

LET'S WAIT AND SEE: A PERSPECTIVE ON POST-AIA PATENT REFORM

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Twenty years ago, patent law was somewhat of a backwater practice, little noticed by corporate executives and business leaders outside of the patent arena.¹ Today, the environment has greatly changed.² Patent law issues are now regular fodder for the front pages of the *New York Times*, the *Wall Street Journal*, *Bloomberg*, and other notable media outlets,³ as there is frequently a great deal of controversy concerning the strength, quality, and enforcement of patent rights.⁴ However, it is important to consider what precipitated this change.

What has changed is that the importance of Intellectual Property (IP) intensive industries in the U.S. economy has become clear.⁵ The economy is increasingly based on high-tech and knowledge-based industries instead of traditional manufacturing.⁶ According

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1. See Nancy Scola, *How Patent Reform's Fraught Politics Have Left USPTO Still Without a Boss*, WASH. POST (July 30, 2014), <https://www.washingtonpost.com/blogs/the-switch/wp/2014/07/30/how-patent-reforms-fraught-politics-have-left-uspto-still-without-a-boss/> [https://perma.cc/BBN3-2BHN].

2. See, e.g., Jess Collen, *Patent Reform 2013—the "America Invents Act"—Much Ado*, FORBES (Mar. 15, 2013, 10:18 PM), <http://www.forbes.com/sites/jesscollen/2013/03/15/patent-reform-2013-the-america-invents-act-much-ado/> [http://perma.cc/6PCD-E2FZ].

3. See *id.*

4. See *id.*; see also Charles Duhigg & Steve Lohr, *The Patent, Used As a Sword*, N.Y. TIMES (Oct. 8, 2012), <http://www.nytimes.com/2012/10/08/technology/patent-wars-among-tech-giants-can-stifle-competition.htm> [http://perma.cc/C5J4-QD6Z].

5. See Scola, *supra* note 1 (noting that patent law impacts two of the largest sectors of the U.S. economy: bio-pharmaceuticals and tech); see also Erik Telford, *Republican Leaders Need to Upgrade Their Tech Agenda*, POLITICO MAG. (Mar. 9, 2015), http://www.politico.com/magazine/story/2015/03/republican-leaders-need-to-upgrade-their-tech-agenda-115917_Page2.html#.VbeQMvIViko [http://perma.cc/38ZC-YLE3] (noting that IP-intensive industries make up thirty-five percent of the U.S. GDP).

6. See Telford, *supra* note 5; see also Collen, *supra* note 2; James R. Hagerty, *Why Manufacturing Still Counts in the U.S. Economy*, WALL ST. J. (Jan. 13, 2015),

to the U.S. Department of Commerce, IP-intensive industries contribute more than five trillion dollars annually to the U.S. economy.⁷ In addition, forty million jobs are attributed to IP-intensive industries.⁸ Countries such as the United States, where IP protection is strong, have a significant advantage attracting research and development (R&D) investment.⁹ There is a strong positive correlation between U.S. GDP and U.S. patenting activity.¹⁰ For example, the “smartphone wars” present a \$500 billion prize to the winner, or winners, as the case may be.¹¹ The smartphone wars, in particular, have a number of active “theatres” for engagement in the patent arena.¹²

IP law and patent law, in particular, are currently experiencing study and reform efforts.¹³ There are all kinds of studies, task forces, and research efforts around patents and patent-related issues.¹⁴ We are on the heels of the America Invents Act of 2012 (AIA),¹⁵ the largest patent law reform effort in genera-

<http://www.wsi.com/articles/why-manufacturing-still-counts-in-the-u-s-economy-1421206352> [<http://perma.cc/Q5CR-5MC4>].

7. ECON. & STAT. ADMIN. & U.S. PATENT & TRADEMARK OFFICE, INTELLECTUAL PROPERTY AND THE U.S. ECONOMY: INDUSTRIES IN FOCUS 3 (U.S. DEP'T OF COMMERCE 2012).

8. *Id.* at 43.

9. William G. Barber, Op-Ed., *The U.S. Patent System Works*, N.Y. TIMES (Oct. 10, 2012), <http://www.nytimes.com/roomfordebate/2012/10/10/does-the-law-support-inventors-or-investors/the-us-patent-system-works> [<http://perma.cc/A6AE-TMVA>] (arguing that a strong patent system allows inventors to recover their research and development costs, encouraging them to invest).

10. See Rolando Pena-Sanchez, *The GDP Growth-Rates of Countries with the Highest Production of Patents*, 12 INT'L BUS. & ECON. RES. J. 229, 236 (2013) (citing a strong correlation between economic growth rates and patent production); Bradley D. Riel & Paul T. Meiklejohn, *A Correlation Between the State of the U.S. Economy and Patent Litigation Activity*, J. PAT. & TRADEMARK OFF. SOC'Y 71, 103 (Winter 2010) (citing a correlation between GDP and patent litigation in the district courts).

11. Joel Rosenblatt, *Apple, Samsung Take Smartphone War to First U.S. Jury*, BLOOMBERG BUS. (July 28, 2012, 12:06 AM), <http://www.bloomberg.com/news/articles/2012-07-27/apple-samsung-take-smartphone-war-to-first-u-s-jury> [<http://perma.cc/HV42-TXJP>].

12. Ashby Jones & Jessica E. Vascellaro, *Smartphone Patents: The Never-Ending War—Even Minor Features Figure in Big Battles As Rivalry Heats Up*, WALL ST. J. (Apr. 13, 2012), <http://www.wsj.com/articles/SB10001424052702303624004577339931560320116> [<http://perma.cc/B5PQ-LKZF>] (highlighting the global nature of the smartphone war).

13. See Duhigg & Lohr, *supra* note 4.

14. See *id.*

15. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

tions.¹⁶ Yet there are calls for additional reforms, particularly by those focused on patent litigation.¹⁷ Some critics declare that the patent system as currently constructed is “killing” innovation.¹⁸ The U.S. Patent and Trademark Office (USPTO) is under attack for issuing so-called “junk patents,”¹⁹ and reformers claim that patent litigation is running rampant and is a drag on the economy.²⁰ What is fact and what is fiction?

The reformers are leveraging questionable and anecdotal evidence to support their calls for additional reforms. They claim there has been an explosion of patent litigation fueled by non-practicing entities and that patent litigation is killing innovation.²¹ This so-called litigation explosion, however, has been debunked by credible studies. For example, a recent Docket Navigator report indicates that in 2014, patent litigation filings in the U.S. district courts were down substantially compared to 2013.²² The AIA, through its provisions establishing patent office trials, seems to be achieving its goal of directing certain parties and issues to the USPTO's Patent Trial and Appeal Board for resolution as a cheaper and quicker alternative to, or certainly to shortcut, litigation in the federal district courts.²³ Is

16. See Steve Lohr, *With Patent Litigation Surging, Creators Turn to Washington for Help*, N.Y. TIMES (Apr. 30, 2015), <http://www.nytimes.com/2015/04/30/technology/with-patent-litigation-surging-creators-turn-to-washington-for-help.html> [http://perma.cc/2VTG-JH8S].

17. See, e.g., Ashby Jones, *Senate Tees Up Bipartisan Bill Aimed at Patent Litigation*, WALL ST. J. L. BLOG (Apr. 29, 2015, 4:41 PM), <http://blogs.wsj.com/law/2015/04/29/senate-tees-up-bipartisan-bill-aimed-at-patent-litigation/> [http://perma.cc/AYQ9-MS29].

18. See, e.g., Duhigg & Lohr, *supra* note 4.

19. Ashby Jones, *Leading GOP Senator Says More Patent Reform on the Horizon*, WALL ST. J. L. BLOG (Nov. 14, 2014, 11:23 AM), <http://blogs.wsj.com/law/2014/11/14/leading-gop-senator-says-more-patent-reform-on-the-horizon/> [http://perma.cc/88SC-X2NU] (noting that some companies believe many of the lawsuits are filed based on patents that should not have been issued).

20. Ashby Jones, *Patent Reform Bill Arises Again in Congress*, WALL ST. J. L. BLOG (Feb. 5, 2015, 12:42 PM), <http://blogs.wsj.com/law/2015/02/05/patent-reform-bill-arises-again-in-congress/> [http://perma.cc/57S9-PPEY].

21. See David Segal, *Has Patent, Will Sue: An Alert to Corporate America*, N.Y. TIMES (July 14, 2013), <http://www.nytimes.com/2013/07/14/business/has-patent-will-sue-an-alert-to-corporate-america.html> [http://perma.cc/QYP2-M2VW].

22. Docket Navigator, *2014 Year in Review*, at 6, <http://home.docketnavigator.com/year-review/> [http://perma.cc/HYJ5-8SSM].

23. See Kevin Jakel, *Congress Should Preserve the IPR Process*, THE HILL (June 30, 2015, 5:00 PM), <http://thehill.com/blogs/congress-blog/technology/243778-congress->

additional reform urgently needed? Given that the AIA is still in its infancy²⁴ and that the federal courts continue to actively address many of the issues that the reformers claim are a scourge on the patent system,²⁵ the prudent course is to take a wait-and-see approach to evaluate the effectiveness of the recent reforms prior to engaging in additional reform.

What is the state of play on some of these critical issues? In general, the rate of patent litigation is at or below historical trends, relative to the number of issued patents.²⁶ And the percentage of litigation filed by non-practicing entities (NPEs), patent assertion entities, or pejoratively, “patent trolls”²⁷ continues to represent seventeen to twenty percent of patent litigation.²⁸ A recent study by Cotropia, Kesan, and Schwartz²⁹ found that the perceived increase in NPE litigation is primarily driven by the revised joinder rules of the AIA.³⁰ The abusive practice of sending scores or even hundreds of questionable claim letters has been, and is being, adequately addressed by the Federal Trade Commission and state attorneys general.³¹ The courts, including the U.S. Supreme Court, have provided crucial guidance on many of the issues that have been identified as problematic: fee

should-preserve-the-ipr-process [<http://perma.cc/H6YV-PVN2>] (arguing that the PTAB is a faster, cheaper, more efficient alternative to litigation).

24. See Lohr, *supra* note 16.

25. See *Commil USA, LLC v. Cisco Systems, Inc.*, 135 S. Ct. 1920, 1928 (2015) (holding that a good-faith belief in patent invalidity is not a defense to a claim of induced infringement); *Limelight Networks, Inc. v. Akamai Technologies, Inc.*, 134 S. Ct. 2111, 2117 (2014) (holding that because no single entity performed all steps in the patented process, there was no direct infringement); *Eli Lilly & Co. v. Teva Parenteral Medicines, Inc.*, 689 F.3d 1368, 1378 (Fed. Cir. 2012) (holding that a patent is not invalid for obviousness-type double-patenting).

26. See Brad Pedersen, *Patent Litigation: Too Much as Compared to What?*, IP-WATCHDOG (July 8, 2013), <http://www.ipwatchdog.com/2013/07/08/patent-litigation-too-much-as-compared-to-what/id=42868/> [<http://perma.cc/5P8B-SMN3>].

27. See Ryan T. Holte, *Trolls or Great Inventors: Case Studies of Patent Assertion Entities*, 59 ST. LOUIS U. L.J. 1, 4 (2014).

28. Michael J. Mazzeo et al., *Do NPEs Matter?: Non-Practicing Entities and Patent Litigation Outcomes*, 9 J. COMPETITION L. & ECON. 879, 897 (2013).

29. Christopher A. Cotropia, Jay P. Kesan & David L. Schwartz, *Unpacking Patent Assertion Entities (PAEs)*, 99 MINN. L. REV. 649, 699 (2014).

30. See *id.*; see also Dongbiao Shen, *Misjoinder or Mishap? The Consequences of the AIA Joinder Provision*, 29 BERKELEY TECH. L.J. 545, 580 (2014).

31. See Bernard Nash et al., *Troll Tamers: State Attorneys General's Role in the Patent Reform Debate*, DICKSTEINSHAPIRO, <http://www.dicksteinshapiro.com/sites/default/files/Troll-Tamers-State-Attorneys-General-s-Role-in-the-Patent-Reform-Debate.pdf> [<http://perma.cc/7R6L-JZCR>] (last visited July 31, 2015).

shifting,³² inequitable conduct,³³ end-user protection,³⁴ and eligible subject matter.³⁵ The AIA and judicial action have created several avenues for alleged infringers and others to invalidate questionable patents. Yet the reformers want more. The proposed reforms are targeted at entities whose business is strictly licensing, including NPEs, patent-assertion entities (PAEs), or “trolls.”³⁶ The government should not be in the business of legislating to advance or impede one business model or another. That is an important purpose of the free marketplace.

The accusation that patents are killing innovation and squelching opportunities for tech entrepreneurs is not supported by the facts. In 2014, venture capital funding soared to its highest level since the peak of the dotcom bubble in 2000,³⁷ and patent filings and issuances have never been higher.³⁸ The vast majority of patent activity such as licensing and transfers happens outside of the courts,³⁹ and thus litigation statistics paint an incomplete and frequently misleading picture of the patent marketplace.

Some commentators have proposed different requirements and rights for different patents, depending on their subject matter.⁴⁰ Moreover, they claim that the one-size-fits-all patent system is not appropriate for software and business-method patents or in an era where technology is advancing and changing so quickly.⁴¹ This thinking is flawed. The uniform patent model has worked for about two hundred years through all kinds of technological and marketplace transfor-

32. *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014).

33. *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276 (Fed. Cir. 2011).

34. *GoldenBlount, Inc. v. Robert H. Peterson Co.*, 438 F.3d 1354 (Fed. Cir. 2006).

35. *Bilski v. Kappos*, 561 U.S. 593 (2010).

36. See Mazzeo, *supra* note 28, at 897.

37. See Eric Newcomer, *Venture Funding of U.S. Last Year Was Most Since 2000*, BLOOMBERG BUSINESSWEEK (Jan. 15, 2015, 11:01 PM), <http://www.bloomberg.com/news/articles/2015-01-16/it-s-official-startup-funding-last-year-was-biggest-since-2000> [http://perma.cc/HMW5-R95N].

38. U.S. Patent and Trademark Office, *U.S. Patent Statistics Chart Calendar Years 1963–2014* (July 31, 2015 10:42 PM), http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm [http://perma.cc/EUY2-BXJW].

39. See David Pridham, *Patent Licensing is as American as Apple Pie*, IPWATCHDOG (Mar. 29, 2014), <http://www.ipwatchdog.com/2015/03/29/patent-licensing-is-as-american-as-apple-pie/id=56217/> [http://perma.cc/S6PV-MAEZ].

40. See Michael W. Carroll, *One Size Does Not Fit All: A Framework for Tailoring Intellectual Property Rights*, 70 OHIO ST. L.J. 1361 (2009).

41. See *id.*

mations, and it appears to still be working. Technology advances at a regular pace and designing around existing technologies is one of the many ways the useful arts are advanced. Further, it is not clear that technology is moving so fast as to make the current patent term unworkable. For example, the 802.11 Wi-Fi standard has been around for more than a decade;⁴² while it has been modified in some respects, it continues to be one of the most widely used technologies and also one of the most highly litigated from a patent perspective.⁴³

A strong patent system is required to support R&D investment and new innovation, particularly in emerging technologies of all stripes and, for example, in pharmaceuticals. There is now a question as to whether business methods and, by extension, software, should be patentable.⁴⁴ Many technological innovations are implemented through software rather than hardware; this facilitates desirable attributes such as miniaturization and mobility. In this regard, software is an immensely important arena of innovation, and it is thriving.⁴⁵ In some instances, the distinction between the effects of software and hardware is unclear and potentially illusory.⁴⁶ Software inventions should not be treated or evaluated any differently than other types of invention, as many things that were formerly only achievable with specialized hardware are now achieved through software. This is true, for example, in the case of field-programmable gate arrays.

42. See *A Brief History of Wi-Fi*, THE ECONOMIST (June 10, 2004), <http://www.economist.com/node/2724397> [<http://perma.cc/YA3J-MAG3>].

43. See Jay P. Kesan & Carol M. Hayes, *FRAND's Forever: Standards, Patent Transfers, and Licensing Commitments*, 89 IND. L.J. 231, 232 (2014).

44. See Brian Kahin, *At the Heart of the Knowledge Economy: Should Patents Be Limited to Technology*, HUFFINGTON POST (May 6, 2008), http://www.huffingtonpost.com/brian-kahin/at-the-heart-of-the-knowl_b_100404.html [<http://perma.cc/2ZPA-682J>].

45. See Steve Denning, *Agile: The World's Most Popular Innovation Engine*, FORBES (July 23, 2015), <http://www.forbes.com/sites/stevedenning/2015/07/23/the-worlds-most-popular-innovation-engine/> [<http://perma.cc/5S9J-Y5LL>]; see also *To fly, to fall, to fly again*, THE ECONOMIST (July 25, 2015), <http://www.economist.com/news/briefing/21659722-tech-boom-may-get-bumpy-it-will-not-end-repeat-dotcom-crash-fly> [<http://perma.cc/72S6-VHXR>] (discussing growth among software startups).

46. See Eric G. Bear, *False Distinctions Between Hardware and Software Patents are Not the Answer*, IPWATCHDOG (June 9, 2013), <http://www.ipwatchdog.com/2013/06/09/false-distinctions-between-hardware-and-software-patents-not-the-answer/id=41244/> [<http://perma.cc/K7NH-NF3W>].

Contrary to the assertions by some critics, patent-infringement lawsuits concerning software inventions are not flooding the courts.⁴⁷ Lawsuits of this nature represent about ten percent of patent-infringement lawsuits,⁴⁸ which is about the historical norm.⁴⁹ In addition, software patents are not necessarily of poorer quality than patents of different subject matter.⁵⁰ Courts have generally upheld software patents about eighty percent of the time.⁵¹ Of course, the full effects of *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*⁵² remain to be seen.⁵³ Software patents are not going away. Many of them cover highly valuable technological implementations, and a high percentage of them are maintained for the full patent term.⁵⁴ It is worth noting that establishing a common lexicon around software inventions is worth the effort, as such commonality of terms would support consistent patent claim construction and interpretation.

Unquestionably, the USPTO is up to the task of examining new patent applications and fully implementing the new processes of the AIA. There is no need to consider reorganizing or dividing the USPTO, as some have suggested.⁵⁵ As with any process or organization, there is definitely room for improvement, and transitions can create “muddiness” for an initial period of time. For many years, engineering and manufacturing processes have focused on designing-in quality as opposed to

47. See Chris Berry et. al, PWC, *2014 Patent Litigation Study: As Case Volume Leaps, Damages Continue General Decline* 12 (2014).

48. See *id.*

49. See *id.*

50. See David Kappos, Director, USPTO, Keynote Address at Center for American Progress: An Examination of Software Patents (Nov. 20, 2012), available at <http://www.uspto.gov/about-us/news-updates/examination-software-patents> [<http://perma.cc/Z3EC-MZ48>].

51. *Id.*

52. 134 S. Ct. 2347 (2014).

53. See Ashby Jones, *Courts Nix More Software Patents*, WALL ST. J. (Sept. 21, 2014), <http://www.wsj.com/articles/federal-courts-reject-more-software-patents-after-supreme-court-ruling-1411343300> [<http://perma.cc/RL9C-L5F3>].

54. See Kimberley A. Moore, *Worthless Patents*, 20 BERKELEY TECH. L.J. 1522, 1543 (2005).

55. See Donald Zuhn, *Docs at Bio: Panel Offers Suggestions for Fixing the USPTO—Updated*, PATENT DOCS (May 20, 2009), <http://www.patentdocs.org/2009/05/docs-at-bio-panel-offers-suggestions-for-fixing-the-uspto.html> [<http://perma.cc/VJ2Q-LEKE>].

inspecting-out defects.⁵⁶ This type of thinking should be applied to the USPTO as well. More attention and rigor can be applied to the first level examination of patent applications, which should have the effect of reducing the need for the USPTO to reexamine its own work. Admittedly, there has been substantial investment in the examination process overall.⁵⁷ But the USPTO continues to be inundated with new applications, the examination of which taxes available resources.⁵⁸

More resources should be invested to support the USPTO and to improve its processes and services. It should be fully funded, and the fees it collects should not be diverted to other government interests. Continued focus on process improvements and examiner training is important. The burden on examiners must be addressed either by providing additional examining resources or by changing the examination process by, for example, implementing a requested-examination scheme similar to those seen in other jurisdictions.⁵⁹ Currently, every non-provisional application is examined as a matter of course.⁶⁰ Requiring applicants to request examination would have the effect of relieving some of the burden on the examining corps and might serve as a useful governor on scarce examining resources. The pendency of patent applications would also likely be reduced. Requested examination would almost inevitably have the effect of reducing the number of patent applications requiring examination. In this post-AIA first-inventor-to-file world where inventors have an incentive to file early and file often, reducing the number of patent applications examined

56. JOHN RIORDAN, OFFICE OF ASSISTANT SECRETARY OF DEFENSE, *ZERO DEFECTS: THE QUEST FOR QUALITY*, at iii (Aug. 15, 1968); see also Derick Bailey, *Favor Defect Prevention Over Quality Inspection and Correction*, LOS TECHIES (Jan. 31, 2009), <https://lostechies.com/derickbailey/2009/01/31/favor-defect-prevention-over-quality-inspection-and-correction/> [<https://perma.cc/C8CF-Y6J9>].

57. See, e.g., U.S. Patent and Trademark Office, *Accelerated Examination* (June 24, 2015, 7:25 AM), <http://www.uspto.gov/patent/initiatives/accelerated-examination> [<http://perma.cc/3ZU8-WLJ6>] (explaining that the accelerated examination program represents an investment in the examination program).

58. See U.S. Patent and Trademark Office, *U.S. Patent Statistics Chart* (Mar. 18, 2015), http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm [<http://perma.cc/8RZ9-N5T9>].

59. See, e.g., Canadian Intellectual Property Office, *How Your Patent Application is Processed* (June 1, 2015), <https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr01409.html> [<http://perma.cc/WBV4-WGAT>].

60. See 35 U.S.C. § 131 (2002).

would go a long way to counteracting the additional examination burden of the USPTO.

Worldwide harmonization efforts continue to play a critical role in patent protection as well.⁶¹ Many innovations have a global reach, and harmonization amongst the various patent systems helps to make them more user-friendly and facilitates the incentive to innovate that comes with broader patent protection. While there is a good level of harmonization among key patent offices throughout the world, there remain clear differences with respect to standards of eligibility and patentability. For example, the inventive step requirement as applied in the European Patent Office is generally a higher bar than non-obviousness in the United States.⁶² And the U.S. "grace period" continues to be a point of diversion, even as newly crafted in the AIA.⁶³ Even as harmonization efforts continue, there are limits to the amount of harmonization that can be achieved, as governments will always require that their respective patent systems reflect local values and norms.

61. See Anthony D. Sabatelli & J.C. Rasser, *Impediments to Global Patent Law Harmonization*, 22 N. KY. L. REV. 579 (1995).

62. See Stephen G. Kunin & Philippe J.C. Signore, *A Comparative Analysis of the Inventive Step Standard in the European and Japanese Patent Offices from a U.S. Perspective*, at 22, IP LITIGATOR (Jan.–Feb. 2008).

63. See Jing Wang et al., *Comparison of United States AIA First-Inventor-to-File with Chinese First-to-File*, 38 U. DAYTON L. REV. 251, 257, 261–64 (2013).