

THE NEED FOR “INNOVATION CERTAINTY” AT THE CROSSROADS OF PATENT AND ANTITRUST LAW



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I. INTRODUCTION

Innovation has long been the driving force of the U.S. economy.² From the early days of our nation, inventors played a pivotal role in creating wealth for a growing nation, and this innovation continues today. Quantum computing research being funded by Google, IBM, Intel, and Microsoft; Genetic engineering, such as CRISPR; Autonomous vehicles, such as Otto’s self-driving trucks: The nation’s continued success in innovation is critical for maintaining the United States as an economic leader.

Successful innovation requires the proper environment. Innovators need intellectual capital, an educated workforce, and access to financial capital. These resources enable innovators to conduct the research and development and to optimize products for the commercial marketplace.

Equally important is a sufficient degree of what we call “innovation certainty.” Innovation certainty considers those legal, regulatory, and political factors that affect the degree of risk. The lower the degree of innovation certainty, the less hospitable the system is for innovators and investors. The less stable the legal and political rules, the more inimical the jurisdiction is to the investors who ultimately finance the innovative work.

During the past ten years, innovation certainty in the United States has decreased dramatically, and the decrease is directly attributable to two general trends: The destabilization of patent law, and the increased uncertainty in antitrust law. Both patent law and antitrust law, when properly implemented, contribute to an optimal level of innovation certainty. Patent law incentivizes innovation by awarding exclusive rights, thereby encouraging investment in and public disclosure of inventions.³ Antitrust law incentivizes innovation by maximizing competition in a free marketplace and allowing startup innovators to disrupt markets and avoid monopolies created by market power. Working within these legal regimes, private firms innovate and commercialize. They also create efficient transaction mechanisms, such as standard setting organizations (“SSOs”) and FRAND (“fair, reasonable, and non-discriminatory”) licensing agreements for standard essential patents (“SEPs”), so that innovators and their investors can efficiently obtain a return on their capital.

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2 See generally United States Patent & Trademark Office, *Intellectual Property and the U.S. Economy: 2016 Update*, available at: <https://www.uspto.gov/sites/default/files/documents/IPandtheUSEconomySept2016.pdf>.

3 Joan Farre-Mensa, Deepak Hegde & Alexander Ljungqvist, *What is a Patent Worth? Evidence from the U.S. Patent “Lottery.”* USPTO Economic Working Paper No. 2015-5 (Dec. 2015), available at: <https://ssrn.com/abstract=2704028> (demonstrating, for example, that “securing a patent has economically large and positive effects on a startup’s job creation, sales, and follow-on innovation”).

Yet, due to a parade of legislation, judicial interpretations, and administrative application during the past decade, the combination of patent law destabilization and antitrust law uncertainty has devastated innovation certainty in the United States. A series of Supreme Court cases has altered the ground rules for patents with generally anti-patent holdings. Next came the America Invents Act ("AIA"), which fundamentally altered the adjudication of granted patent rights. Most recently, increased uncertainty in the antitrust area has resulted from the Federal Trade Commission invoking its controversial Section 5 authority to interject itself into the issue of FRAND licensing of SEPs, among other actions.

These and other events have swung the pendulum so far that we are now seeing the manifestations of diminished innovation certainty — or perhaps it is now better termed “innovation uncertainty.” We now see an unreasonable unwillingness to license intellectual property, even when there is no question of infringement. A larger percentage of applicants for U.S. patents are non — U.S. entities and inventors. The U.S. patent system is no longer considered the gold standard. In 2017, it fell from No. 1 to No. 10 in the annual U.S. Chamber of Commerce global ranking of patent systems. And despite all of this, as well as pending Supreme Court patent cases, there are continued calls for so-called patent “reform” legislation.

II. THE DESTABILIZATION OF PATENT LAW

With all of these changes, we must keep in mind that the patent right is grounded in the U.S. Constitution itself. The intellectual property clause is the only provision of the originally-ratified Constitution that concerns a personal property right. Other personal rights, such as protection of property from governmental takings, were added via amendments. James Madison proposed the IP clause, and it was so immediately and widely accepted as a top need for the new nation that the Founding Fathers adopted it without much debate.

For almost 230 years after the First Congress enacted the first Patent Act, strong intellectual property rights largely drove American economic growth, converting America from a poor, agrarian, backward and weak nation to the wealthiest, most industrialized, and most technologically advanced and powerful nation on earth.⁴

The past decade has yielded the most fundamentally destabilizing changes to the U.S. patent system in the nation's history — through statutory amendments, judicial interpretation, and regulatory implementation.⁵ So much has changed in the last several years that the patent system is a shadow of its former self. America needs to take stock of the health and strength of its patent system, its efficiency, and its effectiveness today.

The destabilizing events can be traced to a series of judicial, legislative, and administrative interventions. The judicial decisions began primarily in 2006. That year, the Supreme Court weakened the power of injunctive relief for patentees in *eBay v. MercExchange*, despite the long tradition of granting injunctions when a patent was deemed valid and infringed.⁶ The *eBay* decision made injunctions essentially unavailable to successful patent owners despite the Constitution's assurance of “exclusive rights.” unless they are direct competitors with corresponding products in the same market.

The following year, in *KSR v. Teleflex*, the Court raised the bar for patentability, making invalidation of patents issued long before under different standards substantially easier. Just as importantly, *KSR* imported a “common sense” standard for assessing whether an invention was obvious. Now, innovators face not only a raised bar for demonstrating that an invention is nonobvious, but also a subjective “common sense” bar. As Voltaire noted, “common sense is not so common,” and its usefulness in patent law is tenuous at best.

Next came the quartet of Supreme Court decisions on patent eligibility: *Bilski*, *Mayo*, *Myriad*, and *Alice*. By any measure, these decisions effected a complete and dramatic revolution in eligibility law. The Supreme Court started with *Bilski* in 2010, continued with *Mayo* in 2012 and *Myriad* in 2013, and finished with *Alice* in 2014. Each decision expanded the scope of the so-called judicial exceptions to patentability. The *Myriad* decision was *sui generis* in certain respects, in that it dealt with the unique properties of genetic information encoded in human DNA. But the other three created enormous uncertainty about the patentability of medical diagnostics, software, computers, and business methods.

⁴ See Christopher Beauchamp, *The First Patent Litigation Explosion*, 125 Yale L.J. 848 (2016); Adam Mossoff, *Patent Licensing and Secondary Markets in the Nineteenth Century*, 22 Geo. Mason L. Rev. 959 (2015).

⁵ We have detailed elsewhere the uncertainty created by the Supreme Court's patent law jurisprudence. See Paul Michel & Matthew J. Dowd, *The Uncertain State of Patent Law 10 Years Into The Roberts Court*, IAM, Nov./Dec. 2016, at 27.

⁶ For a more detailed analysis of *eBay*, see Paul R. Michel & Matthew J. Dowd, *Understanding the Errors of eBay*, 2 Criterion J. on Innovation 21 (2017), available at: <https://www.criterioninnovation.com/articles/understanding-the-errors-of-ebay/>.

The patent system had yet to fully reveal the magnitude of the Court's judicial reinterpretation when Congress enacted the America Invents Act in 2011.⁷ Starting in 2013, we began to see the fuller impact when the final decisions from AIA post-grant reviews began to issue from the PTO's Patent Trial and Appeal Board ("PTAB"). Every patent attorney is well-aware of the PTAB's impact on patent law and its nickname as the "Patent Death Squad." Invalidation rates were astronomically high at the outset. While the rate of instituting review of a patent has lowered somewhat recently, the rates of invalidation remain extraordinarily high.

More importantly, the PTAB proceedings differ significantly from traditional procedures for challenging the validity of a duly issued U.S. patent. Discovery is highly restricted. There is virtually no live testimony of witnesses, including expert witnesses, so the PTAB has no means of assessing the credibility of one witness over another. Additionally, the near unanimity of PTAB decisions leads one to question whether the three administrative patent judges assigned per case are independently assessing the merits of the challenged patent claims.

To add to the uncertainty, a patent owner who prevails in district court risks losing before the PTAB under a lower burden of proof. The Federal Circuit recently confirmed that the PTAB is not bound to follow the validity determination of a district court.⁸ This outcome is of course a correct application of the statutory scheme, but it underscores the lack of certainty associated with the current patent regime.

III. THE UNCERTAINTY IN ANTITRUST LAWS

In addition to the destabilization of patent law, the past several years have witnessed a wave of changes in antitrust law increasing legal uncertainty for patent owners and innovators. The FTC has taken an increasingly aggressive stance in asserting its authority under the FTC Act to investigate the licensing of intellectual property.

The FTC's decision to investigate and study "patent assertion entities" (PAEs) was a major inflection point that rattled patent owners. The FTC's assertion of its power under Section 6 of the FTC Act to collect confidential business information of patent owners was a concerning announcement for licensors of intellectual property.

The FTC's final report⁹ did not resolve the concerns of innovators and patent owners. Instead, the PAE report revealed general trends, many of which were already known by patent attorneys experienced with patent litigation. For example, the report noted that "most licenses in the sample followed a patent infringement suit against the alleged infringer."¹⁰ But experienced patent counsel were well versed with infringers who refused to take a patent license until sued for infringement.¹¹

Beyond the particular data, the report's recommendations have been criticized because they lack any grounding in the study's limited factual determinations. The methodology of the PAE report was bound to produce a report that was semi-informative but not generalizable.¹² Others criticized the one-size-fits-all approach of the FTC's definition of PAEs.¹³ In short, the FTC's PAE report overpromised and underdelivered, producing more antitrust questions than answers for patent licensors.

7 Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, § 6(a), 125 Stat. 284, 299-304 (2011), codified at 35 U.S.C. §§ 311-319.

8 *Novartis AG v. Noven Pharms. Inc.*, No. 2016-1678, slip op. at 5-9 (Fed. Cir. Apr. 4, 2017).

9 Federal Trade Commission, *Patent Assertion Entity Activity* (Oct. 2016), available at: https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf.

10 *Id.* at 5.

11 In the 1990s, for example, IBM licensed vast numbers of patents to voluntary licensees acquiring some \$2 billion per year, and without ever needing to file a lawsuit. Now, outside counsel routinely advise clients not to license or negotiate or stop using the patented technology. Instead, they advise clients to ignore patent owners and patent licensing offers. Savvy outside counsel know that patent owners may lack the financial means to enforce their patent rights in court. Outside counsel can recommend filing IPRs, which add to the cost of patent enforcement and increase the delay in resolving patent disputes.

12 Layne-Farrar, Anne, *What Can the FTC's §6(B) PAE Study Teach Us? A Practical Review of the Study's Methodology* (Mar. 1, 2016), available at: <https://ssrn.com/abstract=2722057>.

13 Kristen Osenga, *Sticks and Stones: How the FTC's Name-Calling Misses the Complexity of Licensing-Based Business Models*, 22 *Geo. Mason L. Rev.* 1001 (2015).

The uncertainty caused by the PAE report compounded existing uncertainty due to the Supreme Court's recent decisions concerning patent exhaustion. In *Quanta*, the Court unanimously held that rights to a patented method can be exhausted by the authorized sale of a component that substantially embodies the patented method. Then, in *Bowman*, the Court applied a narrower view of patent exhaustion, although in the context of a self-replicating invention (genetically-engineered crops), that was not entirely consistent with *Quanta*. Currently pending before the Court is *Impression Products, Inc. v. Lexmark International, Inc.*, which may resolve significant, unanswered questions about the scope of patent exhaustion.

Most recently, the FTC sent a jolt through the patent licensing community with its Section 5 complaint against Qualcomm for its licensing activities with respect to standard-essential patents and FRAND licensing. FTC's action against Qualcomm raises many significant questions and heightens the uncertainty patent licensors currently face.

First, the *Qualcomm* case is a stand-alone Section 5 case. Such stand-alone cases are rare and have been publicly criticized. Section 5 actions target "unfair methods of competition," and there is significant debate about the scope and meaning of an "unfair method of competition." In many instances, conduct that would not violate Section 2 of the Sherman Act might be considered a violation of Section 5 of the FTC Act.

The *Qualcomm* case also raises the question of what constitutes FRAND licensing terms. In other words, what licensing terms are "fair, reasonable, and non-discriminatory"?

Beyond the legal issues, the *Qualcomm* case appears mired in political maneuvering. The FTC voted 2-1 to file the complaint. The Commission was lacking two members, and it took action just before the inauguration of President Trump. Commissioner Ohlhausen issued a sharply worded dissent.¹⁴ Further, the Commission acted to file only a district court complaint seeking injunctive relief, without a parallel administrative proceeding. All of these extrajudicial factors create a cloud of antitrust uncertainty for companies licensing patent portfolios.

The import of the FTC action, of course, is that even if a patent owner survives multiple *inter partes* reviews ("IPRs") and has the funds and facts to litigate fully and successfully on both validity and infringement in the district court, it may be defeated in the SEP context depending on how the FTC defines the FRAND contractual obligation the patent owner owes at least to the SSO companies, and perhaps even others. The test may be whether the potential licensee is itself practicing the SEP technology as distinct from simply being a supplier of parts to original equipment makers ("OEMs") where only the OEM practices the standard.

In the background is whether the defendant, Qualcomm, must license a direct competitor chip set maker. That, of course, conflicts with the basic notion that an owner does not have to license competitors. In the foreground is whether Apple can abrogate agreed license terms with Qualcomm as being against public policy as established under the Sherman Act and/or the FTC Act.

Finally in the antitrust context, the FTC and DOJ recently revised their Antitrust Guidelines for the Licensing of Intellectual Property.¹⁵ Although the changes were not substantial, the revised guidance from the agencies contributes to the existing questions about the scope of permissible licensing activities. Absent from the updated Guidelines, however, is any meaningful discussion of what constitutes a violation of Section 5 of the FTC Act — an absence particularly notable in view of the FTC's action against Qualcomm.

IV. THE FALLOUT FROM INNOVATION UNCERTAINTY, AND WHERE NEXT?

As is evident from the above, over the course of about ten years, the three tidal waves have impacted the U.S. patent system: (1) multiple Supreme Court decisions decreasing the strength and value of patents; (2) the implementation of a quasi-judicial administrative proceeding before the PTAB, making it easier to invalidate issued patents; and (3) the FTC's increasingly aggressive approach to challenging IP licensing practices. The combined impact of these three tidal waves: massive innovation uncertainty.

14 Maureen K. Ohlhausen, Acting Chairman, Federal Trade Commission, *Optimizing Innovation and Strengthening Intellectual Property Protection* (Apr. 6, 2017), available at: https://www.ftc.gov/system/files/documents/public_statements/1207513/ohlhausen_-_aba_ipi_conference_remarks_4-6-17.pdf.

15 See Federal Trade Commission, *FTC and DOJ Issue Updated Antitrust Guidelines for the Licensing of Intellectual Property* (Jan. 13, 2017), at <https://www.ftc.gov/news-events/press-releases/2017/01/ftc-doj-issue-updated-antitrust-guidelines-licensing-intellectual>.

In the last few years, the value of publicly-traded patent rights has dropped by over 60 percent, according to several economists.¹⁶ Information about private trading and licensing is not readily available, but it seems reasonable that the diminishment is similar in the private sector.

Reduced value of patents is not the only or worst harm. The more significant harm is the added uncertainty over whether there even is a patent right. For every one of the many thousands of patents invalidated by examiners, the PTAB, or the courts under changed law, there are likely thousands of issued U.S. patents that now reside under a cloud of doubt. Accused infringers are now even less likely to accept a license, which in turn leads to additional expensive litigation that takes many years to conclude.

We must also consider the decreased innovation certainty in the United States as compared to other nations. For example, patent application filings in the United States are sharply down in 2017, but sharply up in China and significantly up in Europe. Patent enforcement suits and payment of maintenance fees — both sharply down in the U.S. The number of U.S.-based inventors on U.S. patent applications has also decreased dramatically in recent years.

Importantly, injunctions are increasingly uncommon in the United States, but remain more readily available in other jurisdictions, such as Germany, England and China, once infringement and validity are established. Eligibility for patent protection has been greatly restricted in the United States, while in Europe and China, innovators are benefiting from recently broadened standards for patent eligibility. Capital and innovation being mobile, America may be putting itself at a competitive disadvantage compared to such global competitors. How ironic, when innovation has long been our biggest competitive advantage!

Importantly, the interaction of antitrust law and patent law need not be antagonistic. As aptly noted by one law professor, “[t]he relationship between patent law and antitrust law has challenged legal minds since the emergence of antitrust law in the late nineteenth century.”¹⁷ Viewed from one perspective, patent law restricts competition in the short term, while antitrust laws seek to maximize free-market competition.

But both legal regimes are intended to improve economies and consumer welfare in the long term, albeit utilizing different legal levers. Perceptive commentators have recognized that the patent regime and the antitrust regime can work in tandem to increase consumer welfare.¹⁸ Recognizing the complementary relationship between patent law and antitrust law is key to maximizing innovation certainty in the United States.

This complementary relationship brings us to the question of whether the decisions or actions in any of the three waves took into account the changing patent and antitrust environments? Of course not. After *eBay*, the Supreme Court did not assess the practical impact on injunctive relief before it weighed in on the patent-eligibility cases. Had it done so, the Court might have realized that the district courts preferentially followed the Kennedy concurrence, which advocated for limits on injunctive relief for non-practicing patent owners, even though the Roberts concurrence recognized that injunctions were historically the norm and should continue to be in similar circumstances. Similarly, the Court did not assess the impact of *KSR* before limiting patent-eligibility in *Bilski*, *Mayo*, and *Alice*.

This is not to say that courts necessarily have an obligation to make policy determinations in patent law, but there can be no reasonable debate that the Supreme Court is making such policy decisions with respect to the availability of injunctive relief, the standard for obviousness, and the scope of patent eligibility. When it assumes the role of policymaker, the Court is obligated to account for its prior decisions before further weakening patent rights.

The same holds true for the FTC, particularly when it invokes the controversial Section 5 to assert its view on the licensing of intellectual property. When the two FTC Commissioners voted to take action against Qualcomm under Section 5, did they fully appreciate the extent to which legislation and judicial action has weakened the patent system during the past decade? There is no indication of any such consideration in the FTC’s complaint.

¹⁶ Bruce Berman, *Public Patent Licensing Company Index Declined 24.4% in 2015*, IP Close Up, Jan. 11, 2106, available at: <https://ipclosureup.com/2016/01/11/public-patent-licensing-company-index-declined-24-4-in-2015/>.

¹⁷ Robin Feldman, *Patent and Antitrust: Differing Shades of Meaning*, 13 Va. J. of L. & Tech. 3 (2008).

¹⁸ Gregory Dolin, Center for the Protection of Intellectual Property, *Resolving the Patent-Antitrust Paradox: Promoting Consumer Welfare Through Innovation* (May 2013) (“If, however, the true goal of patent and antitrust law is consumer welfare writ large, then the two legal regimes can be seen as working in tandem, rather than in opposition.”); F. Scott Kieff, *Thinking about IP and Collaboration at the Patent-Antitrust Interface*, IPWatchdog.com, Apr. 9, 2107, available at: <http://www.ipwatchdog.com/2017/04/09/ip-patent-antitrust-interface/id=81893/> (discussing “a commercialization approach” to the intellectual property-antitrust interface”).

Similarly, there is no indication whether, in 2011, Congress was aware of the full impact of *eBay*, *KSR*, and the Patent Act's Section 101 cases on the patent system. Yet, Congress forged ahead and passed what turned out to be the most fundamental restructuring of the U.S. patent regime since the nation's founding.

The question then arises: What perspective could and should have been applied to the evolving patent and antitrust landscape? The answer to that resides in the primary purpose of the patent system, which is to promote invention by incentivizing investment. Research and development is generally expensive. Commercialization can be even more expensive. While innovators will sometimes create in exchange for an average salary, the process of innovation almost always requires significant financial capital, and the exclusive patent right promotes that.

At the same time, the markets have to be structured so that innovators are able to commercialize their new products and services without being crushed by large firms that have enormous market power. Antitrust laws have to be enforced to permit new firms and products to challenge entrenched firms; otherwise, the result leads to monopolistic companies that can charge supracompetitive prices. Without intellectual property protection, new ideas will be taken over by these firms, which is an increasing concern given the concentration of goods and services in an online, internet-based marketplace. Venture capital investors are becoming less likely to invest in start-up companies that lack any protectable intellectual property because, without a protectable IP asset, new entrants are at a severe disadvantage.

In actual commerce, investment decisions reflect basic predictions about return on investment. What are the odds there will be an assured return on the amount invested, plus profit? How large? How soon? Investors compare competing investment opportunities, and when investments in other businesses, such as entertainment and media companies, look more promising, investment dollars will be directed to those opportunities instead of start-up companies that require significant R&D financing. When the "innovation certainty" in a particular sector or a particular country falls too low, it is no longer a viable investment.

Unfortunately, the impact of these interventions, usually called "recent," has been to decrease innovation certainty. For instance, before the AIA, patent litigation was already very expensive (approximately several million per action) and slow (often 3 or 4 years, including at least one appeal). After AIA reviews became standard, total patent enforcement costs increased still further, as did delays. With stays of district court infringement actions granted in some two-thirds of cases with pending IPRs, total delays increased dramatically. And, some 80 percent of IPRs have pending court cases. An IPR typically takes 5 or 6 months to institute and one year to conclude for a total of about 18 months. If the stay remains in effect until the conclusion of the likely Federal Circuit appeal, the delay is around 2.5 years. With serial, overlapping IPRs, which are not uncommon, delays increase still further. Thus, total delay is in the range of 5 to 7 years or more. Expense also increases materially. At about half-million or more per IPR, the added cost is typically in the millions, on top of the millions for the district court proceedings.

In addition, as noted above, the PTAB applies a lower burden of proof, compared to district court litigation, when assessing the patentability of the challenged claims. Before the PTAB, a patent challenger need establish unpatentability only by a preponderance of the evidence. In district court, the patent challenger must establish invalidity by clear and convincing evidence. The system, as conceived, would create disparate outcomes, with patent claims being held valid in district court yet unpatentable before the PTAB, even if the proceedings involved the same evidence. Similarly, patent claims could also fall in district court litigation yet survive a PTAB review because the two proceedings might involve different evidence. How reasonable is the AIA review regime when such disparate outcomes are hardwired into the system?

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On January 25, 2011, Senator Patrick Leahy introduced a bill that ultimately led to the America Invents Act. When he introduced the bill, he stated that it "provides the tools the USPTO needs to separate the inventive wheat from the chaff" and that "[i]t will allow our inventors and innovators to flourish."¹⁹ Six years later, and after a tumultuous decade in patent law, there is considerable evidence that innovators and inventors are not flourishing.

¹⁹ 157 Cong. Rec. S131 (daily ed. Jan. 25, 2011) (statement of Sen. Leahy).