leahy-Smith America Invents Act called upon the USPTO to work with and support intellectual property law associations across the country to establish pro bono programs designed to assist financially under-resourced independent inventors and small businesses. As a precursor to the Act, in early 2010, the USPTO, along with representatives from the Minnesota law firms Patterson, Thuente, Christensen, Pedersen, P.A. and Goodman of Lindquist & Vennum PLLP had already begun discussing how to create a program to eliminate the financial hurdles that often prohibit independent inventors from patenting and bringing great ideas to market.31 Before long, with the help and efforts of other Minnesota colleagues, the first patent law pro bono program became a reality. The team from Minnesota formed various committees which worked toward securing funding, setting processes and procedures, recruiting volunteers, and generating nationwide buzz and support. A first-of-its-kind program, the Legal CORPS Inventor Assistance Program (IAP), launched in Minnesota on June 8, 2011, matching patent prosecution attorneys willing to provide pro bono legal assistance with inventors having already filed pro se patent applications for their inventions32.

31 Id.
32 Id.
In the years since the launch of the initial patent pro bono effort, the program has expanded to a nationwide network of independently operated regional programs that match volunteer patent professionals with financially under-resourced inventors and small businesses for the purpose of securing patent protection. Each regional program provides services for residents of one or more states\textsuperscript{33}. While the patent pro bono is not specifically targeted to women and people of color, early indicators suggest this initiative is already positively impacting these communities for many reasons, not the least of which because the practitioner provides legal services to the innovator at no cost.

\textsuperscript{33} Patent Pro Bono Program for independent inventors and small businesses (https://www.uspto.gov/patents/basics/using-legal-services/pro-bono/patent-pro-bono-program) accessed April 2021
VI. Conclusion

AIPLA appreciates the substantial effort of this undertaking by the Subcommittee and the opportunity to participate in the development of a very important dialogue on how to improve access and inclusivity in our patent system. We will continue to be engaged, and lead the way on this issue, and we are willing to respond to any questions you may have. We look forward to working with the Subcommittee on this important challenge as circumstances allow.