

June 19, 2019

Via Electronic Mail

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Attention: SUCCESS Act Study
Office of the Chief Economist
Mail Stop OPIA
Director of the U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Re: IBM Corporation Comments on the “Report Required by the Study of Underrepresented Classes Chasing Engineering and Science Success Act of 2018,” 84 Fed. Reg. 17809 (April 26, 2019)

IBM thanks the United States Patent and Trademark Office (the “Office”) for the opportunity to comment on the participation of women, minorities, and veterans in the U.S. patent system. As a leading innovator, IBM commends the SUCCESS Act’s objective to promote diversity within the U.S. inventor community. With improved diversity, U.S. innovation will benefit from broadened perspectives, fresh insights, and untapped resources, and the benefit will have a compounding effect as future generations of inventors draw inspiration from the preceding trail blazers.

Social and Private Benefits of Diversity

Diversity in innovation and patenting benefits the public tremendously. In the past, inventive teams that lacked diverse perspectives developed innovations that did not meet the needs of all potential users. Consider, for example, voice recognition software that modulated only to recognize the male voice and air bag designs that failed to protect women and children. Without a diverse perspective, technological leaps are stunted. Not only does the lack of diversity mean untapped ideas and insight from a sizeable portion of the U.S. population, it also means that the absent demographics are not being adequately considered when innovation takes place. If women, minorities, and veterans are not “in the room” inventing and patenting, it follows that their needs are likely not considered, and thereby the potential inventions that would meet those needs are not being developed.

IBM submits that the early exposure to Science, Technology, Engineering, and Math (STEM) careers interwoven with intellectual property (IP) education would advance diversity in

patenting. IBM champions such STEM and IP education. Since 2011, IBM has successfully launched over 100 Pathways in Technology (P-TECH) schools in multiple countries. P-TECH schools provide students in grades 9-14 with a no-cost Associate Degree in an applied science, engineering, computers or other competitive STEM disciplines. P-TECH schools were designed to address the global “skills gap” and strengthen regional economies by building a workforce with the academic, technical and professional skills required for new-collar jobs and provide underserved youth with an innovative education opportunity — a direct pathway to college attainment and career readiness. Over 185 students have graduated from the P-Tech program and many of these graduates are the first in their family to earn a college degree.

IBM supports introduction of IP education at an early age. Such programs open the window on patenting to our next generation. We applaud the IP Patch program, which began as a joint collaboration of the Office with the Girl Scout Council of the Nation’s Capital (GSCNC) and Intellectual Property Owners (IPO) Education Foundation. Through the IP Patch program, Girl Scouts and others increase their awareness of, and interest in, the creation and protection of IP, and particularly as it relates to STEM. Members of IBM’s IP legal department have administered IP Patch programs for local Girl Scout troops, as well as broader audiences, including IBM’s Take Your Children to Work event, last summer in Armonk, NY.

IP education goes "hand in hand" with improved diversity in patenting. The AAAS-Lemelson Invention Ambassadors is one such program, which highlights the importance of invention and inventors. “The Invention Ambassadors are deployed to address key audiences across the country to inspire and encourage a new and diverse generation of inventors, increase global understanding of the role of invention in creating new products and building new businesses, illustrate the importance of inventors and invention education in building economies and fostering innovation, and celebrate inventors who work to address issues of environmental sustainability and social good.¹” Prominent IBM inventors, such as Lisa Seacat Deluca, have been Ambassadors for the AAAS-Lemelson Invention Ambassadors Program over the years, and IBM Master Inventor Fang (Florence) Lu currently holds a position as an Ambassador.

Workplaces that provide encouragement, support and education about patenting foster a lasting culture of innovation that assists the broad and diverse spectrum of inventors. The workplace environment plays a strong role in whether women, minorities, and veterans are inventing, and consequently, patenting. If there is a lack of diversity in STEM fields, it follows that there would be a similar underrepresentation in patenting in those STEM fields. But laser focus on obtaining diversity in the workplace environment in STEM fields is not enough. Workplaces must also provide the necessary tools to their potential inventors to encourage

¹ American Association for the Advancement of Science, About Section, <https://www.aaas.org/programs/invention-ambassadors/about> (last visited June 19, 2019).

patenting. Workplaces can, and should, foster innovation and patenting through education and one-on-one mentorship programs. In 2019, IBM developed an invention disclosure promotion program in recognition of International Women's Day. The program was a successful initiative to encourage new inventors, and by extension the involvement of a substantial number of historically under-represented inventors, in the patenting process. We were encouraged by the results, which demonstrated near parity of women to men inventors in this new generation of inventors.

Support for Gathering Demographic Data

IBM supports the Office collecting demographic information in an effort to best assess current trends in diversity in patenting. Without demographic information collection, it is difficult to fully assess any problem of underrepresentation and whether any initiative to bring more inventors to the table has proven successful. However, we are concerned that demographic information could introduce bias. It is our position that while demographic information should be gathered, it should not be required to file a patent application. We propose, to reduce the possibility of any unintended bias in patent examination, the demographic information should not be linked to a specific application or, alternatively, that the demographic information should remain unavailable during examination.

Intellectual Property Education Outreach

IBM recognizes the potential of prominent intellectual property organizations in promoting the participation of underrepresented groups within the patent system. Institutions such as the World Intellectual Property Organization (WIPO), Intellectual Property Owners (IPO), and American Intellectual Property Law Association (AIPLA) hold well-attended conferences throughout the year discussing various aspects of IP. While these conferences are generally attended by corporate and private practice IP professionals, we propose leveraging these conferences as an opportunity to increase outreach among underrepresented inventive groups by offering workshops or panels to educate the public on inventing and patenting processes. These prominent IP organizations could further team with industry and organizations such as the Center for Intellectual Property Understanding to encourage education reform that includes at least some component of inventing and IP education at the elementary and secondary school level.

It should be noted that many of these organizations should be commended for their efforts towards improving diversity within the IP community; both IPO and AIPLA have formed

“Women in IP” committees, while WIPO launched a Gender Equality policy in 2014 as a means of promoting gender equality and women’s empowerment both within the organization and in the wider world of IP. IPO has even created a subcommittee directed to Women Inventors complete with its own toolkit with ideas to help support women inventors. The IPO Education Foundation, a nonprofit organization “devoted to educational and charitable activities designed to promote the value of intellectual property rights,²” in partnership with the Michelson 20MM Foundation, developed a lesson plan curricula for educators at middle school, high school and undergraduate level to teach IP basics to students. While these are all wonderful efforts, more partners are needed to engage in this effort to reach the untapped potential in women, minorities and veterans for the next generation of inventors.

One exemplary IBM mission to increase IP awareness involves members of the IBM IP department mentoring law students in IP with various institutions outside the United States, often providing guidance as these students write their dissertations covering various aspects of IP. From these mentoring relationships, both the mentors and the mentees gain a better understanding of how IP is protected in their respective countries as well as a better cultural understanding. A possible unintentional consequence of this mentoring program, however, is a better perspective of our own culture of innovation in the United States. From these mentorships, what rings true is that not only does the United States have a rich culture of innovation, but also our inventors are keenly comfortable with perseverance when faced with difficult technological challenges. We’d be remiss not to capitalize on that “can-do” innovative attitude by drawing on the potential of our women, minority and veteran inventive communities.

Recommended Programs and Policies

The Office asks whether there are policies, programs, or other targeted activities that have already proven themselves to be effective at recruiting and retaining women, minorities, and veterans in innovative and entrepreneurial activities. IBM has personally seen success in this area with its aforementioned 2019 International Women’s Day Invention Disclosure Promotion Program. Launched to celebrate and coincide with International Women’s Day, the program encouraged invention disclosure submissions that included at least one new inventor. The program began with a kickoff call with a diverse range of male and female prominent inventors and IP professionals, as well as innovators with an equally diverse range of experience with IBM’s patenting process. In so doing, the kickoff call inclusively welcomed our entire inventive community. We not only provided online tools explaining how to describe the invention and present the invention before IBM’s invention review boards, but also provided

² Intellectual Property Owners Education Foundation, About Section, <https://www.ipoef.org/about-us/> (last visited June 19, 2019).

over fifty experienced and diverse mentors for these new inventors. The program successfully attracted hundreds of new inventors, and of those new inventors we approached near parity between male and female inventors.

Through its own success, IBM believes that diverse mentorship and educational programs, particularly those that provide one-on-one interaction with budding inventors, are effective in recruiting and retaining underrepresented classes in the patent field. Thus, IBM recommends that the Office consider undertaking similar action in its efforts to address the participation of women, minorities, and veterans in the patent system. One potential approach involves the Office not merely encouraging, but coordinating opportunities for its diverse patent examining corps and industry experts to volunteer in schools across the country, educating and mentoring young children and teenagers who might otherwise lack knowledge or interest in the patent system. By having a diverse array of role models speak to these students, the Office would better convey a message that underrepresented classes are not only welcome within the inventor community but sought after for their diverse and valuable perspectives. Such an initiative should be coordinated with the Department of Education and similar state and local authorities to ensure the outreach is purposeful, coordinated and designed to reach as many students as possible.

Conclusion

IBM thanks the Office for providing an opportunity to submit comments regarding the participation of women, minorities, and veterans within the patent system. We support the Office's commitment to work with the patent community to improve diversity among inventors, as we believe that the inclusion of underrepresented groups will lead to greater creativity and innovation within the patent system.

Respectfully Submitted,

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