THE USPTO PATENT PRO BONO PROGRAM

JENNIFER M. McDowell & Saurabh Vishnubhakat†

I. Introduction	3
II. From First Steps in Minnesota to the AIA	5
III. A National Patent Pro Bono Commitment	11
A. First Movers: 2011-2012	12
1. Minnesota	12
2. Colorado	14
3. California	17
4. Washington, DC	19
B. National Reach: 2013-2014	21
1. Texas	21
2. Ohio	23
3. Massachusetts	25
4. Greater Philadelphia	26
5. The Carolinas	28
6. New York	29
7. Michigan	30

† Jennifer M. McDowell is the Pro Bono Coordinator of the United States Patent and Trademark Office. She was previously an Associate Counsel in the USPTO's Office of General Counsel. Saurabh Vishnubhakat is an Expert Advisor in the USPTO's Office of Chief Economist. Sincere thanks to Grant Corboy and Jeffrey Siew for their tireless efforts in support of the Patent Pro Bono Program, to Janet Gongola for helpful comments, and to Alan Marco and Charles DeGrazia for valuable data assistance.

8. Georgia	31
C. Latest Additions: 2015	33
1. The Midwest	34
2. Indiana	35
3. Florida	36
4. Alabama and Mississippi	38
5. Illinois	39
D. Expansions and Breakaways	40
IV. A Closer Look at the Program's Success	44
A. Minnesota: The Basic Numbers	44
B. Impact of the Pro Bono Filings	47
C. Two Case Studies	50
V. Conclusion	52
Tables and Figures	55

I. Introduction

Pro bono service is an important contribution of the legal profession to civil society. Not only does it promote greater access to justice in the traditional sense of legal representation, but it also increasingly reflects an investment in the social capital of communities who lack adequate economic resources—though this investment is often difficult to quantify. Put another way, pro bono service is important to those who have had their rights violated and cannot afford their own lawyers. Yet pro bono can be an invaluable benefit to anyone who is developing an invention or launching a startup and cannot afford his or her own lawyer. This prospective vision of pro bono as social investment is more ambitious. It is a vision particularly well suited for the U.S. innovation system, which reflects a similar balance of future investment with present benefit.

It is now somewhat rote in innovation economics and law that property rights, such as patents, are a temporary way to constrain competition and tolerate higher prices today as a way of rewarding innovators who create and disseminate valuable knowledge that will be freely available to society tomorrow.³ Patent rights are

-

¹ See Deborah L. Rhode, *Cultures of Commitment: Pro Bono for Lawyers and Law Students*, 67 FORDHAM L. REV. 2415, 2418 (1999) (identifying the fundamental quality of legal representation as a widely needed, and scarce, resource in the pro bono context).

² See, e.g., Scott L. Cummings & Rebecca L. Sandefur, Beyond the Numbers: What We Know—And Should Know—About American Pro Bono, 7 HARV. L. & POL'Y REV. 83.

^{107 (2013) (}characterizing pro bono as a "social investment"). See generally Deborah L. Rhode, Symposium, Rethinking the Public in Lawyers' Public Service: Pro Bono, Strategic Philanthropy, and the Bottom Line, 77 FORDHAM L. REV. 1435, 1451 (2009).

⁵ See generally David J. Kappos, Investing in America's Future Through Innovation: How the Debate over the Smart Phone Patent Wars (Re)Raises Issues at the Foundation of Long-Term Incentive Systems, 16 STAN. TECH. L.

particularly important to entrepreneurs and startups, as raising venture capital and securing a competitive advantage against established incumbents is difficult and complex.⁴ In these unforgiving economic conditions, patents can be a valuable quality signal to attract both funding and talent.⁵ But by the same token, innovators often are constrained by a lack of resources to pay for patent counsel necessary to protect the full scope of their invention.⁶

To help fill that need, the United States Patent and Trademark Office (USPTO) has systematically been engaging the legal community with inventor assistance beyond the agency's usual business of examining applications for patents and trademarks. This Article describes the brief history, flexible structure, and

REV. 485 (2013). Former USPTO Director Kappos framed the question this way:

[A]s regards our national innovation system, do we want today's innovations now on the cheap, or are we prepared to moderate what we take today with in-vestment [sic] so that we and our children will have even more, and better, innovations to enjoy 5, 10, and 20 years from now?

Id. at 487.

⁴ See generally Stuart J.H. Graham et al., High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey, 24 BERKELEY TECH. L.J. 1255, 1288–90 (2009).

⁵ *Id.* at 1303–04. *See generally* David H. Hsu & Rosemarie H. Ziedonis, Paper presented at the DRUID Summer Conference in Copenhagen, CBS, Denmark: *Patents as Quality Signals for Entrepreneurial Ventures* (2007), *available at* http://www2.druid.dk/conferences/viewpaper.php?id=1717&cf=9.

⁶ See Ted Sichelman & Stuart J.H. Graham, Patenting By Entrepreneurs: An Empirical Study, 17 Mich. Telecomm. & Tech. L. Rev. 111, 115 (2010) (finding that "young technology companies are especially sensitive to the costs of acquiring and enforcing patents, which . . . are roughly double the reported average for all patentees."); see also USPTO, INTERNATIONAL PATENT PROTECTIONS FOR SMALL BUSINESSES 16–22 (2012), available at http://www.uspto.gov/sites/default/files/aia_implementation/20120113-

ippr_report.pdf (finding that patenting costs are also substantial in international markets and that patenting expenses occur early in the life of small firms and are difficult to fund).

ongoing growth of that effort, embodied in the USPTO Patent Pro Bono Program.

The Patent Pro Bono Program is a national network coordinated by the USPTO to connect inventors and small businesses with registered patent attorneys and agents to assist in the filing and prosecution of patent applications for free. At the regional level, a broad array of non-profit organizations, bar associations, community economic development organizations, and institutions of higher education support the USPTO in low-income inventors with experienced patent professionals. At the individual level, volunteer patent attorneys and their inventor clients engage in the usual back-and-forth of the USPTO examination process, seeking patent protection as a way to enter or advance in the marketplace. In short, the program is a structural effort to bring independent inventors and startups the same opportunity of investment and economic competition that large and established incumbents enjoy.

The Article proceeds in three parts. Part I explains the origins of the program from a local pilot initiative within Minnesota's patent law community to a national endeavor codified in the landmark Leahy-Smith America Invents Act of 2011 (AIA). Part II describes the contours of the program as it has been adopted and implemented throughout the entire country. Part III offers empirical insights into the Minnesota pilot program, for which initial data is now available. The Article concludes with a discussion of pro bono's benefits and of the program's outlook for the future.

II. From First Steps in Minnesota to the AIA

Prior to 2011, no systematic client-side patent pro bono assistance existed in the United States. Thus, the USPTO's Inventors Assistance Center was, and still is, a valuable source of

general information about patent examining policy and procedure. Notably, the Inventors Assistance Center also connects the public with appropriate USPTO personnel, just as the related Patent Ombudsman Program does later during the patent application process. By its nature, however, the USPTO is not permitted to provide legal advice or answer questions about particular inventions or patent applications. That support previously came only from individual lawyers who, on an informal basis, performed prosecution work at reduced rates and sometimes for free.

As a first step to strengthening the support available to financially-needy independent inventors and small businesses, the USPTO, together with the non-profit LegalCORPS, ¹⁰ announced a pilot pro bono legal assistance program for Minnesota in June 2011. ¹¹ The Minnesota pilot was the first of its kind in the United States and was, from its creation, intended to serve as a model for more ambitious inventor assistance nationally. ¹² With support from the Minneapolis legal and business communities, the program matched qualifying inventors with registered patent attorneys who were prepared to guide them through the patent application process. ¹³

⁷ See Inventors Assistance Center (IAC), USPTO, http://www.uspto.gov/learning-and-resources/support-centers/inventors-assistance-center-iac (last visited Aug. 10, 2015).

⁸ See id.

⁹ See id.

¹⁰ "LegalCORPS provides free assistance in non-litigation business law matters to low-income owners of small businesses, small nonprofit organizations and low-income innovators in Minnesota—through the services of volunteer lawyers" What is LegalCORPS?, LEGALCORPS, http://legalcorps.org (last visited Aug. 18, 2015) .

See David Kappos, Director's Forum: A Blog from USPTO's Leadership, USPTO (June 20, 2011),

http://www.uspto.gov/blog/director/entry/new_pilot_program_to_provide.

¹² See id.

¹³ See id.

In addition to income qualifications, the Minnesota pilot program also had a risk-sharing feature that is common to many kinds of market support systems ranging from corporate governance¹⁴ to legal services:¹⁵ It required a committed investment from the beneficiary inventors themselves. Candidate inventors were required to have completed an online USPTO training program on intellectual property and to have conducted a patent search to explore as an initial matter that their inventions were, indeed, inventive. 16 They also were required to have filed either a provisional or non-provisional patent application, and to have paid a modest administrative fee to signal the seriousness of their intent to pursue patent protection further. 17

At the same time that the USPTO's Minnesota pilot program was being established, Congress was considering a comprehensive patent reform bill that would conclude years of legislative effort. 18 In June 2011, the House Committee on the Judiciary issued a

¹⁷ See id.

¹⁴ E.g., Alan O. Sykes, The Economics Of Vicarious Liability, 93 YALE L.J. 1231, 1246–47 (1984) (explaining how the vicarious liability doctrine encourages more socially optimal investment in a principal's oversight of its agent through risk-sharing between them).

¹⁵ E.g., Lester Brickman, Contingent Fees Without Contingencies: Hamlet Without the Prince of Denmark?, 37 UCLA L. REV. 29, 43 (1989) (framing contingent-fee representation as a means of risk sharing to hedge against exposure to loss in the provision of legal services).

¹⁶ See Kappos, supra note 11.

¹⁸ See Patent Lawsuit Reform Act of 2010, H.R. 6352, 111th Cong. (2010); Patent Reform Act of 2009, S. 610, 111th Cong. (2009); Patent Reform Act of 2009, S. 515, 111th Cong. (2009); Patent Reform Act of 2009, H.R. 1260, 111th Cong. (2009); Patent Reform Act of 2008, S. 3600, 110th Cong. (2008); Patent Reform Act of 2007, S. 1145, 110th Cong. (2007); Patent Reform Act of 2007, H.R. 1908, 110th Cong. (2007); Patent Reform Act of 2006, S. 3818, 109th Cong. (2006); Patents Depend on Quality Act of 2006, H.R. 5096, 109th Cong. (2006); U.S. Patent & Trademark Fee Modernization Act of 2005, H.R. 2791, 109th Cong. (2005); Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005).

favorable report on H.R. 1249, which provided that the Director of the USPTO would "work with and support intellectual property law associations across the country in the establishment of pro bono programs designed to assist financially under-resourced independent inventors and small businesses." In endorsing a national programmatic expansion of pro bono assistance for patent applicants, the committee report identified "the importance of individuals and small businesses to the patent system and our national culture of innovation" as the motivation of Congress. By September 2011, H.R. 1249 had passed both chambers by large bipartisan margins and was enacted as the America Invents Act (AIA). 22

Implementing the AIA's pro bono program requirement²³ would require an evaluation of the Minnesota pilot program. Establishing the pilot took over a year, during which time LegalCORPS had determined what best practices Minnesota would try to model for other programs in the future. Of particular importance were the intake, screening, and referral services by which potential clients would be properly identified and vetted to manage the liability and conflict concerns that law firms routinely

¹⁹ H.R. REP. No. 112-98, at 38 (2011) (reproducing § 29 of the Act, later enacted as § 32).

²⁰ *Id.* at 56.

²¹ First introduced in the Senate as S. 23, the AIA passed the Senate on March 8, 2011, by a vote of 95-5. Senate Vote 35 – Approves Patent System Overhaul, N.Y. TIMES http://politics.nytimes.com/congress/votes/112/senate/1/35 (last visited Aug. 18, 2015). The bill passed the House with amendment on June 23, 2011, by a vote of 304-117 as H.R. 1249. House Vote 491 - H.R.1249: On Passage, N.Y. TIMES, http://politics.nytimes.com/congress/votes/112/house/1/491 (last visited Aug. 18, 2015). The amended bill passed the Senate on September 8, 2011, by a vote of 89-9 and was signed into law on September 16, 2011. Senate Vote 129 -Passes Patent Reform Bill, N.Y. TIMES. http://politics.nytimes.com/congress/votes/112/senate/1/129 (last visited Aug.

²² Pub. L. No. 112-29, 125 Stat. 284 (2011).

²³ *Id.* at 340.

confront and that pro bono programs are particularly concerned with resolving.²⁴ These best practices would later inform the establishment of similar programs around the country,²⁵ as other programs were already emerging, including efforts in Colorado, northern and southern California, and the DC metropolitan area, with expressions of interest from a dozen others.²⁶

To build on this momentum under the AIA's mandate, the USPTO convened a Pro Bono Task Force of practitioners and leaders in the IP community, including members of the American Intellectual Property Law Association, the IP Section of the American Bar Association, and the Federal Circuit Bar Association. ²⁷ By October 2012, the task force had begun

²⁶ See Salmela & Privratsky, supra at 24.

- James Brookshire, Federal Circuit Bar Association
- Jay Erstling, William Mitchell College of Law
- Candee Goodman, Lindquist & Vennum
- Georgann Grunebach, Fox Group
- Harry Gwinnell, Greenblum & Bernstein
- James Patterson, Patterson Thuente IP
- Mark Privratsky, Lindquist & Vennum
- The Hon. Randall Rader, U.S. Court of Appeals for the Federal Circuit
- Kevin Rhodes, 3M Innovative Properties Company
- Paul Roberts, Foley & Lardner
- Amy Salmela, Patterson Thuente IP
- Warren Tuttle, United Inventors Association
- Laura Zeman-Mullen, Zeman-Mullen & Ford

24

²⁴ The best practices were subsequently compiled and published. *See* Amy M. Salmela and Mark R. Privratsky, *Patent Law Pro Bono: A Best Practices Handbook*, 4 CYBARIS. AN INTELL. PROP. L. REV. 1, 3 (2012), *available at* http://web.wmitchell.edu/cybaris/wp-content/uploads/2012/09/Salmela-

Privratsky-Pro-Bono-Best-Practices-Handbook.pdf.

²⁵ *Id.* at 286.

²⁷ As of August 2012, the Pro Bono Task Force included the following members outside the USPTO:

considering potential governing structures to offer ongoing support and guidance to the regional programs in existence at the time, and to encourage the establishment of additional programs.²⁸ As a result of these efforts, the task force concluded its work with the establishment of an initial governance body, the Pro Bono Advisory Council in October 2013.²⁹ The advisory council replaced the earlier task force, and the council's charter was itself limited to two years, when it would have to be renewed or replaced.³⁰ Notably, under the charter, the USPTO would participate in the pro bono program only indirectly as an advisor and convener rather than directly as a member.³¹

By early 2014, the patent pro bono efforts had substantial support in all three branches of the federal government. Congress had already clearly spoken in the AIA about the need for a national commitment to serving resource-constrained inventors and startups; 32 then-Chief Judge Rader of the Federal Circuit had been an early leader of the task force and had signed the advisory council's first charter at a ceremony in his own judicial chambers; 33 and in February 2014, President Obama issued an

²⁸ See generally REPORT OF THE PRO BONO TASK FORCE, LEGAL SERVS. CORP. (Oct. 2012),

http://www.lsc.gov/sites/default/files/LSC/lscgov4/PBTF_%20Report_FINAL.pdf

²⁹ See USPTO Applauds Pro Bono Programs and Newly Formed Advisory Council, USPTO (Nov. 12, 2013), http://www.uspto.gov/news/pr/2013/13-32.jsp.

³⁰ CHARTER OF THE PRO BONO ADVISORY COUNCIL (on file with the USPTO).

³² H.R. REP. No. 112-98, at 56 (2011) ("The Committee acknowledges the importance of individuals and small businesses to the patent system and our national culture of innovation. Consistent with this sentiment, the Act requires the USPTO Director to support intellectual property law associations across the United States to establish pro bono programs to assist under-resourced independent inventors and businesses.").

³³ See Sections Signs Charter for AIA Pro Bono Advisory Council, ABA, http://www.americanbar.org/publications/section_enews_home/intelprop_eNews_november2013.html (last visited Aug. 18, 2015).

executive action to "dedicate educational and practical resources to assist inventors who lack legal representation, appoint a full-time Pro Bono Coordinator, and help expand the existing America Invents Act Pro Bono Program to cover all fifty states." The executive action cited the Pro Bono Advisory Council's leadership in coordinating the program and urged the patent bar to participate. 35

III. A NATIONAL PATENT PRO BONO COMMITMENT³⁶

For all the support it received and momentum it generated, the patent pro bono program has had a strikingly simple design: independent groups match qualifying clients into a network of patent lawyers willing to volunteer their services. These groups may be bar associations, non-profits, universities, or others. The USPTO, being a federal agency, does not control the pro bono activities of these referral networks, but rather, it provides resources and expertise to help establish them in the first place and help them expand their reach.

In general, most regional programs have three basic requirements for an inventor to qualify for assistance: (1) income below a specified level, (2) some sort of knowledge of the patent system, and (3) an invention (not merely an idea). Each of these

³⁴ Answering the President's Call to Strengthen Our Patent System and Foster Innovation, THE WHITE HOUSE (Feb. 20, 2014), http://www.whitehouse.gov/the-press-office/2014/02/20/fact-sheet-executive-actions-answering-president-s-call-strengthen-our-p.

³⁵ See id.

³⁶ This Article does not purport to outline the policies and procedures of every Patent Pro Bono Program, but rather surveys practices across the regional programs. Additional information is available directly from each regional program.

concepts is implemented in slightly different ways by various programs across the United States.³⁷

A. First Movers: 2011–2012

1. Minnesota

Minnesota's Inventor Assistance Program was established by LegalCORPS, a non-profit organization created by the Minnesota State Bar Association that, at the time the Inventor Assistance Program was created, had already proven successful in matching low-income entrepreneurs with attorneys in transactional business matters. As Minnesota's only statewide business pro bono legal program, LegalCORPS was best positioned to add patent prosecution to the existing portfolio of services available to entrepreneurs. The program opened its doors to Minnesota residents on June 8, 2011.

The program's requirements are straightforward. Inventors must be at or below an income limit of 300% of the federal poverty guidelines in order to qualify. The income threshold helps to ensure that pro bono assistance does not crowd out the work of private attorneys whose services are, in fact, affordable to their clients. In addition to individual inventors, the program also accepts small businesses where each owner's income falls below the 300% threshold. Inventors must pay a \$50 administrative fee

³⁷ See infra Parts III.A–C.

See History, LEGALCORPS, http://www.legalcorps.org/about-legalcorps/history (last visited Aug. 10, 2015) [hereinafter LegalCORPS History].

³⁹ *Id*.

⁴⁰ See John Calvert, Pushing Ahead with Pro Bono Assistance, INVENTORSEYE, http://www.uspto.gov/custom-page/inventors-eye-pushing-ahead-pro-bono-assistance (last visited Aug. 18, 2015).

⁴¹ See Salmela & Privratsky, supra note 24, at *18.

⁴² See id.

⁴³ See 300% of Federal Poverty Level Guidelines—2015, LEGALCORPS, http://legalcorps.org/wp-content/uploads/2015/03/2015-200-300-Percent.pdf (last visited Aug. 18, 2015).

when completing an application for the program. 44 Inventors must already have filed a provisional patent application prior to acceptance into the program. 5 This requirement ensures that inventors have a sufficient interest in their invention and that they are willing to take initial steps to protect their potential rights. Additionally, applicants must have a strong connection to Minnesota. 47 Lastly, applicants must pass a subject-matter screening as to their inventive ideas in order to be eligible. 48

Significantly, the Minnesota program provides professional liability insurance for volunteer attorneys taking on a patent matter that LegalCORPS has referred to them. ⁴⁹ This allows in-house counsel, who may not be covered by a portable malpractice insurance policy, to volunteer in the program. Attorneys who

_

⁴⁴ See Frequently Asked Questions, LEGALCORPS, http://www.legalcorps.org/small-businesses/frequently-asked-questions (last visited Aug. 10, 2015) [hereinafter Small Business FAQ].

See *Frequently* Asked Ouestions, LEGALCORPS. http://legalcorps.org/inventors/frequently-asked-questions (Aug. 18, 2015) [hereinafter Inventors FAO] ("[A] requirement that an applicant already have an application helps ensure that the inventor has developed the innovation beyond the 'I've got an idea' stage—and does not expect an attorney to provide a viable framework for a patentable (and marketable) invention that the inventor cannot."). If an inventor requesting assistance has not yet filed a provisional application, LegalCORPS refers her to the nearby William Mitchell College of Law, where students at a USPTO-certified IP clinic can draft and file provisional applications for clients, enabling them to participate in the LegalCORPS program. LEGALCORPS, INVENTOR ASSISTANCE PROGRAM, **MIPLA** (2012),available at

 $^{{\}it http://www.mipla.net/ricofiles/pdf/LegalCORPSIAP for MIPLA.pdf.} \ ^{47} \emph{Id.}$

⁴⁸ See Salmela & Privratsky, *supra* note 24, at *23, *33. The screening committee does not conduct a formal assessment but rather evaluates basic patentability for purposes of further review and engagement with the inventor. *See id.* at *33.

⁴⁹ LegalCORPs History, supra note 38

volunteer for the program must have a minimum of three years' experience or, otherwise, must partner with a more senior attorney.⁵⁰

As the oldest of the patent pro bono initiatives, the Minnesota program and its volunteer attorneys have refined the intake process over time to screen applicants, educate inventors, and solicit volunteer lawyers more effectively. The Minnesota program has not only led the way in the establishment of patent pro bono programs across the country, but has also modeled an approach for existing programs to offer services in nearby states. Implicit in its approach is that individual inventors and startups have individual needs that require flexible and adaptive ways to deliver legal services to them. These particularities may include the geographic clustering of certain technology fields, the economic and industrial needs of local pools of engineers and scientists, and even financial concerns such as access to local capital and credit. The result has been a fundamentally regional approach to a broadly national effort.

2. Colorado

After Minnesota's initial success, Colorado followed suit with ProBoPat, administered by the Mi Casa Resource Center, a non-profit organization dedicated to advancing family prosperity and entrepreneurial training for low-income residents of Colorado. ⁵² Mi Casa and the Intellectual Property Section of the Colorado Bar

⁵⁰ See William Mitchell Coll. of Law, 4-20-15 Patent Pro Bono Attorney Orientation, VIMEO (Apr. 20, 2015), http://www.vimeo.com/125519060.

⁵¹ See generally Salmela & Privratsky, supra note 24.

⁵² See Vision & Impact, MI CASA, http://www.micasaresourcecenter.org/about-us/vision/ (last visited Aug. 10, 2015). Mi Casa was established in the 1970s to help women educate themselves and acquire employment skills, and evolved over the years to help all Latino families have realistic opportunities to pursue professional, educational, and entrepreneurial advancement. See History, MI CASA, http://www.micasaresourcecenter.org/about-us/history/ (last visited Aug. 10, 2015).

Association established ProBoPat in April 2012, as the state's patent pro bono program. ⁵³

Like LegalCORPS in Minnesota, ⁵⁴ ProBoPat has set an income limit of 300% of the federal poverty guidelines. ⁵⁵ Also, at least initially, ProBoPat limited its program to Colorado residents. ⁵⁶ Unlike LegalCORPS, however, ProBoPat does not charge candidate inventors an administrative fee nor require the prior filing of a provisional patent application. ⁵⁷ Moreover, ProBoPat does not accept requests from small businesses or non-profits, only individuals. ⁵⁸ In the ProBoPat program, inventors who successfully complete the screening process join a list from which any patent lawyer registered with ProBoPat may volunteer to

53

See Pro Bono Patent Program, MI CASA, http://www.micasaresourcecenter.org/business-development/pro-bono-patent-program/ (last visited Aug. 10, 2015); Heather Draper, Denver Launches Pro Bono Patent Law Initiative for Low-Income Inventors, DENVER BUS. J. (Apr. 25, 2012), http://www.bizjournals.com/denver/news/2012/04/25/denver-launches-pro-bono-patent.html.

⁵⁴ See supra Part III.A.1.

See Pro Bono Patent Program, MI CASA, http://www.micasaresourcecenter.org/business-development/pro-bono-patent-program/ (last visited Aug. 18, 2015) ("Eligible applicants include individual Colorado residents who have a target annual income of three times the federal poverty guidelines or less").

⁵⁶ Press Release, Senator Michael Bennett, Bennett: Pro Bono Patent Program Will Help Colorado's Entrepreneurs, Inventors (Apr. 25, 2012), http://www.bennet.senate.gov/?p=release&id=1315. The program is now open to residents of Colorado, New Mexico, Utah, and Wyoming. *See ProBoPat Frequently Ask Questions*, MI CASA RESOURCE CENTER (last updated Feb. 3, 2015), http://www.micasaresourcecenter.org/wp-content/uploads/2013/04/ProBoPat-FAQ-Document.pdf.

⁵⁷ See ProBoPat Frequently Ask Questions, MI CASA RESOURCE CENTER, http://www.ipsectioncolorado.org/content/20130201_ProBoPat_FAQ.pdf (last updated Feb. 1, 2013).

⁵⁸ See id.

accept a particular client. ⁵⁹ ProBoPat also provides some clients with "low bono" patent services—services at reduced fees rather than for free. ⁶⁰

When ProBoPat began, no patentability search was required at all,⁶¹ but now program attorneys perform a basic search of the invention prior to the inventor's placement on the list of qualified inventors seeking assistance.⁶² The decision to proceed, notwithstanding any search results, remains with the inventor rather than ProBoPat.⁶³

On the attorney side, ProBoPat accepts volunteer patent attorneys and agents who are registered in good standing to practice before the USPTO and who reside in Colorado. ⁶⁴ The program also welcomes participation from interested students from local law schools. ⁶⁵ Volunteer attorneys must provide their own professional liability insurance for work referred through the program. ⁶⁶

⁵⁹ See The ProBoPat Program, Colo. B. ASSOC. INTELL. PROP. SEC., http://www.ipsectioncolorado.org/probopat/ (last visited Aug. 18, 2015).

⁶¹ Compare ProBoPat Frequently Ask Questions, MI CASA RESOURCE CENTER, http://www.ipsectioncolorado.org/content/20120706_ProBoPat_FAQ.pdf (last updated July 6, 2012) (detailing request of a one-sentence summary of the basic subject matter).

⁶² See The ProBoPat Program, supra note 59 ("More recently, ProBoPat has implemented a required patent search prior to putting an applicant onto the main referral list." (last visited Aug. 18, 2015).
⁶³ Id.

⁶⁴ *Id.* ("[T]he applicant first goes to a volunteer searcher to perform a patent search, after which the representation ends and the *applicant* is to decide whether to proceed through the ProBoPat process to file a patent application.") (emphasis added).

 $^{^{65}}$ Id.

⁶⁶ ProBoPat Colorado Volunteer Interest Form G1, Colo. B. Ass'n IP Sec., http://www.ipsectioncolorado.org/content/20120712_ProBoPat_Form_G1.pdf (last updated July 12, 2012). The ProBoPat steering committee is currently searching for ways to offer "easy, inexpensive malpractice insurance for volunteers." See Spotlight on Upcoming Events, Colo. B. Assoc. Intell. Prop.

3. California

The Patent Pro Bono Program reached California in October 2012.⁶⁷ Unlike the state-specific programs in Minnesota and Colorado, the California initiative served as a regional hub for residents in nine western states: California, Washington, Oregon, Montana, Idaho, Nevada, Arizona, Alaska, and Hawaii.⁶⁸ The program, styled the California Inventors Assistance Program, is administered by the California Lawyers for the Arts, a lawyer referral service certified by the California state bar.⁶⁹ Reflecting the patent pro bono initiative more generally, the California Lawyers for the Arts takes as its mission the empowerment of the creative community by education, legal representation, and dispute resolution.⁷⁰

The California program's intake process requires a \$125 fee that is refunded to applicants if they do not complete the screening process. The program also sets an income threshold of 300% of the federal poverty guidelines and does not require any patent search or provisional filing in order to be accepted into the program. Small businesses are also accepted into the program

SEC., http://www.cobar.org/index.cfm/ID/22952/subID/29304/PATENT// (last visited Aug. 18, 2015).

⁶⁷ USPTO Launches New California Inventors Assistance Program, FENWICK & WEST LLP (Oct. 8, 2012), http://www.fenwick.com/Media/Pages/USPTO-Launches-New-California-Inventors-Assistance-Program.aspx.

⁶⁸ *See* Jenny McDowell, Pro Bono Coordinator, USPTO, Remarks at the Patent Public Advisory Committee Quarterly Meeting (Aug. 20, 2015).

⁶⁹ California Inventors Assistance Program, CAL. LAWS. FOR ARTS, http://www.calawyersforthearts.org/CIAP (last visited Aug. 18, 2015)...

⁷⁰ CLA Home, CAL. LAWS. FOR ARTS, http://www.calawyersforthearts.org/ (last visited July 26, 2015).

⁷¹ USPTO Launches New California Inventors Assistance Program, supra note 67.

⁷² *Inventors*, USPTO, http://www.uspto.gov/patents-getting-started/using-legal-services/pro-bono/inventors (last modified Jun. 12, 2015, 9:36 AM).

provided that each of the owners meets the program's income threshold. The program requires independent inventors to review the USPTO's training video prior to requesting assistance. Rather than a rule-based approach, the California program's financial screening process works to take a holistic view of each applicant's financial situation. To date, California has served the most inventors of all the regional patent pro bono programs due to the large number of states for which it provides coverage, including California itself, from which a disproportionately high share of patent application filings originate. From the program's inception through March 2015, 835 applicants have sought patent pro bono services from the California hub, and 131 applicant-attorney matches have emerged. The total value of patent pro bono services by California's volunteer lawyers is estimated at over \$1 million and growing.

A notable feature of the California program is that it provides legal malpractice insurance for its volunteer lawyers, as the professional liability policy of the California Lawyers for the Arts extends to lawyers participating in the patent pro bono program. This is significant because it encourages attorneys from organizations that do not have independent malpractice coverage to volunteer for the program and also broadens the pool of legal talent that is available to the inventor community.

⁷³ California Inventors Assistance Program, supra note 69.

⁷⁴ Press Release, Fish & Richardson, Fish & Richardson and California Lawyers for the Arts Hosted Protecting Little Guys' Big Ideas: The California Inventors Assistance Program (Mar. 6, 2015), *available at* http://www.fr.com/news/fishrichardson-and-california-lawyers-for-the-arts-hosted-protecting-little-guys-big-ideas-the-california-inventors-assistance-program/ ("CLA's financial screening process takes a holistic approach to make sure CLA sees the complete financial picture of each applicant, rather than a simple formulaic approach used by many pro bono services.").

⁷⁵ Document on file with author.

⁷⁶ *Id*.

⁷⁷ *Id*.

⁷⁸ BAR ASS'N OF SAN FRANCISCO, PRO BONO RESOURCE GUIDE 14 (2015), *available at* http://www.sfbar.org/forms/barristers/pro-bono-resource-guide.pdf.

4. Washington, DC

Like California, the Washington, DC-area program opened its doors in 2012.⁷⁹ Also like California, the DC program was a regional hub from the start, serving residents of the District of Columbia, Maryland, and Virginia.⁸⁰ The program has been administered by the Federal Circuit Bar Association (FCBA), and draws from the large group of patent lawyers who are also members of the FCBA.⁸¹

The DC program requires inventors to have an income below 300% of the federal poverty guidelines, to complete a training video on the USPTO's website, and an invention that is more developed than merely an idea. ⁸² The program also accepts small businesses subject to certain conditions. First, there must be no more than four inventors. ⁸³ Second, those inventors must not be under an obligation to assign the rights to the invention to another entity. ⁸⁴ Third, all inventors must have current household incomes

70

Programs, USPTO (Sept. 15, 2011, 11:02 AM), http://www.uspto.gov/patent/laws-and-regulations/america-invents-act-aia/programs (last modified Jun. 24, 2015, 7:38 PM); see also PTO Pro Bono Program, FED. CIR. B. ASS'N, http://www.fedcirbar.org/olc/pub/LVFC/cpages/misc/pto.jsp (last visited July 26, 2015).

Frequently Asked Questions for Attorneys, FED. CIR. B. ASS'N, http://www.fedcirbar.org/olc/filelib/LVFC/cpages/9005/Library/FAQ%20for%2 0Attorneys.pdf (last visited July 26, 2015).

⁸¹ *Id.* Since 1982, the Federal Circuit has been the exclusive federal appellate forum for patent cases, leading to considerable specialization of its bar in patent and related intellectual property issues. *See* 17 CHARLES ALAN WRIGHT, ET AL., FEDERAL PRACTICE AND PROCEDURE JURISDICTION AND RELATED MATTERS § 4104 (3d ed. 2015).

⁸² See PTO Pro Bono Program, supra note 79; Inventors, supra note 72.

⁸³ Frequently Asked Questions for Inventors, FED. CIR. B. ASS'N, http://www.fedcirbar.org/olc/filelib/LVFC/cpages/9005/Library/FAQ%20for%2 Oliventors.pdf (last visited Aug. 18, 2015).

⁸⁴ *Id*.

below 300% of the federal poverty guidelines. ⁸⁵ Fourth, the small business as a whole must have a gross income of less than \$150,000 in the preceding calendar year and an expected gross income of less than \$150,000 in the current calendar year. ⁸⁶

Attorneys who wish to volunteer in the DC program must be members of the FCBA. ⁸⁷ The FCBA may pair an attorney with less than three years of experience with an attorney mentor. ⁸⁸ Additionally, all volunteer attorneys must carry their own professional liability insurance, as the FCBA does not provide malpractice coverage. ⁸⁹

In addition to operating the DC regional program, the FCBA also administers a national information clearinghouse for the Patent Pro Bono Program. 90 In this capacity, the FCBA has served as a single intake source for regional programs. Thus, an inventor may apply directly to the regional program of the state in which he or she lives (or works, depending upon the relevant program's criteria). 91 Alternatively, an inventor could apply through the clearinghouse, which would pass the request on to the appropriate program. 92 The clearinghouse does not screen applicants other than to verify U.S. citizenship or legal residency status. 93

In the early days of the national program, the clearinghouse was quite active in pointing inventors to the correct place to obtain

⁸⁵ *Id*.

⁸⁶ *Id*.

 ⁸⁷ PTO Pro Bono Regional Volunteer Attorney Information Submission, FED.
 CIR.
 B.
 ASS'N,

 $https://secure.www.fedcirbar.org/olc/pub/LVFC/event/showEventForm.jsp? for $m_id=132084$ (last visited Aug. 18, 2015).$

⁸⁸ Frequently Asked Questions for Attorneys, FED. CIR. B. ASS'N, http://www.fedcirbar.org/olc/filelib/LVFC/cpages/9005/Library/FAQ%20for%2 0Attorneys.pdf (last visited Aug. 18, 2015).

⁸⁹ *Id*.

⁹⁰ PTO Pro Bono Program, supra note 79.

⁹¹ *Id*.

⁹² *Id*.

⁹³ *Id*.

help, though initially there was often nowhere to refer an inventor because so few states were covered by a regional pro bono assistance program. Today, as regional programs have arisen across the United States, the clearinghouse is a less prominent, though still important source of referrals as many inventors apply directly to their respective regional programs.

B. National Reach: 2013–2014

1. Texas

Nine months after the inception of the California and DC programs, the Texas regional program came online in July 2013, serving residents of Texas and Louisiana. The program was administered by the Arlington County Chamber of Commerce's Texas Center for Innovation (CFI). CFI, in turn, is a non-profit association affiliated with TechComm, a federal technology transfer intermediary. TechComm brought two sets of skills to the newly developed program: (1) commercializing federally funded research through patent license agreements and cooperative research and development agreements between businesses and federal laboratories, and (2) identifying technology from the market that is of interest to federal agencies and laboratories.

_

⁹⁴ Texas AIA-USPTO Pro Bono Patent Assistance Program, CENTER FOR INNOVATION, http://www.thecenterforinnovation.org/texas-aia-uspto-pro-bonopatent-assistance-program (last visited Aug. 18, 2015). The USPTO provides a link to the Texas Pro Bono Patent Assistance Program for those residents of Louisiana. See Louisiana, USPTO, http://www.uspto.gov/learning-and-resources/inventors-entrepreneurs/louisiana (last modified May 29, 2015, 9:24 AM).

⁹⁵ The Center for Innovation Receives Grant from Texas Bar Foundation for Office for Inventor Assistance Pro Bono Program, CENTER FOR INNOVATION, https://thecenterforinnovation.org/center-innovation-receives-grant-texas-bar-foundation-office-inventor-assistance-pro-bono-program (May 21, 2014).

⁹⁶ Texas AIA-USPTO Pro Bono Patent Assistance Program, supra note 94.

Texas AIA-USP10 Pro Bono Patent Assistance Program, supra note 94 of Id.

a result, the CFI partnership came to the patent pro bono world with considerable expertise in the downstream uses of the patents that inventors would seek through the program. It also marked Texas as the first patent pro bono program associated with a technology transfer office. The program started up with grant funding from the Texas Bar Foundation for advancing invention-based economic development and job creation in Texas.⁹⁸

Although the Texas program did not initially disclose its applicant criteria, it has recently published those criteria on its website. ⁹⁹ An applicant's earnings are reviewed, using submitted tax records. ¹⁰⁰ The Texas program has differing eligibility requirements depending on the type of applicant. Solo inventors must have a total household income of less than 300% of the federal poverty guidelines and must not currently be under an obligation to assign rights to the invention. ¹⁰¹

Non-profits must have four or fewer inventors who are under an obligation to assign rights to another organization, have 501(c)(3) status, and have a budget of less than \$1 million per year. Additionally, the non-profits must not be a research institution or an institution of higher learning, and must not be under any obligation to assign the rights to the invention to another entity. 103

⁹⁸ The Center for Innovation Receives Grant from Texas Bar Foundation for Office for Inventor Assistance Pro Bono Program, supra note 95.

Texas AIA-USPTO Pro Bono Patent Assistance Program, supra note 94. The newly updated website can be found at: https://thecenterforinnovation.org/texas-aia-uspto-pro-bono-patent-assistance-program

See Application for Free Legal Assistance, CENTER FOR INNOVATION, https://thecenterforinnovation.org/uploads/Application_for_Free_Legal_Assistance.pdf (last visited Aug. 18, 2015).

¹⁰¹ Texas AIA-USPTO Pro Bono Patent Assistance Program, supra note 94. ¹⁰² Id.

¹⁰³ *Id*.

Small businesses must have four or fewer inventors who are under an obligation to assign the rights to another organization, where all inventors have a current household income of less than 300% of the federal poverty guidelines, had a total gross income of less than \$150,000 in the preceding calendar year, expect a total gross income of less than \$150,000 in the current calendar year, and are not currently under an obligation to assign the rights to the invention to another entity. ¹⁰⁴

Importantly, the program may disqualify an applicant whose inventor has been listed on more than four previous USPTO applications or U.S. patents. ¹⁰⁵

The program requires applicants to perform an initial patent search of their respective inventions, as well as to complete a training video on the USPTO's website. The program charges an administrative fee for entry into the program. ¹⁰⁷

2. Ohio

Soon after the Texas program expanded the scope of patent pro bono to include commercialization-oriented technology transfer partners, a new program in Ohio expanded it to include the law school community. In 2013, the IP Venture Clinic of the Case Western Reserve University School of Law began offering patent

¹⁰⁵ *Id*.

¹⁰⁴ *Id*.

¹⁰⁶ See id.; Shekar Rao, America Invents Act Pro Bono Assistance Program: State Bar of Texas Advanced IP Law Course 13 (2014), available

 $[\]underline{http://www.texasbarcle.com/Materials/Events/12716/161828_01.pdf.}$

^{\$50} for solo inventors, \$100 for non-profits, and \$150 for small businesses. *Texas AIA-USPTO Pro Bono Patent Assistance Program, supra* note 94.

pro bono assistance to underserved Ohio inventors. ¹⁰⁸ Per the national norm, the Ohio program sets its income threshold at 300% of the federal poverty guidelines. ¹⁰⁹ The program also requires applicants to complete a training video on the USPTO's website and charges no fee for participation in the clinic. ¹¹⁰ The program also screens "new ventures" (small businesses) using a revenue, investment, and income basis. ¹¹¹

Because it is based in a legal clinic setting, the Ohio program has also added a natural second step to its pro bono operations. Initially, the clinic itself performs administrative functions including all the intake, screening, and referral of applicants. Yet while the IP Venture clinic retains much of the patent prosecution work for itself, it does refer some matters to outside volunteer attorneys for filing and prosecution. Notably, law students have assisted many "new ventures" in pre-engagement

108 IP Venture Clinic is a 'New Economic Force', CASE W. RES. U. SCH. OF L.,(Nov. 14, 2014),

http://law.case.edu/Home/Trending/tabid/820/vw/1/ItemID/325/Default.aspx.

109 IP Venture Clinic, CASE W. RES. U. SCH. OF L., http://www.law.case.edu/Academics/AcademicCenters/LTA/IPVentureClinic.as px (last visited Aug. 18, 2015) ("The IPVC works with a limited number of early stage entrepreneurs that do not have the financial resources to cover the cost of obtaining legal counsel."). Ohio applies the standards of the Federal Circuit Bar Association. See Pro Bono Service Request Form, FED. CIR. B. ASS'N, https://secure.www.fedcirbar.org/olc/pub/LVFC/event/showEventForm.jsp?for

¹¹⁰ IP Venture Clinic, supra note 109; see also CWRU's new Venture Clinic puts patents in reach of rookie inventors, PLAIN DEALER (Nov. 14, 2015), http://www.cleveland.com/business/index.ssf/2014/11/cwru_venture_clinic_puts paten.html.

m_id=131881 (last visited Aug. 18, 2015).

paten.html.

III See Email from Case Western Clinic Coordinator, Case Western Law University School of Law, to Jennifer McDowell, Pro Bono Coordinator, USPTO (on file with author).

112 FAQ, CASE W. RES. U. SCH. OF L., http://www.law.case.edu/Academics/AcademicCenters/LTA/IPVentureClinic/F AQ.aspx (last visited Aug. 18, 2015) [hereinafter Case Western Clinic FAQ].

113 See IP Venture Clinic, supra note 109 (stating that "students will prepare . . .

materials necessary to support investor discussions").

counseling to assist the founders in reaching agreements on key issues prior to formally launching a business.

The Case Western clinic model for Ohio also benefits from a related USPTO program that has gained increasing prominence in the last two years: the Law School Clinic Certification Program. 114 Clinic certification allows law students at participating schools to practice before the USPTO under clinical faculty supervision and to gain direct experience in drafting and filing applications for patents, trademarks, or both. 115 Of the forty-two schools currently participating, six are certified for patent prosecution alone, nineteen are certified for trademark prosecution alone, and seventeen are certified for both. 116

The Clinic Certification Program's benefits to law students are a strong complement to the Pro Bono Program's benefits to low-income inventors, particularly as it not only offers students IP practice experience, but also cultivates their broader acumen in business counseling and instills a professional commitment to pro bono service. As a result, other law schools have followed Case Western's lead in combining USPTO clinical certification with patent pro bono initiatives, including Indiana¹¹⁷ as well as the original program in Minnesota.¹¹⁸

3. Massachusetts

Also in the fall of 2013, Massachusetts joined the pro bono circuit with a program launched by Volunteer Lawyers for the Arts

116 See Id.

¹¹⁴ See Case Western Clinic FAQ, supra note 112; Law School Clinic Certification Program, USPTO, http://www.uspto.gov/learning-and-resources/ip-policy/public-information-about-practitioners/law-school-clinic-1 (last visited Aug. 18, 2015).

¹¹⁵ *Id*.

¹¹⁷ See infra Part III.C.2.

¹¹⁸ See infra Part III.D.

in partnership with the Boston Patent Lawyers Association. ¹¹⁹ The program was supported locally by the Arts and Business Council of Greater Boston, ¹²⁰ a non-profit organization that provides legal and business services, as well as ongoing educational programs to creative communities in Massachusetts. ¹²¹ The program uses an income threshold, though it is not publicly disclosed, and applicants must demonstrate financial eligibility by submitting tax documents or equivalent financial information. ¹²² The program charges a \$55 application fee, and applicants who complete the screening process are placed on a list that is sent to volunteer patent attorneys roughly once a month to initiate a pro bono client relationship. ¹²³ Attorneys and agents in good standing who are licensed to practice before the USPTO may volunteer for the program. ¹²⁴

4. Greater Philadelphia

The last pro bono program to come online in 2013 was in Greater Philadelphia. Created by the Philadelphia Volunteer Lawyers for the Arts, an initiative of the Arts and Business Council of Greater Philadelphia, the program began serving residents of eleven counties in and around Philadelphia and the Delaware Valley. Unlike previous regional programs, this has served a

¹¹⁹ Patent Pro Bono Program of New England, ARTS & BUS. COUNCIL GREATER BOS., http://www.artsandbusinesscouncil.org/programs/patent-program.html (last visited Aug. 18, 2015).

¹²⁰ *Pro Bono*, Bos. Pat. L. Ass'n, http://www.bpla.org/?27 (last visited Aug. 18, 2015).

About Us, ARTS & BUS. COUNCIL GREATER BOS., http://www.artsandbusinesscouncil.org/about-us.html (Aug. 18, 2015).

¹²² Patent Pro Bono Program of New England, supra note 119.

¹²³ *Id*.

¹²⁴ *Id*.

 ¹²⁵ Arts + Business: The successful Philadelphia story, PHILA. BUS. J., (May 7, 2015), http://www.bizjournals.com/philadelphia/blog/guest-comment/2015/05/arts-business-the-successful-philadelphia-story.html ("[T]he Arts + Business Council has done this [pro bono] work under the umbrella of the Greater Philadelphia Chamber of Commerce . . . [which] represents over

limited geographic area across multiple states centered around Philadelphia. The program charges a nonrefundable \$50 administrative fee, though a hardship waiver is available for applicants earning less than 187.5% of the federal poverty guidelines or have other extenuating circumstances. 126

Unlike other programs that utilize the federal poverty guidelines, the Philadelphia criteria are only based loosely on the 300% level. Specifically, the program accepts requests for assistance both from individuals whose gross income is \$35,000 or less per year (or \$55,000 for a married couple or cohabitating couple), with a \$3,000 credit per dependent. Groups of individuals are also accepted, provided each member's individual gross income falls below the threshold standard. Nonprofits with an annual operating budget of less than \$1 million per year may also apply. Inventors must complete a training video on the USPTO's website. Volunteer patent attorneys in the program are required to take a three-hour course of continuing legal education (CLE) covering best practices for pro bono attorneys.

^{600,000} employees in eleven counties of Pennsylvania, New Jersey, and Delaware that make up the Greater Philadelphia region.").

¹²⁶ PVLA Application Fee Hardship Policy, ARTS & BUS. COUNCIL PHILA., http://www.artsandbusinessphila.org/pvla/documents/PVLAHardshipPolicyand WaiverFY12.pdf (last visited Aug. 18, 2015).

Frequently Asked Questions, ARTS & BUS. COUNCIL PHILA., http://www.artsandbusinessphila.org/pvla/pvlafaq.asp (last visited Aug. 18, 2015).

¹²⁸ *Id*.

¹²⁹ *Id*.

Patent Pro Bono Program, ARTS & BUS. COUNCIL GREATER PHILA., http://www.artsandbusinessphila.org/pvla/patentprobono.asp (last visited Aug. 18, 2015) [hereinafter Philadelphia Patent Pro Bono Program].
131 Id.

5. The Carolinas

The Carolinas brought a pro bono program online in May 2014, organized by the North Carolina Bar Association as the North Carolina Lawyers for Entrepreneurs Assistance Program, or NC LEAP. 132 Serving residents of North and South Carolina, the program provides free legal services to low-wealth entrepreneurs, small businesses, and established non-profits that are in the process of starting or expanding their businesses. 133 The NC LEAP program screens clients without charging an administrative fee and requires that volunteer attorneys have at least three years of experience practicing patent law before the USPTO. 134 Initially, the program set its income limit at 80% of the state-established poverty guidelines, which varied by the county in which the inventor resided. 135 More recently, however, the program has increased the threshold—to allow more inventors to qualify for assistance—by raising the limit to 300% of the federal poverty guidelines. 136

A unique aspect of the NC LEAP program is that volunteer attorneys often do not file the patent application for the client. Instead, the client is directly responsible for making all USPTO filings and responses to Office Actions and does so with the attorney's assistance. ¹³⁷ To encourage wider participation by the

¹³² Inventor Assistance Program Expands Into Tennessee, N.C. BAR. ASS'N, http://www.ncbar.org/news/patent-pro-bono-program-expands-into-tennessee/ (last visited Aug. 18, 2015) ("The Inventor Assistance Program was launched in North Carolina on May 5, 2014.").

¹³³ Frequently Asked Questions, N.C. BAR ASS'N, http://www.ncbar.org/public-resources/nc-leap/faqs/ (last visited Aug. 18, 2015) [hereinafter N.C. Bar FAQ] ¹³⁴ N.C. INVENTORS ASSISTANCE PROGRAM GUIDE (on file with the USPTO). ¹³⁵ Ld

¹³⁶ N.C. Bar FAQ, supra note 133.

¹³⁷ N.C. INVENTORS ASSISTANCE PROGRAM GUIDE (on file with USPTO), *supra* note 134.

state bar, the NC LEAP program also provides professional liability insurance coverage to volunteer lawyers. 138

6. New York

In 2014, New York created its pro bono assistance program, run by the New York Volunteer Lawyers for the Arts. 139 In line with the predominant approach, the New York program serves primarily "those innovators who believe they have a novel invention but have not yet filed for a patent." Yet on a case-bycase basis, the program also assists patent applicants who have filed a patent application and have received an Office Action. ¹⁴¹ The New York program financially screens applicants by requiring them to provide an affidavit of income and bank statements from their primary checking account for the previous twelve months. 142

Four types of applicants may request assistance in the NY Pro Bono Patent Program: individuals, for-profit entities and partnerships, non-profit unincorporated entities, and non-profit incorporated entities. 143 The program charges an administrative fee that depends upon the status of the entity filing the request. 144 Applicants who qualify for the program consult with a program

139 VLA Patent Pro Bono Program, N.Y. VOLUNTEER LAWS. FOR ARTS, http://www.vlany.org/legalservices/patent_program.php (last visited Aug. 18,

¹⁴⁰ *Id*. ¹⁴¹ *Id*.

¹⁴² VLA Frequent Asked Questions, N.Y. VOLUNTEER LAWS. FOR ARTS, http://www.vlany.org/aboutus/vla_faq.php (Aug. 18, 2015).

¹⁴³ VLA Online Intake Forms, N.Y. VOLUNTEER LAWS. FOR ARTS, http://www.vlany.org/legalservices/online intake form.php (last visited Aug. 18, 2015).

¹⁴⁴ Individual, Artist and Attorney Membership, N.Y. VOLUNTEER LAWS. FOR ARTS, http://www.vlany.org/supportvla/indmem.php (last visited Aug. 18, 2015).

staff attorney and are placed on a case list for referral to a volunteer patent attorney. 145 Over 90% of the applicants on the case list are matched with patent counsel. 146

The New York program accepts volunteer attorneys who have completed a short orientation course on the program, its requirements, and its procedures. 147 Volunteer lawyers must be covered by their own legal malpractice insurance policy or that of their employers. 148 Moreover, attorneys who have been admitted to practice for less than three years must find their own supervising attorney. 149 Interestingly, the New York program is approved to provide CLE credit to attorneys who provide pro bono legal services through the program. 150 With few exceptions, eligible pro bono activity is limited to legal services that are performed within New York to clients who are otherwise unable to afford counsel. 151

7. Michigan

In late 2014, Michigan began receiving patent pro bono services through a program established by two groups within the State Bar of Michigan: the Pro Bono Initiative and the IP Law Section. 152 The program requires that applicants earn a gross income of 200% or less of the federal poverty guidelines and have less than \$5,000 in liquid assets. 153 This income threshold is, by mandate, the same as other pro bono programs operated by the

¹⁴⁵ VLA Patent Pro Bono Program, supra note 139.

¹⁴⁷ New Attorney Orientations, N.Y. VOLUNTEER LAWS. FOR ARTS, http://www.vlany.org/legalservices/orientations.php (last visited Aug. 18, 2015). ¹⁴⁸ *Id*. ¹⁴⁹ *Id*.

¹⁵⁰ See CLE Credit for Pro Bono Work, N.Y. VOLUNTEER LAWS. FOR ARTS, http://www.vlany.org/legalservices/clecredit.php (last visited Aug. 18, 2015).

¹⁵² Michigan Pro Bono Patent Project, STATE BAR OF MICH., http://www.connect.michbar.org/iplaw/patent (last visited Aug. 18, 2015).

state bar.¹⁵⁴ The program also requires applicants to file a provisional application with the USPTO prior to entry into the program.¹⁵⁵

The intake, screening, and referral process itself is administered by the State Bar of Michigan. The program is funded entirely by bar dues paid by attorneys licensed to practice law in Michigan. Unlike many other programs that accept volunteer services from USPTO-registered practitioners—whether attorneys or agents—the Michigan program does not allow patent agents to volunteer.

8. Georgia

Around the same time in late 2014, the Georgia program also began accepting inventor requests for pro bono assistance. Run by the Georgia Lawyers for the Arts, the program is styled the Pro Bono Assistance and Training for Entrepreneurs and New, Talented, Solo inventors (PATENTS) program. Applicants are required to pay an administrative fee—\$50 for solo inventors, \$100

¹⁵⁷ See AN ASSESSMENT OF PRO BONO IN MICHIGAN, 1–2 (Feb. 2013) available at http://www.michbar.org/file/programs/pdfs/probonoreport2013.pdf (stating that "[1]egal aid organizations funded by the [Michigan State Bar Foundation] or affiliated with the Access to Justice Fund are expected to engage pro bono

lawyers and their work.").

¹⁵⁴ E.g., Memorandum from Robert Mathis to Michigan Litigation Assistance Partnership Project (May 20, 2014), *available at* http://www.michbar.org/file/programs/pdfs/TaxReferralProcess.pdf.

¹⁵⁵ Michigan Pro Bono Patent Project, supra note 152.

¹⁵⁶ See id.

Patent Pro Bono Attorney Registration, St. B. MICH., https://michbar.wufoo.com/forms/patent-pro-bono-attorney-registration/ (last visited Aug. 18, 2015).

¹⁵⁹ *Inventor Information*, GA. LAWS. FOR ARTS, http://www.glarts.org/patents/(last visited Aug. 18, 2015).

for non-profits, and \$150 for small businesses—after the intake appointment and prior to placement with an attorney. 160

The Georgia PATENTS program has differing eligibility requirements depending on the type of applicant. Solo inventors must have a total household income of less than 300% of the federal poverty guidelines and must not currently be under an obligation to assign rights to the invention. ¹⁶¹

Non-profits must have four or fewer inventors who are under an obligation to assign right to another organization, have 501(c)(3) status, have a budget of less than \$1 million per year, must not be a research institution or an institution or higher learning, and must not be under any obligation to assign the rights to the invention to another entity. ¹⁶²

Small businesses must have four or fewer inventors who are under an obligation to assign the rights to an organization, where all inventors have a current household income of less than 300% of the federal poverty guidelines, had a total gross income of less than \$150,000 in the preceding calendar year, expect a total gross income of less than \$150,000 in the current calendar year, and are not currently under an obligation to assign the rights to the invention to another entity. Importantly, the program may disqualify an applicant whose inventor has been listed on more than four previous USPTO applications or U.S. patents. Acceptance into the Georgia program also requires a good-faith belief that the relevant invention constitutes novel and non-obvious subject matter that has been reduced to practice.

¹⁶⁰ Georgia Patents Program Qualifications, GA. LAWS. FOR ARTS, http://www.glarts.org/patents/inventors/ (last visited Aug. 18, 2015).

¹⁶¹ *Id*.

¹⁶² *Id*.

¹⁶³ *Id*.

¹⁶⁴ *Id.* (citing 37 C.F.R. § 1.29 (2014).

 $^{^{165}}$ Id

Additionally, applicants must have completed an approved patent training seminar. Moreover, prior to acceptance into the program, applicants must complete a prior art search and provide the program with between three and ten prior art references identified through the search. In this regard, the Georgia program reflects a more well-developed view of patent pro bono infrastructure that builds on the approaches of other regional programs, particularly with the refined intake and screening process suited to local needs.

As for providing services, the program accepts volunteer patent attorneys as well as patent agents. ¹⁶⁸ It also provides malpractice coverage for in-house counsel representing a case referred through the program, though it requires attorneys in law firms to use their firms' respective professional liability policies. ¹⁶⁹

C. Latest Additions: 2015

Before 2015, patent pro bono programs were coming online at a rate of about four new programs per year. The first part of 2015, however, has already exceeded that trend with five new programs and startup efforts in several more. As the number of states with access to a patent pro bono program more than doubled in the last half of 2014, the first half of 2015 rounds out the USPTO's efforts to provide every state with access to a patent pro bono program.

_

¹⁶⁶ *Id.* Although the USPTO video training is the only approved course for this purpose as of this writing, the Georgia Lawyers for the Arts program anticipates additional approved courses will be coming soon. *See Upcoming Seminars*, GA. LAWS. FOR ARTS, http://glarts.org/upcomingevents/seminars/ (last visited Aug. 18, 2015).

¹⁶⁷ Georgia Patents Program Qualifications, supra note 160.168 Id

Legal Volunteer Registration, GA. LAWS. FOR ARTS, https://glarts.formstack.com/forms/legalvolunteer (last visited Aug. 18, 2015).

On August 6, 2015, the President announced that the Patent Pro Bono Program now extends to all 50 states. ¹⁷⁰

1. The Midwest

Similar to the Greater Philadelphia program's coverage of multiple neighboring states, the Midwest regional program began operating in February 2015 to serve its home base of Missouri, as well as Nebraska, Kansas, Oklahoma, and Arkansas. The program is administered by Gateway VMS, an entrepreneur support organization in St. Louis that offers business-mentoring services to early-stage innovators. In this regard, the Midwest program is the first patent pro bono initiative focused specifically on the start-up community.

The program requires an income equal to or less than 300% of the federal poverty guidelines and a basic knowledge of the patent process, which can be demonstrated through evidence of the prior filing of a provisional or nonprovisional application or by completing the USPTO's online training course. ¹⁷³ The program charges no administrative fee. ¹⁷⁴ An initial patentability screening is available through the Entrepreneurship and Intellectual Property Clinic at Washington University in St. Louis School of Law. ¹⁷⁵

¹⁷⁰ Fact Sheet, President Obama Announces New Commitments from Investors, Companies, Universities, and Cities to Advance Inclusive Entrepreneurship at First-Ever White House Demo Day (Aug. 4, 2014), *available at* https://www.whitehouse.gov/the-press-office/2015/08/04/fact-sheet-president-obama-announces-new-commitments-investors-companies.

¹⁷¹ See About Patent Pro Bono, PAT. PRO BONO, http://patentprobono.com/about/ (last visited Aug. 18, 2015).

¹⁷² See GVMS, GATEWAYVMS, http://gvms.ite-stl.org/wordpress/?page_id=7G (last visited Aug. 18, 2015).

¹⁷³ See Guidelines, PAT. PRO BONO, http://www.patentprobono.com/guidelines/(last visited Aug. 20, 2015).

^{&#}x27;' See id

¹⁷⁵ See id.; see also Entrepreneurship and Intellectual Property Clinic, WASH. U. L., http://law.wustl.edu/clinicaled/pages.aspx?id=6835 (last visited Aug. 20, 2015).

2. Indiana

More availability in the Midwest region also came in early 2015 to Indiana, when the Patent Connect program began offering patent pro bono services to that state's residents. The program is administered by the Indiana University Maurer School of Law and the Center for Intellectual Property Research. The Center for Intellectual Property Research was itself established in 2010 to oversee all aspects of intellectual property law education at IU's law school and is certified for both patents and trademarks under the USPTO's Law School Clinic Certification Program.

Indiana's requirements are similar to those in Texas and Georgia. Inventors applying to the program must have an income of less than 300% of the federal poverty guidelines and must not be obligated to assign the rights to the invention. Non-profit firms must have four or fewer inventors who are under an obligation to assign rights to the organization, have 501(c)(3) status, have a budget of less than \$1 million per year, not be a research institution or an institution of higher learning, and not be

¹⁷⁶ See Launch Event Date Set for the IP Clinic and Patent Connect for Hoosiers, CENTER FOR INTELL. PROP. RES. MAURER SCH. L., (July 27, 2015), http://ip.indiana.edu/launch-event-date-set-for-the-ip-clinic-and-patent-connect-for-hoosiers/.

¹⁷⁷ See Maurer School of Law IP Clinical Program Certified for Pro Bono Practice Before U.S. Patent Office, IND. U. BLOOMINGTON (July 31, 2014), http://news.indiana.edu/releases/iu/2014/07/iu-maurer-ip-program-certified-by-uspto.shtml

¹⁷⁸ See Our Mission, IND. U. BLOOMINGTON, http://www.ip.indiana.edu/ourmission/ (last visited Aug. 19, 2015).

¹⁷⁹ See infra Table 1.

¹⁸⁰ See supra Parts III.B.I, 8

Patent Connect for Hoosiers, IND. U., http://www.indiana.edu/~patconn/(Aug. 19, 2015).

under any obligation to assign the rights to the invention to another entity. ¹⁸²

Small businesses, for their part, must have four or fewer inventors who are under an obligation to assign the rights to the organization, where all inventors have a current household income of less than 300% of the federal poverty guidelines, had a total gross income of less than \$150,000 in the preceding calendar year and expect a total gross income of less than \$150,000 in the current calendar year, and must not currently be under an obligation to assign the rights to the invention to another entity. ¹⁸³

There is no application fee for the program, but inventors must have either taken the USPTO online training course or have previously filed a provisional or nonprovisional application with the USPTO. 184

3. Florida

Closely following Indiana's example of administering a patent pro bono program through a well-established public institution, Florida brought its program online in May 2015. The program administrator is the Institute for the Commercialization of Public Research (ICPR), a non-profit organization formed by the Florida Legislature in 2007 to support the creation of new companies and jobs based on publicly-funded research across the state. The ICPR's business model is to collaborate with licensing officers at universities and private research institutions in Florida to help identify commercially viable startup company opportunities and to

¹⁸³ *Id*.

¹⁸² *Id*.

¹⁸⁴ *Id*.

Nancy Dahlberg, *Patent Pro Bono Program Launches for Florida Inventors*, MIAMI HERALD (May 4, 2015), http://www.miamiherald.com/news/business/technology/article20216364.html . 186 *Id*

See Background, FLA. INST. FOR COMMERCIALIZATION PUB. RES., http://www.florida-institute.com/about/background (last visited Aug. 19, 2015).

provide company-building support and seed funding. ¹⁸⁸ To this existing portfolio of services regarding management, growth, capitalization, and general intellectual property strategy, in 2015, ICPR added patent referrals for inventors and businesses. ¹⁸⁹

The Florida program, nicknamed "Flobono," reflects similar income and ownership thresholds for inventors and small businesses as the Texas, Georgia, and Indiana programs. Flobono requires that applicants complete the USPTO online training course. In addition, applicants must demonstrate viability in their inventions by providing a detailed description or graphical representation of its use. Individual inventors must be Florida residents and businesses must be Florida-based in order to qualify for the program.

The program has benefited in particular from the Washington DC-based national information clearinghouse. ¹⁹⁴ Even before its official May 2015 launch in Miami, Flobono received a large number of requests from inventors for assistance through the program. The pro bono element of the program has since grown quickly and efficiently to serve a significant population of low-income inventors in Florida.

¹⁸⁸ See Frequently Asked Questions, FL. INST. FOR COMMERCIALIZATION PUB. RES., http://www.florida-institute.com/about/faq (last visited Aug. 19, 2015).

¹⁸⁹ See The Florida Patent Pro Bono Program, FL. INST. FOR COMMERCIALIZATION PUB. RES. http://www.florida-institute.com/FloBono (last visited Aug. 19, 2015).

¹⁹⁰ See Inventor Information, FLA. INST. FOR COMMERCIALIZATION PUB. RES., http://www.florida-institute.com/programs/inventor-information (last visited Aug. 19, 2015) [hereinafter FLA Inventor Information].

¹⁹¹ See id.

¹⁹² See FLA Inventor Information, supra note 190.

¹⁹³ *Id*.

¹⁹⁴ See supra Part III.A.4.

4. Alabama and Mississippi

In May 2015, patent pro bono in the Gulf Coast region also came to Alabama and Mississippi, where the Birmingham Bar Association's Volunteer Lawyers Program began serving the inventor communities of those states. ¹⁹⁵ The Volunteer Lawyers Program had already been providing free legal services to low-income clients on general civil matters. ¹⁹⁶ A formal launch event is slated for the fall of 2015, but eligible inventors are already able to receive assistance through the program.

To be eligible, an inventor must have an income below 200% of the federal poverty guidelines. This is a notable departure from most other programs, which set a higher threshold at 300% of the federal poverty guidelines. The reason for this policy choice is that the average income in Alabama and Mississippi is often lower than national averages. Put another way, an Alabama or Mississippi inventor earning 300% of the federal poverty guidelines is relatively better off than the same inventor in many other states and, therefore, less in need of pro bono assistance.

Small businesses are not currently accepted into the program, though groups of individual inventors may be eligible, provided they each meet the criteria. The program requires inventors to have completed the USPTO's online training course or to have

¹⁹⁵ See BBVLP Patent Program, BIRMINGHAM B. VOLUNTEER LAWS. PROGRAM, http://www.vlpbirmingham.org/patent-program/ (last visited Aug. 6, 2015).

¹⁹⁶ See Welcome to the Birmingham Bar Volunteer Lawyers Program, BIRMINGHAM B. VOLUNTEER LAWS. PROGRAM, http://www.vlpbirmingham.org/about/ (last visited Aug. 6, 2015).

See BBVLP Patent Program, supra note 195

¹⁹⁸ See supra Parts III.A–C.

http://quickfacts.census.gov/qfd/states/01000.html (last revised May 28, 2015) (\$23,680 compared to \$28,155); *State and County Quick Facts: Mississippi*, U.S. CENSUS BUREAU, http://quickfacts.census.gov/qfd/states/28000.html (last revised May 28, 2015) (\$20,618 compared to \$28,155).

²⁰⁰ BBVLP Patent Program, supra note 195.

participated in an approved training seminar. ²⁰¹ There is no fee for applying to the Alabama and Mississippi program. ²⁰²

5. Illinois

In June 2015, Illinois joined the ranks of patent pro bono programs, thanks to the Illinois Institute of Technology (IIT), Chicago-Kent College of Law, which serves as the administrator for the program. As a leader in IP-related research and programming of events, this program is well suited to capitalize on its established relationships with IP firms and corporate law departments throughout the state. Akin to the Texas, Georgia, Indiana, and Florida programs, individual inventors must earn less than 300% of the federal poverty guidelines, and must be Illinois residents. The ownership and income criteria for small businesses are also like the Texas, Georgia, Indiana, and Florida programs.

Applicants are required to provide financial information to demonstrate that they have a total household income of less than 300% of the federal poverty guidelines. ²⁰⁶ Inventors must also show that they understand the patent process and what they can do with a patent, if granted, by filing a provisional or nonprovionsal application or by successfully completing the USPTO training

²⁰² Welcome to the Birmingham Bar Volunteer Lawyers Program, supra note 196.

²⁰⁶ Id.

²⁰¹ See id.

²⁰³ Chicago-Kent Patent Hub, IIT CHI.-KENT C. LAW, http://www.kentlaw.iit.edu/seeking-legal-help/illinois-patent-pro-bono (last visited Aug. 19, 2015).

²⁰⁴ Information for Inventors, IIT CHI.-KENT C. LAW, http://www.kentlaw.iit.edu/seeking-legal-help/illinois-patent-pro-bono/inventor-information (last visited Aug. 19, 2015).

 $^{^{205}}$ *Id*.

module.²⁰⁷ Lastly, the inventor must be able to describe the invention.²⁰⁸

Unlike most other programs, the Illinois program sets forth the general scope of representation on its website.²⁰⁹ Attorneys are nevertheless expected to execute an engagement letter with the inventor, and attorneys must also commit to providing any information needed for reports to the USPTO. 210 In general, the volunteer attorney will draft and file one nonprovisional U.S. patent application, will prosecute the patent application until either (1) a response is filed to a final Office action, or (2) the application issues as a patent, and will commit to monitor and docket all deadlines.²¹¹ The attorney is not responsible for filing any requests for continued examination, appeals, challenges to a USPTO decision in a court of law, prosecution after issue or response to final Office Action, foreign filings or additional U.S. application filings. 212 However, the attorney's services may be expanded by mutual agreement between the inventor and the attorney, which should be in writing.²¹³

The Illinois program matches inventors or small businesses with attorneys based on the field of the invention and the preferred technical fields of expertise of the attorney. ²¹⁴

D. Expansions and Breakaways

While new state and region-specific programs have been emerging, existing programs have also been expanding and

²⁰⁷ *Id*.

²⁰⁸ *Id*.

²⁰⁹ Information for Volunteer Attorneys, IIT CHI.-KENT C. LAW, http://www.kentlaw.iit.edu/seeking-legal-help/illinois-patent-probono/volunteer-attorney-information (last visited Aug. 19, 2015).

 $^{^{210}}$ *Id*.

²¹¹ *Id*.

²¹² *Id*.

 $^{^{213}}$ *Id*.

 $^{^{214}}$ *Id*.

spinning off new efforts to provide greater support to underserved innovators throughout the United States. In the second half of 2014, Minnesota's LegalCORPS program joined with William Mitchell College of Law to provide patent pro bono services to residents in four surrounding states: Wisconsin, North Dakota, South Dakota, and Iowa. Through this effort, LegalCORPS still provides free patent services to Minnesota residents, but now individuals and business owners in the other four surrounding states may seek help from William Mitchell's Inventor Assistance Program. In the other four surrounding states may seek help from William Mitchell's Inventor Assistance Program.

The Inventor Assistance Program is administered by the law school's intellectual property clinic, which conducts applicant intake and screening. Like LegalCORPS, William Mitchell uses an income level of 300% of the federal poverty guidelines for both inventors and small business owners. Additionally, like LegalCORPS, the William Mitchell Inventor Assistance Program requires inventors to have already filed a provisional application, and be a resident of one of the states for which the program provides service. Law students, under the supervision of

²¹⁵ *Inventor Assistance Program*, WM. MITCHELL C. LAW, http://web.wmitchell.edu/intellectual-property/inventors/ (last visited Aug. 19, 2015).

Ways We Can Help Inventors, WM. MITCHELL C. LAW, http://web.wmitchell.edu/intellectual-property/inventors/ways-we-can-help-inventors/ (last visited Aug. 19, 2015).

²¹⁷ See Clinic-Intellectual Property Law Clinic, WM. MITCHELL C. LAW, http://web.wmitchell.edu/students/course-description/?course=5111 (last visited Aug. 19, 2015).

²¹⁸ Ways We Can Help Inventors, supra note 216 ("William Mitchell will apply pre-determined income guidelines").
²¹⁹ See id. However, inventors who have not filed a provisional application may

See id. However, inventors who have not filed a provisional application may request assistance form the William Mitchell Intellectual Property Clinic. *Id.*

William Mitchell's patent law faculty, help file and prosecute patent applications referred through the expanded program. ²²⁰

Moreover, in the second half of 2014, the Colorado program, ProBoPat, expanded its service area to include Wyoming, Utah, and New Mexico. Similarly, the Ohio program, operated through Case Western Reserve University School of Law, expanded to accept applicants from nearby Kentucky. The NC LEAP program began to accept requests from Tennessee individuals and small businesses. The Washington DC program began serving residents of West Virginia and Delaware. And the Greater Philadelphia program expanded to accept all inventors in Pennsylvania.

²²⁰ Caitlin Hill, *LegalCorps Provides Pricey Patent Help for Free*, MINN. BUS. MAG. (Mar. 25, 2015), http://minnesotabusiness.com/legalcorps-provides-pricey-patent-help-free ("[The program] enables free legal representation for low-income inventors seeking to patent their inventions with the USPTO, connecting them to law school students and volunteer attorneys.").

²²¹ See Alicia Wallace, Mi Casa-based Pro Bono Patent Program Expands to Neighboring States, DENVER POST, (May 12, 2015 3:51 PM), http://www.denverpost.com/business/ci_28101567/mi-casa-based-pro-bono-patent-program-expands.

The USPTO brings the person seeking assistance to the Case Western University School of Law *IP Venture Clinic* homepage when one clicks on the Kentucky link. *See Patent Pro Bono Program*, USPTO, http://www.uspto.gov/patents-getting-started/using-legal-services/pro-

bono/patent-pro-bono-program (last visited Aug. 19, 2015) [hereinafter USPTO Patent Pro Bono Program].

²²³ Frequently Asked Questions, N.C. B. ASS'N, http://www.ncbar.org/public-resources/nc-leap/faqs/ (last visited Aug. 19, 2015). The NC LEAP program won the 2015 NCBF/LexisNexis Partnerships for Success Award for its inventor assistance efforts. See Inventor Assistance Program Receiving Award, N.C. B. ASS'N, http://www.ncbar.org/news/inventor-assistance-program-receiving-award/ (last visited Aug. 19, 2015).

²²⁴ *PTO Pro Bono Program*, FED. CIR. B. ASS'N, http://www.fedcirbar.org/olc/pub/LVFC/cpages/misc/pto.jsp (last visited Aug. 20, 2015).

²²⁵ See Philadelphia Patent Pro Bono Program, supra note 130.

Two significant expansions in late 2014 opened up the growing patent pro bono movement to a large number of people in the northeastern United States. The New York Volunteer Lawyers for the Arts program expanded its coverage to include residents living or working in New Jersey and Connecticut. Similarly, the Massachusetts program began to serve individuals residing in Maine, New Hampshire, Vermont, and Rhode Island by offering access to the Boston-based inventor assistance program. In a June 22, 2015 press conference, Senator Patrick Leahy announced his support for the northeastern Patent Pro Bono Program's efforts to assist Vermont inventors and small businesses, commenting: "The Patent Pro Bono program will make sure that anybody with an innovative invention, regardless of income, has the ability to take advantage of the crucial protection that patents afford." 228

As a federal coordinator in this national effort, the USPTO is sensitive to the needs of local inventor assistance programs to address the particular needs of their respective communities. To that end, the USPTO is also prepared to provide support to new programs as comprehensive as what the above-described programs have enjoyed. The USPTO is working with various groups in Washington state, Delaware and Tennessee to establish programs specific to those states, apart from their current regional programs.

_

²²⁶ TRI-STATE Patet Pro Bono Program to Launch in New York, New Jersey, and Connecticut, ABA CENTER FOR PRO BONO EXCHANGE (Feb. 10, 2015), https://centerforprobono.wordpress.com/2015/02/10/tri-state-patent-pro-bono-program-to-launch-in-new-york-new-jersey-and-connecticut/.

²²⁷ See Pro Bono Patent Program of New England, ARTS & BUS. COUNCIL GREATER BOS., http://www.artsandbusinesscouncil.org/programs/patent-program.html (last visited Aug. 19, 2015).

²²⁸ Leahy Kicks Off Vermont Launch Of Patent Pro Bono Program, U.S.

²²⁸ Leahy Kicks Off Vermont Launch Of Patent Pro Bono Program, U.S. SENATOR PATRICK LEAHY VERMONT (June 22, 2015), http://www.leahy.senate.gov/press/leahy-kicks-off-vermont-launch-of-patent-pro-bono-program.

IV. A CLOSER LOOK AT THE PROGRAM'S SUCCESS

Beyond a qualitative overview of the Patent Pro Bono Program's trajectory, it is also helpful to evaluate the effectiveness of a particular program in some quantitative detail. Given the rapid expansion of programs across the country in a relatively short period of time, data on the work of most programs is very limited. Future analysis of data from all the regional programs will be appropriate for a more robust assessment. The earliest program, however—in Minnesota—has now been in operation for close to four years and offers an initial longitudinal view of the Patent Pro Bono Program's benefits.

A. Minnesota: The Basic Numbers

In its first year of operation (July 1, 2011 through June 30, 2012), the Minnesota program received thirty-seven inventor requests for assistance. 229 From these requests, seventeen inventors met the screening criteria and were matched with volunteer attorneys.²³⁰ Of the seventeen inventors paired with free patent counsel, twelve eventually received patents.²³¹ One applicant abandoned the application, another declined to proceed after the search report was generated, and three more unpublished.²³² Because the Minnesota program applicants to have filed a provisional application in order to meet the Inventor Assistance Program's screening criteria, 233 the program in its first year of operation also referred thirteen

²²⁹ See infra Table 2. The authors are grateful to LegalCORPS staff and volunteers for generously providing Minnesota program data. No information contained in this Article is confidential. Only published information on applications and patents is reported.

Id.

²³¹ *Id*.

²³² *Id*.

²³³ See supra Part III.A.1.

inventors to the William Mitchell Intellectual Property Clinic for assistance with filing provisional applications. ²³⁴

In the second year of operation (July 1, 2012 through June 30, 2013), the program received forty requests for assistance.²³⁵ Of these, fourteen resulted in matches with volunteer attorneys. ²³⁶ Of the fourteen matches, seven applications have issued as patents.²³⁷ Six more are pending, including two that have just been docketed and are ready for examination and three more for which the attorneys have currently filed responses to USPTO office actions.²³⁸ One application has received a final rejection. In the second year, the program also referred thirteen inventors to the William Mitchell Intellectual Property Clinic. 239

In the third year (July 1, 2013 through June 30, 2014), the Minnesota program received 38 requests for assistance. 240 Of these, seventeen were matched with volunteer attorneys. 241 From these matches, two applications have issued as patents, and twelve applications are currently pending. 242 The twelve pending applications include three newly docketed cases ready for examination, three more applications for which examiners have issued Office Actions and await an applicant reply, one application for which the applicant has filed a response, and one application for which the USPTO has issued an advisory action to the applicant. 243 One application was abandoned by the inventor, 244

²³⁵ See infra Table 3.

²³⁴ *Id*.

²³⁶ *Id*.

²³⁷ *Id*.

²³⁸ *Id*.

²³⁹ *Id*.

²⁴⁰ See infra Table 4.
²⁴¹ Id.

²⁴² *Id*.

²⁴³ *Id*.

and two more applications were not filed because the inventors declined to proceed.²⁴⁵ In the third year, the program also referred two inventors to the William Mitchell Intellectual Property Clinic.²⁴⁶

In all three years for which Minnesota program data is available, the patent applications encompass nearly all the major technology categories, including computer and communications, drugs and medical, electrical and electronic, and mechanical. Likewise, the cases referred to the William Mitchell Intellectual Property Clinic also encompass most of the major technology areas, including mechanical, chemical, electrical, and business method inventions. These various data are summarized in Tables 2–4.

These bare numbers from the Minnesota program reveal that, even at the small-scale level of a single state's patent pro bono initiative, inventors are availing themselves of help in a variety of technological areas. They also reveal that the law school clinic model is, indeed, a meaningful complement to pro bono services in empowering low-income innovators while educating future lawyers both in real-world IP and business counseling and in the legal profession's ethic of public service.

²⁴⁴ *Id*.

²⁴⁵ *Id*.

²⁴⁶ *Id*.

²⁴⁷ See Classes Within the U.S. Classification System: Arranged by Related Subject Matter, USPTO (2012), available at http://www.uspto.gov/sites/default/files/patents/resources/classification/classesc ombined.pdf. These categorizations are based on the U.S. Patent Classification System into which all applications and patents are ordered, and on the National Bureau of Economic Research six-category system, which is keyed to the USPC. See generally The NBER U.S. Patent Citations Data File: Lessons, Insights, and Methodological Tools, NBER, http://www.nber.org/patents/ (last updated May 16, 2012).

B. Impact of the Pro Bono Filings

To understand the impact of patent pro bono services beyond this basic summary information, it is useful to consider the disparity in patent prosecution outcomes between applicants who proceed *pro se* and those who are represented by a USPTO-registered practitioner. We draw this comparison in two steps. First, to place our analysis in context with underlying (and unobservable) differences among macroeconomic and other regional factors, we compare various outcome statistics for USPTO applications originating from Minnesota and USPTO applications overall. Second, we then compare the outcomes for applications supported through LegalCORPS in the Minnesota patent pro bono program both to overall Minnesota applications filed *with* an attorney and to overall Minnesota applications filed *without* an attorney, i.e., *pro se*. The particular outcomes we compare in all cases are as follow:

- the rate at which the USPTO examiner's first action on the merits is to allow the application to issue as a patent;
- the rate at which the USPTO examiner allows the application to issue as a patent within one round of examination, i.e., without a request for continued examination (RCE) or an appeal;
- the rate at which the USPTO examiner allows the application to issue as a patent with up to one rejection; and
- the rate at which the application goes abandoned.

Even with the small sample size of the Minnesota patent pro bono population, the results are illuminating. As Figure 1 shows, the general run of patent applications from Minnesota fare differently, to a statistically significant extent, from USPTO applications overall. The rate of first-action allowance is indistinguishable between Minnesota-originating applications and USPTO applications overall. Minnesota-originating applications receive first-action allowances in 6.78% of cases, and USPTO applications overall receive first-action allowances in 7.01% of cases. The difference is not statistically significant (p = 0.9808). However, Minnesota applications are allowed more often without RCE or appeal, are more often allowed with up to one rejection, are abandoned less frequently, and remain pending longer than applications overall.

In turn, comparing applications within Minnesota more specifically, the rate of first-action allowances for LegalCORPS patent pro bono applications are virtually indistinguishable from overall Minnesota applications *filed with an attorney*. LegalCORPS applications receive first-action allowances in 6.67% of cases, and overall Minnesota applications with an attorney receive first-action allowances in 6.65% of cases, with a statistically insignificant difference (p = 0.9963). By contrast, overall Minnesota *pro se* applications receive first-action allowances in only 2.13% of cases, and this difference is somewhat significant (p = 0.0868).

The rate of allowance without RCE or appeal is considerably higher for Minnesota applications *with* attorneys (39.9%) than for Minnesota *pro se* applications (12.3%), and the rate for LegalCORPS applications (46.7%) quite closely resembles the former. The difference between LegalCORPS applications and Minnesota applications *with* attorneys is insignificant (p = 0.4492), but the difference between LegalCORPS and Minnesota *pro se* applications is significant (p = 0.000).

Likewise, the rate of allowance with up to one rejection is considerably higher for Minnesota applications *with* attorneys (36.0%) than for Minnesota *pro se* applications (10.0%), and the rate for LegalCORPS applications (40.0%) quite closely resembles the former. Again, the difference between LegalCORPS and Minnesota *with* attorneys is insignificant (p = 0.6500), but the

difference between LegalCORPS and Minnesota pro se applications is significant (p = 0.000).

These findings indicate that support from LegalCORPS's patent practitioners in the Minnesota patent pro bono program does significantly improve an inventor's likelihood of receiving a favorable outcome in the patent application process, as evidenced by three basic measures of patent allowance. Our initial comparison demonstrates a significant difference between USPTO applications overall and the subset of applications from Minnesota, meaning that Minnesota applications with and without attorneys are, indeed, the appropriate reference point for LegalCORPS's outcomes—rather than the general population of USPTO applications. Our second comparison then shows that inventors supported by LegalCORPS's patent pro bono attorneys fare as well as the average Minnesota inventor who is represented by counsel—and significantly better than the average Minnesota inventor who proceeds *pro se*.

It is also important to consider two additional prosecution outcome measures—abandonment and pendency—that are particularly important to under-resourced innovators. The rate of abandonment among applications supported by LegalCORPS (10.0%) is roughly the same as that among Minnesota *pro se* applications (13.9%), with a statistically insignificant difference (p = 0.5343). By contrast, the rate of abandonment is lower for LegalCORPS applications than for overall Minnesota applications filed with an attorney (25.5%), and to a somewhat statistically significant extent (p = 0.0520).

This abandonment finding suggests a possible selection effect arising from the small size and scarce resources of an inventor or firm that was eligible for pro bono assistance in the first place. Such a firm might only begin the patent application process after carefully vetting applicants, and would presumably be less likely to abandon its investments in patent prosecution. However, this is difficult to establish with the small sample size of LegalCORPS's work to date. In general, the abandonment rate among Minnesota applicants claiming "large entity" status (16.2%) in the USPTO is notably higher than for those claiming "small entity" status (2.86%), and the difference is significant (p = 0.0000). Yet, the LegalCORPS abandonment rate (10.0%) is indistinguishable both from that of large entities (p = 0.8601) and from that of small entities (p = 0.3599), meaning that the precise effect of size and resources cannot be resolved without a larger data set of patent pro bono outcomes.

C. Two Case Studies

In addition to statistical inferences from these comparisons of the Minnesota patent pro bono program applications to larger, more general populations, two cases studies from the program also bear closer scrutiny.

In November 2011, Travis Kelley, a *pro se* inventor in Backus, Minnesota, sought legal help through the pro bono program to patent his door-installation invention, called the CHEATAH. LegalCORPS connected Mr. Kelley with a volunteer patent lawyer, Kate DeVries Smith, who filed and prosecuted his application. He had received U.S. Patent No. 8,677,636. During the same year, he would go on to be named a runner up in the Minnesota Cup, a statewide entrepreneurship competition. Legal Corp.

Mr. Kelley's company JenTra Tools has now manufactured over 6,000 units of his invention, all within the United States,

²⁴⁸ 'Minnesota Cup' Honors IAP Participant, LEGALCORPS, http://www.legalcorps.org/minnesota-cup-honors-iap-participant (last visited Aug. 19, 2015).

²⁴⁹ Caitlin Hill, *supra* note 220.

²⁵⁰ See U.S. Patent No. 8,677,636 (issued Mar. 25, 2014).

²⁵¹ See 'Minnesota Cup' Honors IAP Participant, supra note 248.

generating over \$150,000 in gross revenue. 252 As the invention employs a leveler and spacer kit to enable faster and more precise door installation, 253 it is of particular relevance to the door manufacturing industry. In order to reach a greater segment of that industry, JenTra Tools has now hired three employees in Minnesota to expand its operational capacity. On the small scale of an individual firm, Mr. Kelley's successful patent prosecution reflects many of the aims of a well-functioning innovation system: production of a new and useful good, complementary benefits to existing industry, and local job creation.

A second Minnesota inventor, a seventy-one-year-old retiree named Jim Lemke, had initially tried to file a patent application on his own, but was unable to do so.²⁵⁵ In June 2011, LegalCORPS matched Mr. Lemke with volunteer patent attorneys Amy Salmela and Christian Girtz.²⁵⁶ They filed a provisional application and, subsequently, a nonprovisional utility application for his invention, a device to remove ice clumps from behind car wheels.²⁵⁷

.-

²⁵² See Patent Pro Bono Program Grows: My Interview with Jennifer McDowell, Coordinator of the U.S. Patent Pro Bono Program, L. OFFICE KATHLEEN LYNCH PLLC (Dec. 16, 2014), http://kliplaw.com/blog/2014/12/16/patent-pro-bono-program-grows-my-interview-with-jennifer-mcdowell-coordinator-of-the-us-patent-pro-bono-program (hereinafter Interview with Jennifer McDowell).

²⁵³ CHEETAH Door Level Features, JENTRA TOOLS, http://www.jentratools.com/cheatah-door-level-features/ (last visited Aug. 19, 2015).

²⁵⁴ Interview with Jennifer McDowell, supra note 252.

Neal St. Anthony, LegalCorps Cited by White House for Helping Lowincome Inventors, STAR TRIB. (Mar. 1, 2014), http://www.startribune.com/legalcorps-cited-by-white-house-for-helping-low-income-inventors/247896711/.

²⁵⁶ See Phone Interview with Jim Lemke (document on file with author).

²⁵⁷ See Neal St. Anthony, supra note 255.

Colorfully named the Snow Booger Remover, the device is now protected under U.S. Patent No. 8,533,896.²⁵⁸

Mr. Lemke began marketing his device locally in the Twin Cities area and through his website, ²⁵⁹ and LegalCORPS then also assisted Mr. Lemke with obtaining a trademark for his device. 260 As part of his ongoing efforts to commercialize his invention, Mr. Lemke has attended trade shows, advertised on the radio, and visited with local meteorologists. 261 With his business operation now approaching 1,000 units sold, he is preparing to license his invention to retail stores across the United States, secure in the intellectual property rights that give him a more equal bargaining position with large well-funded distribution chains. 262 In these licensing discussions, too, Mr. Lemke has returned to LegalCORPS for counsel. 263 As with Mr. Kelley, Mr. Lemke's case began from modest means and personal initiative before he sought help and was able to receive it from the Minnesota patent pro bono program.

It is unlikely that these inventors' intellectual property rights would have been protected at all, or adequately, without the help of competent patent counsel. Given this support, they now contribute their innovations to their local economies with not only the ambition, but the means, to contribute to the national economy.

V. CONCLUSION

The patent pro bono movement is an illuminating example of socially and economically conscious investments that yield returns many times over. Beyond the direct benefits to inventors and to their local economies and communities, the innovation system as a

²⁵⁸ See id.; U.S. Patent No. 8,533,896 (issued Sept. 17, 2013).

²⁵⁹ See SNOW BOOGER REMOVER, http://www.snowboogersbegone.com/ (last visited Aug. 6, 2015).

²⁶⁰ See Phone Interview with Jim Lemke, supra note 256.

²⁶² *Id*.

²⁶³ *Id*.

whole functions more smoothly through such investments. The complexities of filing and prosecuting patent applications often leave otherwise capable inventors and startups stymied.

The USPTO, for its part, continues to develop its programs of assistance to unrepresented inventors, such as the Pro Se Assistance Program, ²⁶⁴ a redesigned website geared towards first-time users of the patent system, ²⁶⁵ and Patent and Trademark Resource Centers located all across the country. ²⁶⁶ Yet, the benefits of representation by patent counsel remain clear. Unnecessary errors, overlooked formalities, and ultimately abandoned applications consume the USPTO's resources, including examiner time spent assisting *pro se* applicants—often before an invention even receives substantive evaluation on the merits, let alone approaches an issued patent. By pairing inventors with volunteer attorneys, these up-front inefficiencies in the patent system are greatly reduced.

The positive economic impacts of patent pro bono initiatives are a principal reason why the USPTO is committed to making the program available to low-income residents across the United States. Together with small inventor-friendly policies such as reduced fee structures, these efforts help level the playing field for innovators to compete on the strength of their innovations.

The USPTO's significant commitment of pro bono lawyers and its initial commitment of financial resources provided the kick start the program needed to expand nationwide. Now, going forward,

²⁶⁴ See Pro Se Assistance Program, USPTO, http://www.uspto.gov/patentsgetting-started/using-legal-services/pro-se-assistance-program (last visited Aug. 19, 2015).

²⁶⁵ See USPTO, http://www.uspto.gov/ (last visited Aug. 19, 2015).

²⁶⁶ PTRC Locations By State, USPTO, http://www.uspto.gov/learning-and-resources/support-centers/patent-and-trademark-resource-centers-ptrc/ptrc-locations (last visited Aug. 19, 2015).

the USPTO must transition primary responsibility for the vision and sustainability of the patent pro bono initiative to those outside of the federal government. Given the successes already seen during the short duration of the program, market forces appear likely to bear the minimal operational burden required not only to expand but to flourish. In this, the Pro Bono Advisory Council (PBAC) is well prepared to lead the way forward.

Key challenges remain in broadening the participation of patent professionals as well as inventors and small businesses in the program. For attorneys, especially those without portable professional liability insurance (such as in-house counsel), a regional programs' provision of malpractice insurance becomes a necessity for participation. To this end, in late 2014, the PBAC established a subcommittee to explore malpractice issues, and by mid-2015, found multiple insurers willing to work with the regional programs to provide adequate malpractice coverage. This alone increases the capacity of patent pro bono programs through greater volunteer attorney participation, which, in turn, makes it possible to provide service to more inventors and startups.

Another key challenge is the ability of every regional program to become self-sustaining. Currently, most programs operate through corporate sponsorship and other donations. Some, such as the California program, recover some costs through administrative fees. Others, such as the Midwest program, are exploring a mode of expansion by which revenue from successful applicants may help fund future operations. In all cases, sustainable sources of funding must eventually be built into each program's business model. With direction and guidance from the dozens of IP professionals on the PBAC, the program is poised to thrive.

The USPTO's Pro Bono Program team remains committed to offering enthusiastic guidance and coordination to the PBAC, to the regional programs already established, and to the new inquiries that come to the office daily. The USPTO's responsible stewardship of the program requires that the program's future

viability be pursued in a realistic and thoughtful way by each regional program, so that all American can reap the benefits this program has to offer.

TABLES AND FIGURES

Table 1. Law School Clinic Certification Program Participants

Patents	Trademarks	Both	
Brooklyn Law School	American University, Washington College of Law	Arizona State University College of Law	
Case Western Reserve University School of Law	California Western School of Law	Fordham University School of Law	
New York Law School	Howard University School of Law	Indiana University Maurer School of Law	
University of Colorado Law School	Lewis & Clark College School of Law	Lincoln Law School of San Jose	
University of Detroit Mercy School of Law	Loyola University Chicago School of Law	North Carolina Central University School of Law	
Wayne State University Law School	- · · · · · · · · · · · · · · · · · · ·	South Texas College Of Law	
	Roger Williams University School of Law	Southern Methodist University Dedman School of Law	

Rutgers Law School— Newark	Texas A&M University School of Law
Saint Louis University School of Law	The John Marshall Law School
The George Washington University School of Law	Thomas Jefferson School of Law
University of Akron School of Law	University of California, Los Angeles School of Law
University of Idaho College of Law	University of Connecticut School of Law
University of New Hampshire School of Law	University of Maryland School of Law
University of North Carolina at Chapel Hill School of Law	University of Notre Dame Law School
University of San Francisco School of Law	University of Puerto Rico School of Law
University of Tennessee College of Law	University of Washington School of Law
Vanderbilt Law School	William Mitchell College of Law
West Virginia University School of Law	
Western New England University School of Law	

Table 2. Minnesota Patent Pro Bono Program Summary: July 2011–June 2012

Month of Att'y-Client	Application	USPTO	U.S. Patent	NBER	
Match	Serial No.	Art Unit	Class	Category	Status
Sep-2011	12/363,787	3656	074	Mech	Patented Case
Nov-2011	13/315,450	2685	340	Cmp&Cmm	Patented Case
Nov-2011	13/371,004	2856	033	Others	Patented Case
Dec-2011	Unpublished	_	_	_	_
Dec-2011	13/462,444	3788	206	Others	Patented Case
Jan-2012	12/803,309	3611	040	Others	Abandoned Failure to Respond to an Office Action
Jan-2012	Unpublished	_	_	_	_
Feb-2012	12/785,303	3716	463	Others	Patented Case
Mar-2012	Unpublished	_	_	_	Client did not proceed after search
Mar-2012	Unpublished	_	_	_	_
Mar-2012	13/065,596	3632	248	Others	Patented Case
May-2012	12/587,881	3652	294	Mech	Patented Case
May-2012	12/962,974	3764	482	Mech	Patented Case
May-2012	13/334,698	2848	174	Elec	Patented Case
Jun-2012	13/555,555	3644	043	Others	Patented Case
Jun-2012	12/804,100	3781	220	Others	Patented Case

Jun-2012	13/612,372	3739	607	Drgs&Med	Patented Case

Table 3. Minnesota Patent Pro Bono Program Summary: July 2012-June 2013

Month of Att'y-Client Match	Application Serial No.	USPTO Art Unit	U.S. Patent Class	NBER Category	Status
Jul-2012	29/442,338	2912	D02	Design	Patented Case
Aug-2012	13/330,183	3654	254	Mech	Patented Case
Aug-2012	13/586,128	3721	053	Others	Response to Non-Final Office Action Entered and Forwarded to Examiner
Aug-2012	13/302,210	3679	403	Others	Response to Non-Final Office Action Entered and Forwarded to Examiner
Oct-2012	13/764,535	3788	206	Others	Docketed New Case - Ready for Examination
Nov-2012	Unpublished	_	_	_	Final rejection
Jan-2013	12/930,778	3727	015	Others	Patented Case

Feb-2013	13/860,385	3643	054	Others	Response to Non-Final Office Action Entered and Forwarded to Examiner
Feb-2013	Unpublished	_	_	_	Active
Mar-2013	13/010,254	3739	607	Drgs&Med	Patented Case
Apr-2013	13/485,792	1792	426	Others	Patented Case
May-2013	12/930,263	2886	356	Elec	Patented Case
Jun-2013	14/262,331	3765	036	Others	Docketed New Case - Ready for Examination
Jun-2013	14/188,726	2837	084	Others	Patented Case

Table 4. Minnesota Patent Pro Bono Program Summary: July 2013-June 2014

Month of Att'y-Client Match	Application Serial No.	USPTO Art Unit	U.S. Patent Class	NBER Category	Status
Jul-2013	14/104,952	3634	043	Others	Docketed New Case - Ready for Examination
Aug-2013	13/017,019	2614	345	Cmp&Cmm	Patented Case
Aug-2013	14/081,713	3746	417	Mech	Docketed New Case - Ready for Examination
Oct-2013	14/285,757	2875	362	Elec	Docketed New Case - Ready for Examination
Nov-2013	14/106,407	3672	405	Others	Patented Case
Nov-2013	Unpublished	_	_	_	Client did not proceed
Nov-2013	14/211,017	3634	160	Others	Non Final Action Mailed
Nov-2013	Unpublished	_	_	_	Client did not proceed
Nov-2013	13/209,503	3753	137	Others	Abandoned Failure to Respond to an Office Action

Feb-2014	14/318,670	3625	705	Cmp&Cmm	Non Final Action Mailed
Feb-2014	Unpublished	_	_	_	Active
Mar-2014	14/226,516	3711	273	Others	Non Final Action Mailed
May-2014	Unpublished				Active
May-2014	13/507,951	3731	606	Drgs&Med	Advisory Action Mailed
May-2014	Unpublished	_	_	_	Active
May-2014	Unpublished	_	_	_	Active
Jun-2014	14/034,759	3677	063	Others	Response after Final Action Forwarded to Examiner

Figure 1. Prosecution Statistics for Minnesota vs. Overall Applications

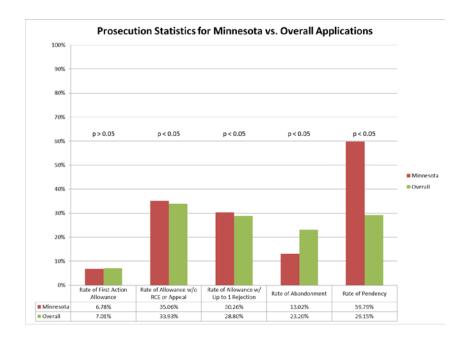
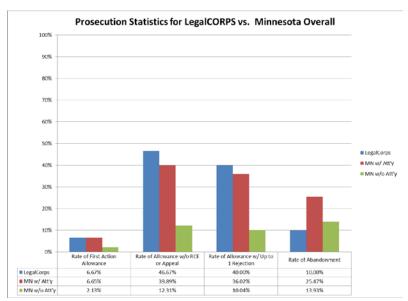


Figure 2. Prosecution Statistics for LegalCORPS vs. Minnesota w/ and w/o Att'y



	LegalCORPS	LegalCORPS
	vs.	vs.
Measure	MN w/ Att'y	MN w/o Att'y
Rate of First Action Allowance	p > 0.05	p > 0.05
Rate of Allowance w/o RCE or Appeal	p > 0.05	p < 0.05
Rate of Allowance w/ Up to 1 Rejection	p > 0.05	p < 0.05
Rate of Abandonment	p > 0.05	p > 0.05