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Liquid Patents

LIQUID PATENTS

AMY L. LANDERS[†]

ABSTRACT

The current patent system is argued to be in a state of crisis. Although much recent criticism about the patent system has been leveled at so-called "patent trolls," another trend has emerged that may prove more enduring and potentially more troublesome. Patent holders have developed more systematized and strategic methods to obtain revenues from the patent system, building business plans around leveraging monetary value from what are called "liquid patents" herein. Recognizing that the patent right can be monetized into licensing fees and damages in an action for patent infringement, some entities have undertaken formalized programs to gather or acquire critical patents in particular fields. These practices are supported by patent rules of law, but are in contravention of the larger goals of the patent system. This work traces certain attributes that encourage liquid patent holders' strategies. Further, the paper proposes that the remedies provisions of the patent system should be modified to ensure that this practice does not harm innovation. In addition, the traditional antitrust protections for patent holders should be eliminated to prevent abuse and curb liquid patent holders' ability to block subsequent invention, innovation and the commercialization of ideas.

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INTRODUCTION

When patent systems first developed, rewarding the inventor as a creative force was a paramount and express purpose.¹ Now some five centuries later, the state of the patent system has undergone momentous change. Serious questions have been raised about how well the patent system is serving invention and society. Critics have deemed the patent system in the U.S. at a crisis point.² Legislators have called for reform.³

1. The first known patent statute was enacted in 1474 in the Venetian Republic, and has been translated to read:

We have among us men of great genius, apt to invent and discover ingenious devices . . . if provision were made for the works and devices discovered by such persons, so that others who may see them could not build them and take the inventor's honor away, more men would then apply their genius, would discover, and would build devices of great utility and benefit to our Commonwealth.

Venetian Republic Patent Statute (1474), *reprinted in* PRINCIPLES OF PATENT LAW 10-11 (Donald S. Chisum et al. eds., 2d ed. 2001).

2. See, e.g., ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS 170 (2004) (commenting that the patent system is a "freight train out of control"); *Patently Ridiculous*, N.Y. TIMES, March 22, 2006, at A24.

3. Press Release, Representative Lamar Smith, Smith Introduces Reform Bill (June 8, 2005), available at <http://lamar.smith.house.gov/news.asp?FormMode=Detail&ID=648>; see also H.R. 2795, 109th Cong. (2005) (tracking the introduction of the Patent Reform Act).

Some condemnation of the current patent system has been leveled at “patent trolls,” a term coined⁴ to describe patent holders who do not commercialize an invention, but rather raise money by asserting the patent against those who do.⁵ Patent trolling has ignited a highly polarized policy debate. On one hand, patent trolls are characterized as “profiteers” that demonstrate that something has “gone very wrong” with the U.S. patent system, having turned the purpose of the patent right “on its head, using [patents] to tax, blackmail, and even shut down productive companies unless they pay high enough ransoms.”⁶ On the other hand, this activity has been argued to constitute “simply enforcing the right of exclusion granted to them by the Constitution, and . . . help[ing] to ensure that the system is functioning properly and as intended.”⁷ Indeed, one prominent lawyer who specializes in asserting patents has been described as “a guardian angel” for solo inventors who would otherwise be unable to enforce their patents.⁸ At the same time, it is difficult to avoid the evidence that the system is being used to create considerable private wealth.⁹ Although the term has been characterized as too vague,¹⁰ overly broad,¹¹ and “used unfairly to deride” patentees,¹² the phrase patent troll is always used in the pejorative and contrary to how a healthy patent system should operate.

Patent trolls have become the fulcrum for public debate about the underlying incentive structure of the patent laws. The necessity for patent reform depends, to some degree, on whether patent trolls are a permanent fixture in the patent landscape. At the same time, another trend has emerged that may prove more enduring. Although patent trolling raises some troubling issues, some patent holders have developed even more systematized and strategic methods to obtain revenues from the patent system, building business plans around leveraging value from asserting patents. This activity—which for purposes of this article is

4. The term “patent troll” was reportedly coined in 2001 by Peter Detkin, a patent attorney, while working as counsel for Intel Corp. See Rob Garretson, *Has the Enemy of the Patent Trolls Become One?*, CIO INSIGHT, Dec. 5, 2005, <http://www.cioinsight.com/article2/0,1540,1902291,00.asp>.

5. Testimony of Peter Detkin, TRANSCRIPT OF THE FTC/DOJ HEARINGS ON THE IMPLICATIONS OF COMPETITION AND PATENT LAW AND POLICY 112 (Feb. 2, 2002), http://www.abanet.org/antitrust/word_docs/competition.doc.

6. *Patently Ridiculous*, *supra* note 2.

7. John LaPlante, *The Case for Abandoning the Term “Patent Troll,”* INTELL. PROP. LITIG., Winter 2006, available at http://www.rkmc.com/The_Case_for_Abandoning_the_Term_Patent_Troll.htm.

8. Lisa Lerer, *Meet the Original Patent Troll*, IP L. & BUS., July 20, 2006, available at <http://www.law.com/jsp/article.jsp?id=1153299926232>.

9. *Id.*

10. *What the Heck Is a Patent Troll?*, PHOSITA: AN INTELLECTUAL PROPERTY LAW BLOG, Apr. 14, 2006, http://www.okpatents.com/phosita/archives/2006/04/what_the_heck_i.html.

11. See Dennis Crouch, *What is a Patent Troll?*, PATENTLY-O, May 12, 2006, http://www.patentlyo.com/paten/2006/05/what_is_a_paten.html#comments (excluding from the definition of “patent troll” those entities who do research and development).

12. LaPlante, *supra* note 7.

termed “liquidizing patents”— treats patents as a commodity. As explored further in this article, using patents as liquid assets invokes probing questions about patent policy and the manner in which the system is administered.

Recognizing that the patent right can be monetized into licensing fees and damages in an action for patent infringement, some entities have undertaken formalized programs to gather or acquire critical patents in particular fields.¹³ Firms have made patents the financial centerpiece of their businesses, by developing patentable ideas internally or through purchase.¹⁴ Other entities have become market makers, undertaking programs such as patent auctions to facilitate patent transfers.¹⁵ Some uses of patents as assets have become financially creative, for example one entity uses patents as collateral, having established a multi-million dollar fund to provide loans that are secured by the debtor’s intellectual property.¹⁶

The framers of the U.S. Constitution authorized the patent system with the purpose of promoting invention.¹⁷ Specifically, the patent system was developed to provide inventors a reward of the right of exclusivity for a limited period of time.¹⁸ The patent laws provide this advantage to inventors for the ultimate benefit of the public.¹⁹ Under current law, the patent right can be transferred from the original owner of the idea—the patent’s inventor—in a written contract to an assignee who becomes the patentee and thereby succeeds to all of the rights originally held by the inventor.²⁰ The patentee can license infringers or seek court intervention to prevent others from practicing the invention and seek monetary relief.

The U.S. patent system treats the patent right as immutable. Objectivity, uniformity and certainty are driving forces in the development and application of patent law. Under these policies, the patent has taken on a monolithic quality that, once the right is set in the patent document, becomes unchangeable as an engraving in stone unaffected by changes in ownership. Thus, unlike other legal rights for which the plaintiff’s individual circumstances are legally relevant to the existence of the plaintiff’s right to recover, a liquid patent holder can purchase, sell, license

13. See *infra* text accompanying notes 69-72.

14. See *infra* text accompanying notes 76-83.

15. See *infra* text accompanying notes 47-67.

16. OCEAN TOMO, OCEAN TOMO INTELLECTUAL CAPITAL EQUITY (print on file with author).

17. U.S. CONST. art. I, § 8, cl. 8 (granting Congress the power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”).

18. *Id.*

19. *In re Fisher*, 421 F.3d 1365, 1371 (Fed. Cir. 2005) (explaining that in order to obtain a patent, the invention must have substantial utility, meaning it must provide some benefit to the public).

20. 35 U.S.C.A § 261 (West 2006).

and assert the patent without concern that the scope of the right is changed or diminished by any of this activity. Those who commoditize patents obtain all of the benefits of the laws that were created for the protection of inventors.

Perhaps inadvertently, the patent laws have created incentives for the transfer and financial exploitation of patents that are disconnected with the development of inventions for public benefit. The profit-seeking activities of liquid patent holders seem intuitively at odds with the public interest sought to be served by the patent system. Further, liquid patents pose the potential to harm inventive activity in the long term by amassing control of patents that extracts above-market licensing fees or that entirely prevents others from performing research or making improvements on existing technology.

Part I of this article examines how a liquid patent holder uses established patent laws to create the liquid patent right. This section further explores various examples of how liquid patent holders use patents to create or amass markets from the patent system. Part II considers how the patent system has created opportunities for patent holders to shift their use of patents as means to protect commercial markets to liquid assets. Part III examines whether the patent system should be modified to accommodate liquid patents, in light of the system's goals to promote uniformity. Part IV explores whether the use of liquid patents fits with the existing justifications for the patent system, and finds that such uses are either dissonant or contrary to these policies. After considering the importance of uniformity to the patent system, Part V explores modifications to the remedies provisions of the Patent Act to resolve concerns created by the use of liquid patents. Part VI considers a modification to the protections that patentees have historically enjoyed against antitrust theories as a further means to prevent liquid patent holders from acting in a manner that forecloses consumer choice. The final section concludes that the activities of liquid patent holders are likely to continue, and that those who administer patent law must remain sensitive to this activity so that the overall goal of fostering invention is advanced.

I. LIQUID PATENTS AND THEIR OWNERS

The creation of a market for liquid patents depends on the patent system's ability to create and allow the enforcement of rights that are severable from the patent's initial inventor. An exploration of the present patent system reveals that the statutes not only facilitate liquid patent rights, but in some instances create incentives to do so. Although the creation of separate markets for patents may not be based on conscious or deliberate decisions by lawmakers, nonetheless a number of entities are using the patent system as a means to transfer and exploit patents as commodities. The following section explores the creation of liquid patent rights under the present patent laws. This section also provides some

examples of several entities engaged in different facets of the creation of separate markets for patent rights.

A. *Creating the Liquid Patent Right*

Perhaps the simplest explanation for why liquid patents are growing in popularity is that this activity "is not only profitable but also perfectly legal."²¹ A liquid patent right is created through a straightforward application of the current patent laws. These laws consider the patent right a bundle of rights similar to a personal property interest that can be conveyed, subdivided and exploited for its owner's benefit.²²

As background, an application for a patent must be made by or on behalf of the actual inventor.²³ A party can license and bring an action for patent infringement if that party is the "patentee," defined by statute as one who owns the patent or is an exclusive licensee.²⁴ U.S. patents can be granted for ideas that have not yet been refined to the point of a commercially viable product.²⁵ Thus, an inventor who wishes to patent an idea before development into a marketable product can do so.

Although the inventor is the presumptive owner of a patent,²⁶ ownership can be assigned to another.²⁷ Patents and patent applications can be readily purchased through individual negotiation, auction or any other means devised to transfer the right in writing.²⁸ Except for the writing, no legal relation between the transferor and the transferee need exist for a valid assignment. Once ownership is transferred, the patent owner becomes the patentee and can assert the patent against infringers in court.²⁹ Patentees can also license, sublicense, further assign and otherwise fully exploit the patent right to the full extent permitted by the laws.³⁰

Liquid patent holders use the rules authorizing patent transfers to obtain rights directly from individual inventors, corporations who wish to raise revenue, or other sources.³¹ Such individuals or entities may lack

21. Marcus Reitzig et al., *On Sharks, Trolls, and Other Patent Animals—"Being Infringed" as a Normatively Induced Innovation Exploitation Strategy*, at 3 (Feb. 2006), available at <http://ssrn.com/abstract=885914> (select "Social Science Research Network, New York, USA" icon under SSRN Electronic Paper Collection).

22. *Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.P.A.*, 944 F.2d 870, 875 (Fed. Cir. 1991).

23. 35 U.S.C.A. § 111 (West 2006); *Kennedy v. Hazelton*, 128 U.S. 667, 672 (1888).

24. 35 U.S.C.A. §§ 100(d), 261, 281; *see also* *Waterman v. Mackenzie*, 138 U.S. 252, 255 (1891); *Speedplay, Inc. v. Bebop, Inc.*, 211 F.3d 1245, 1249-50 (Fed. Cir. 2000).

25. *In re Brana*, 51 F.3d 1560, 1568 (Fed. Cir. 1995) ("Usefulness in patent law . . . necessarily includes the expectation of further research and development.").

26. *Teets v. Chromalloy Gas Turbine Corp.*, 83 F.3d 403, 407 (Fed. Cir. 1996).

27. 35 U.S.C.A. § 261 (West 2006).

28. *Id.* ("Applications for patent, patents, or any interest therein, shall be assignable in law by an instrument in writing.").

29. *See, e.g., Vaupel Textilmaschinen KG*, 944 F.2d at 873-74.

30. *Hooker Chems. & Plastics Corp. v. United States*, 591 F.2d 652, 659 (Ct. Cl. 1979).

31. *See, e.g., Geoff Daily, Acacia Makes Its Case*, STREAMINGMEDIA.COM, Mar. 9, 2005, <http://www.streamingmedia.com/r/printerfriendly.asp?id=9041>.

the resources or desire to engage in the risk and expense of exploiting patents themselves. As an exploited patent raises no money on its own, the inventor or original owner has an incentive to transfer the patent in exchange for either a lump sum or share in royalties earned by the purchasing liquid patent holder.

B. Liquid Patent Holders' Strategic Assertion of Patents

After acquiring the patent right, the liquid patentee selects and investigates a potential infringer and may decide to commence licensing negotiations.³² One common strategy is to find patentees who have integrated the patented invention into a commercial product.³³ Both the liquid patent holder and the potential infringer are aware that a failed negotiation can lead to litigation, with the possibility for both monetary damages and injunctive relief.³⁴ Such negotiations raise the concern expressed by Justice Kennedy in his concurring opinion of *eBay Inc. v. MercExchange, L.L.C.*,³⁵ that in such circumstances "the threat of an injunction is employed simply for undue leverage in negotiations," particularly when the patent at issue covers only one aspect of a complex product.³⁶

Some liquid patent holders employ a number of strategies to maximize their leverage, and consequently their profit. For example, some liquid patent holders own patents through holding companies that do not produce any products. Such entities cannot be countersued for patent infringement and thus the alleged infringer is in a poor position to exercise any counter-leverage in the licensing negotiation. This consideration does not bar enforcement of the patent right, as the existence of the patent right is unaffected for patentees who decide not to commercialize their invention.³⁷ Indeed, one entity creates a shell corporation for each

32. *License to Gamble: In-House IP Experts Offer Advice On Making Money From Licensing*, CORPORATE LEGAL TIMES, March 2005, at 56 (roundtable interview with individuals from IBM, Qualcomm, Burnham Institute, Sun World, and TARGUSinfo concerning licensing strategies).

33. *Business Perspectives on Patents: Hardware and Semiconductors*: FTC/DOJ HEARINGS TO HIGHLIGHT BUSINESS AND ECONOMIC PERSPECTIVES ON COMPETITION AND INTELLECTUAL PROPERTY POLICY, Feb. 28, 2002 (statement of Robert Barr, Vice President, Worldwide Patent Counsel, Cisco Systems, Inc.) ("They try to patent things that other people or companies will unintentionally infringe and then they wait for those companies to successfully bring products to the marketplace. They place mines in the minefield."), <http://www.ftc.gov/opa/2002/02/ipsecond.htm> (scroll down to February 28, select "Robert Barr" hyperlink); see generally Reitzig, *supra* note 21 (discussing the problem with patent trolls by use of a microeconomic model).

34. 35 U.S.C.A. §§ 283, 284 (West 2006).

35. 126 S. Ct. 1837 (2006).

36. *eBay Inc.*, 126 S. Ct. at 1842 (Kennedy, J., concurring); see Jeremiah Chan & Matthew Fawcett, *Footsteps of the Patent Troll*, 10 INTELL. PROP. L. BULL. 1, 9 (2005) ("An injunction can be a death sentence for a company, especially an emerging technology firm without a diversified product portfolio. Patent trolls often target such companies for quick cash because the targets cannot afford to risk an injunction.").

37. *Cont'l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 424-25 (1908).

technology subject matter in which it acquires patents,³⁸ which in many cases would even further insulate a parent corporation against any liability incurred by the shell for any conduct associated with patent assertion activities in each individual field.

A liquid patent holder who acquires a large number of patents in the same field as the alleged infringer is well positioned to demand payment, as the possibility of litigating the validity or infringement of a large number of claims becomes an expensive impracticability.³⁹ In a sense, these multiple patents covering a single product create a "patent thicket" by a single patent owner.⁴⁰ This is because patent litigation is sometimes too costly for small companies or those with marginal profit margins to sustain.⁴¹ Such companies may be forced to settle with liquid patent owners rather than to litigate infringement and validity of all of the asserted patent claims.

Those asserting patents may keep their patent ownership quiet, and then assert the patent against inadvertent infringers who are already engaged in manufacturing and selling product based on an infringing design.⁴² This strategy is based on the view that an infringer who discovers a patent before a product is manufactured will simply redesign around the patent.⁴³ By contrast, an infringer is more likely to pay for a license after locking into an existing design and being faced with the potential for a large litigation damage award.⁴⁴

If a patent that covers a key aspect of a feature for which no substitutes are available, the patentee may threaten to shut down a manufacturer, leading to a "hold up" problem that throws the infringer's business

38. Michael Kanellos, *Microsoft Alums Amass Thousands of Patents*, C|NET NEWS.COM, Nov. 3, 2005, http://news.com.com/Microsoft+alums+amass+thousands+of+patents/2100-1014_3-5929360.html.

39. The litigation costs for a case involving a single patent with approximately \$1-25 million at issue costs over \$1 million. American Intellectual Property Lawyers Ass'n, 2005 REPORT OF THE ECONOMIC SURVEY I-109 (2005); see also Gary L. Reback, *Patently Absurd*, FORBES.COM, June 24, 2002 (describing IBM's negotiation strategy in response to invalidity and non-infringement arguments made in licensing negotiations asserting seven patents, in which IBM asserted, "... we have 100,000 patents. Do you really want us to go back to Armonk [IBM headquarters in New York] and find seven patents you do infringe? Or do you just want to make this easy and just pay us \$20 million?").

40. See, e.g., Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, at 1-2 (Mar. 2001), available at <http://ssrn.com/abstract=273550> (select "Social Science Research Network, New York, USA" icon under SSRN Electronic Paper Collection) (describing a "patent thicket" as "a dense web of overlapping intellectual property rights that a company must hack its way through in order to actually commercialize new technology.").

41. See *supra* note 39 and accompanying text. See also Vincent J. Napoleon, *Patents Take Center Stage in Business Litigation and the Global Business Environment*, INSIDECOUNSEL, July 2006 ("Some have referred to patent litigation as 'the sport among kings' because of its expense and complexity.").

42. See Reitzig et al., *supra* note 21, at 5.

43. *Id.* at 17-18.

44. *Id.* This source points out that litigation damage awards tend to be higher than negotiated royalty rates. *Id.*

into doubt.⁴⁵ As others have noted, this problem may be most acute in the biotechnology area where the proliferation and goals of various interests prevent vital downstream research.⁴⁶

In combination, such strategies have the potential to allow liquid patent holders to obtain more licensing revenue than the value of the patent, even if the patent is invalid. This imposes a monetary burden that acts as tax on those commercializing or seeking to improve on the subject matter of the liquid patent. Moreover, hold ups prevent subsequent invention entirely, perhaps for years as a case is litigated. Such techniques pose a threat to the larger goals of encouraging advancement in developing knowledge, creating follow-on inventions and commercializing the benefits of this knowledge for use by the public.

C. Liquid Patent Markets and Holders

A number of business models have developed to facilitate liquid patents. These include brokerage services that work with either buyers or sellers and provide assistance for valuation and negotiation and offering strategic advice.⁴⁷ Governmental, educational and some commercial entities have set up formal technology transfer offices that facilitate license or transfer of intellectual property rights generated by the offering institution.⁴⁸ A number of companies who commercialize products open separate departments to license or assert patents in order to raise licensing revenue.⁴⁹ Other entities that are engaged in activities that use patents as financial or strategic assets may assert patents for licensing fees or attempt to create markets for patent transfers. These are more fully described in the following subsections.

1. Patent Auctions

A reference to “patent auctions” has a ripped-from-the-headlines quality that is associated with catchphrases like “[t]he new IP market-

45. *Id.* at 19.

46. Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, *SCIENCE*, May 1, 1998, at 698, 699-700 (arguing that the proliferation of patents in biotechnological research can set up a “tollbooth on the road to product development” that may hamper research, noting “[w]hen owners have conflicting goals and each can deploy its rights to block the strategies of the others, they may not be able to reach an agreement that leaves enough private value for downstream developers to bring products to the market.”).

47. Examples of patent brokers include IPotential, <http://www.ipotential.org/overview/index.htm>, and Thinkfire, <http://www.thinkfire.com>.

48. An organization which lists a number of these offices is The Association of University Technology Managers, <http://www.autm.net/memberConnect/index.cfm>. This organization prints an annual report that features various success stories that demonstrate transfers from idea to commercial use. See, e.g., *THE ASSOCIATION OF UNIVERSITY TECHNOLOGY MANAGERS, TECHNOLOGY TRANSFER STORIES: 25 INNOVATIONS THAT CHANGED THE WORLD (2006)*, available at <http://www.betterworldproject.net/documents/AUTM-BWR.pdf>.

49. For example, companies such as IBM both create patentable inventions and offer certain patents for licensing. See IBM, <http://www.ibm.com/ibm/licensing/> (last visited Sept. 4, 2006).

place,”⁵⁰ “here to stay,”⁵¹ and drawing in a “carnival buzz.”⁵² A number of auction formats exist, such as the Sotheby’s-style auctions held at four star locations,⁵³ bankruptcy proceedings designed to raise funds to pay off creditors,⁵⁴ do-it-yourself auctions on eBay.com and a free patent auction website.⁵⁵

The name most widely associated with patent auctions is Ocean Tomo, a self-described “integrated intellectual capital merchant bank” that plans to conduct two patent auctions per year for the next three years.⁵⁶ Introduced in April 2006, Ocean Tomo’s first patent auction attracted over 400 professionals, including 30 press attendees, and resulted in the transfer of over \$8 million in patent rights.⁵⁷

Ocean Tomo precedes each auction with a structured process that requires sellers to pre-qualify their patents according to Ocean Tomo’s own quality and valuation system, which measures the patent’s potential auction value.⁵⁸ Sellers must also provide information about the patent’s ownership, validity, licensing activity and any known or suspected infringers.⁵⁹ A due diligence meeting between the seller and potential bidders takes place.⁶⁰ The auction is conducted live, and a contract for the sale of the patent is formed by the highest bid made above the seller’s reserve and before the fall of the auctioneer’s hammer.⁶¹

50. See GREENBERG TAURIG, *THE NEW IP MARKETPLACE: PATENT AUCTIONS* (2006), <http://www.gtlaw.com/pub/alerts/2006/0403.pdf>.

51. *Id.* at 4; see also Barry Evans & Gregory Dolin, *Why Patent Auctions Are Here to Stay*, *THE DAILY DEAL*, Apr. 18, 2006.

52. *First Patent Auction Draws Buzz*, REDHERRING.COM, Apr. 6, 2006, <http://www.redherring.com/article.aspx?a=16433#>.

53. For example, on April 6, 2006, Ocean Tomo held an auction at the San Francisco Ritz Carlton Hotel, which charged \$1,500 fee to bidders preceded by a Gala Dinner. OCEAN TOMO, *THE OCEAN TOMO SPRING 2006 PATENT AUCTION*, April 5-6, 2006, at 5, (print on file with author) [hereinafter OCEAN TOMO, *SPRING 2006 PATENT AUCTION*]. Ocean Tomo will hold another auction in Fall 2006 at a Ritz Carlton in New York City. See Ocean Tomo, <http://www.oceantomo.com/auctions.html>.

54. John Markoff, *Auction of Internet Commerce Patents Draw Concern*, *N.Y. TIMES*, Nov. 16, 2004, at C4.

55. See, e.g., Item No. 230006349370, eBay.com (U.S. Patent No. 6,286,439, filed Apr. 20, 1999, asking price \$150,000); Item No. 130002119843, eBay.com (asking price \$28,000,000); Item No. 170006433907, eBay.com (U.S. Patent No. 6,570,340, filed July 10, 2000, asking price \$20,999,999 plus 10% royalties); see also Free Patent Auction, <http://www.freepatentauction.com/>.

56. See Ocean Tomo, <http://www.oceantomo.com/>; *First Patent Auction Draws Buzz*, *supra* note 52.

57. Press Release, Ocean Tomo, *World’s First Live, Multi-Lot Patent Auction Exceeding Expectations* (Aug. 5, 2006), http://www.oceantomo.com/auction_results.html; see Ocean Tomo, *Auction Frequently Asked Questions*, http://www.oceantomo.com/auctions_FAQ.html (print on file with author).

58. See Ocean Tomo, *Open Call for IP Submissions*, <http://69.59.189.170/auctions/submission1.asp> (last visited Sept. 15, 2006).

59. See OCEAN TOMO, *SPRING 2006 PATENT AUCTION*, *supra* note 53, at 9; see also Patentrating.com, <http://www.patentrating.com> (last visited Sept. 1, 2006).

60. See Ocean Tomo, *Auction Frequently Asked Questions*, *supra* note 57, at 13.

61. *Id.* at 14.

Ocean Tomo's first auction offered patents from patentees including Motorola, Clorox, The University of California and Ford Motor Company.⁶² Bids ranged from \$2,000 to \$1.9 million, and attendees included GE, DuPont, Microsoft, Nokia, Kodak, IBM, AT&T and some who bid anonymously.⁶³ Ocean Tomo declared its own first auction a success, stating, "We are now poised to make a true market for intellectual property liquidity a reality."⁶⁴ When combined with certain sales that were negotiated post-auction, about forty percent of the offered patents had been sold.⁶⁵

Ocean Tomo touts the benefits of a patent auction over individualized negotiation as a means to transfer intellectual property rights, explaining "the live auction creates a sense of urgency and closure to the sales process it keeps the assets in public forum which result in a bidding war, and shifts the burden to purchase from the sellers to the buyers."⁶⁶ At the same time, Ocean Tomo views auctions as means to create a market for patents as assets, in other words as "a stepping stone to a new way of thinking about invention" and to "help people to become more accustomed to buying and selling intellectual property."⁶⁷ Ocean Tomo's efforts serve as one example of a transition to a market where patents are used as liquid assets.

2. Acacia Research Corp.

Acacia Research Corp. was founded in 1995 as a venture capital firm, shifting focus in 2001 to concentrate on patents after earning \$26 million from licensing technology.⁶⁸ Currently, Acacia is a publicly traded company that includes a division that liquidizes patents on a large scale, controlling over 160 U.S. patents through subsidiaries and holding companies which are estimated to be valued at over \$19,600,000.⁶⁹ In a recent filing, Acacia reported licensing revenues of \$4.7 million for the first three months of 2006.⁷⁰ Acacia also reports thirty-one (31) ongoing patent infringement lawsuits, some of which name multiple alleged in-

62. See GREENBERG TAURIG, *supra* note 50.

64. OCEAN TOMO, SPRING 2006 PATENT AUCTION, *supra* note 53, at 6.

65. See Kanellos, *supra* note 38.

66. Ocean Tomo, *Auction Frequently Asked Questions*, *supra* note 57.

67. *First Patent Auction Draws Buzz*, *supra* note 52 (quoting Jim Malackowski, CEO of Ocean Tomo's Auction division).

68. L. Gannes, *Q&A: Acacia's Paul Ryan*, REDHERRING.COM, July 9, 2006, <http://www.redherring.com/Article.aspx?a=17514&hed=Q%26amp%3BA%3A+Acacia%E2%80%99s+Paul+Ryan§or=QAndA&subsector=Executives>.

69. Acacia Research Corp., Quarterly Report (Form 10-Q), at 4, 11 (May 10, 2006).

70. *Id.* at 39.

fringers.⁷¹ Acacia claims to have settled lawsuits against over two hundred companies.⁷²

In response to criticisms,⁷³ Acacia points out that their business model helps inventors who lack resources to enforce their patent rights, explaining that, "[w]hat we are doing is leveling the playing field by giving inventors the opportunity to monetize all of their hard work."⁷⁴ Additionally, Acacia states that patent licensing serves companies with expertise in inventing and innovating, rather than commercialization and marketing.⁷⁵

3. Intellectual Ventures

Intellectual Ventures is a privately held company that was founded in 2000 by two former software executives, including Nathan Myhrvold, who formerly oversaw Microsoft's two billion dollar research and development budget.⁷⁶ Intellectual Ventures views itself as a type of market maker that has "set out to amass one of the biggest holdings of patents in the information technology world," as "part of a plan to create a new investment market" around patents.⁷⁷

Intellectual Ventures' patenting strategy is built on acquiring a high volume of patents in a broad spectrum of industries.⁷⁸

Intellectual Ventures acquires patents from other inventors, reportedly thousands of them.⁷⁹ Additionally, the company works with both staff and external engineers and scientists to conceive and patent inventions, filing five hundred patent applications to date.⁸⁰ Intellectual Ventures does not currently commercialize, but professes plans to later create spin-off companies to develop, commercialize and manufacture products based on its patents⁸¹ and to generate revenue by licensing the patents that Intellectual Ventures has acquired.⁸² Others are more skeptical of Intellectual Ventures' plans, anticipating that asserting enforcement liti-

71. *Id.* at 40-42.

72. See Charles Cooper, *Have Patent, Will Sue*, C|NET NEWS.COM, July 10, 2006, http://news.com.com/Have+patent%2C+will+sue/2008-1014_3-6091975.html.

73. See, e.g., Zachary Roth, *Patent Troll Menace*, WASHINGTON MONTHLY, June 2005, <http://www.washingtonmonthly.com/features/2005/0506.rothsidebar2.html>.

74. Daily, *supra* note 31.

75. See Gannes, *supra* note 68.

76. See Ken Auletta, *The Microsoft Provocateur*, THE NEW YORKER, May 12, 1997, at 66-67.

77. Richard Waters, *Invention Shop or Patent Troll Factory*, FINANCIAL TIMES, Apr. 25, 2006, at 10.

78. Lisa Lerer, *Tech World Worries as Company's Patent Stockpile Grows*, IP LAW AND BUSINESS, June 14, 2006, at 32-33; see also Intellectual Ventures, <http://intellectualventures.com> ("Our current focus is on developing our invention portfolio.").

79. Brad Stone, *Factory of the Future?*, NEWSWEEK.COM, Nov. 22, 2004, at 60; see also Lerer, *supra* note 78, at 32.

80. Press Release, Intellectual Ventures, Intellectual Ventures Files 500th Patent Application (June 26, 2006) (on file with author).

81. *Id.*

82. Nicholas Varchaver, *Who's Afraid of Nathan Myhrvold?*, FORTUNE, July 10, 2006, at 110.

gation will necessarily follow.⁸³ Regardless, Intellectual Ventures devotes a significant portion of its business toward patents as liquid assets.

D. An Incentive to Liquidize

Although critics accuse liquid patent holders of trolling or abusing the patent system, established rules of the patent system presently support the use of patents for private benefit. The law authorizes private assignments of patent rights.⁸⁴ According to Congress, a patent has “the attributes of personal property.”⁸⁵ Some courts have likewise characterized the patent right as a property right⁸⁶ that is intended to create incentives for invention and investment.⁸⁷ As such, the patent right fits within the classic legal definition of an entitlement subject to transfer without government intervention for a privately negotiated value.⁸⁸

The ability to transfer the patent right for profit is well established. For example, the 1888 case *Dolbear v. American Bell Telephone Co.*,⁸⁹ describes patent rights transferred by a solo inventor to a company “composed of leading business men from all parts of the country,” who pooled five million dollars to establish a telephone company that would “certainly result in the driving out of all telephones in the market, save the ones they hold, or else the compelling the Gray, Bell, and Edison lines to pay the new company a munificent royalty.”⁹⁰ *Dolbear* is an early example of a solo inventor seeking to use a patent to obtain a financial return through transfer.

83. *Id.* (citing Joe Beyers and Shane Robison of Hewlett-Packard).

84. 35 U.S.C.A. § 261 (West 2006).

85. *Id.* (“Subject to the provisions of this title, patents shall have the attributes of personal property.”).

86. *See* *Hartford-Empire Co. v. United States*, 323 U.S. 386, 415 (1945) (observing that “a patent is property . . .”); *Carl Schenck, A.G. v. Nortron Corp.*, 713 F.2d 782, 786 n.3 (Fed. Cir. 1983) (“The patent right is but the right to exclude others, the very definition of ‘property.’”); *see also* *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730 (2002) (explaining that the patent laws provide “a temporary monopoly . . . [which] is a property right.”).

87. *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 599 (Fed. Cir. 1985) (quoting J. BENTHAM, *THEORY OF LEGISLATION*, chs. 7-10 (6th ed. 1890)). Specifically, the *Patlex* court described patent rights with reference to Bentham’s justification for property as follows: “It is supposed that men will not labor diligently or invest freely unless they know they can depend on rules which assure them that they will indeed be permitted to enjoy a substantial share of the product as the price of their labor or their risk of savings.”

88. *See* Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1092 (1972) (describing one form of property as a government granted entitlement that can be transferred on the basis of an individually negotiated price).

89. 126 U.S. 1 (1888).

90. *Dolbear*, 126 U.S. at 549. The inventor who claimed priority was described as a “poor mechanic” who “[o]wing to his poverty,” “was unable to push his patent on the market” using his own resources. *Id.* Ultimately, the “poor mechanic” lost the priority battle to the patent obtained by Alexander Graham Bell. *Id.* at 567.

From a number of perspectives, significant social benefits derive from the transferability of intellectual property rights.⁹¹ Today, research for more complex technology frequently requires a significant monetary investment, multiple inventors and firms that can foster inventive activity. Some benefits derive from a firm's ability to combine large financial resources with the work of employee inventors.⁹² In a typical scenario, the employees work under patent rules authorizing assignment or pursuant to common law shop rights that transfer the invention to the firm.⁹³ The firm seeks a patent and develops a product or service based on the invention disclosed in the patent application.⁹⁴ The patent is granted, and the patentee is able to exclude competitors and thereby charge a sufficiently high price for the product to enable recovery of the investment in the research and development of the product.⁹⁵

Patent transfers may be necessary to facilitate innovation.⁹⁶ For example, a typical model to bring an idea to a commercial market may require the effort of several companies which must obtain rights to the patent to bring a product to market.⁹⁷ For example, basic research may be performed at universities or research laboratories.⁹⁸ Some percentage of these inventions may be transitioned to a small company, which incubates the idea and undertakes the risk of taking the idea toward a "commercially viable" product or service.⁹⁹ A larger company may then undertake late-stage product development and market access.¹⁰⁰ Creating

91. See Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1740 (2000) (recognizing that transferability permits inventors to capitalize on inventions). Kitch states

It is clear that the ability of owners of intellectual property rights to transfer these rights in whole or in part is an important feature of the systems. The rights can easily arise in the hands of persons or firms who are not in the best position to exploit them. In order to involve others in the full exploitation of the economic potential of the right, the owners must be able to enter into a wide range of arrangements with other firms.

Id.

Permitting inventors to assign or license patent rights may permit more inventions to reach consumers in the form of commercialized products.

92. See Dan L. Burk, *Intellectual Property and the Firm*, 71 U. CHI. L. REV. 3, 15 (2004) (discussing the lack of a "work made for hire provision" in current United States patent law).

93. *Id.*

94. King Instruments Corp. v. Perego, 65 F.3d 941, 950 (Fed. Cir. 2005).

95. *Id.*; see also F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697, 708-09 (2001) (discussing the need to develop inventions "into some commercial embodiment").

96. The distinction between the terms *invention* and *innovation* highlights how a patent is different from a final, commercial product. See Robert P. Merges, *Commercial Success And Patent Standards: Economic Perspectives On Innovation*, 76 CAL. L. REV. 805, 807 (1988) (An *invention* refers to an inventor's idea as patented. By contrast, an *innovation* is the "functional version of the invention: the version first offered for sale.").

97. *Developments in Nanotechnology: Hearing Before the Sen. Comm. On Commerce, Science, and Transportation* (Feb. 15, 2006), at 1 (Statement of Dr. Todd L. Hylton, Director, Ctr. for Advanced Materials and Nanotechnology Sci. Applications Int'l Corp.), available at <http://commerce.senate.gov/pdf/hylton-021506.pdf>.

98. *Id.*

99. *Id.*

100. *Id.*

alliances and relations through patent transferability rules among these different entities thus may be crucial to the full development of a single idea. Such collaboration will be even more critical for new fields of research and development, such as nanotechnology,¹⁰¹ which requires significant research and development costs.

Another alternative to facilitate innovation is a cross-license between firms that allows freedom to operate without concern over patent lawsuits.¹⁰² A cross-license permits two companies to carry out product design and manufacture based on non-exclusive cross-licenses to the intellectual property of the other.¹⁰³ In contrast to liquid patents, these examples of the alienation of patent rights assist product or service development that may inure to the benefit of the public.

Few would argue that the transfer of patents should be prohibited because such transfers may be critical to the growth of innovation. The patent statute explicitly authorizes patent transfers.¹⁰⁴ As a system based on economic and commercial principles, patent transfers do not carry the same difficult moral and societal freight that warrant the prohibition on transfers of voting rights, human organs or illegal substances.¹⁰⁵

Patent licenses also offer benefits to the inventor.¹⁰⁶ Facilitating information transfers through patent assignments have benefits such as certainty and efficiency, particularly compared to trade secret transfers which are typically encumbered by confidentiality agreements, monitoring mechanisms and ownership uncertainty.¹⁰⁷ Preventing the transfer of information may create undesirable societal effects. For example, im-

101. *Id.* at 2 (noting the long lead time and significant investment necessary for nanotechnology research, which can be expected to require a more complex and interdependent business and funding model).

102. Kenneth W. Dam, *Some Economic Considerations In The Intellectual Property Protection Of Software*, 24 J. LEGAL STUD. 321 n.173 (1994) (discussing the award of a cross-license to smaller firm).

103. Bronwyn H. Hall & Rosemarie Ham Ziedonis, *The Patent Paradox Revisited, An Empirical Study of Patenting in the U.S. Semiconductor Industry, 1979-1995*, 32 RAND J. ECON. 101, 109-110 (2001) (discussing the use of patents for cross-license bargaining).

104. 35 U.S.C.A. § 261 (West 2006).

105. See Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1854-55 (1987) (explaining that "market-inalienability negates a central element of traditional property rights").

106. DAVID J. TEECE, *MANAGING INTELLECTUAL CAPITAL* 101-02 (2000). Teece notes that patent holders enjoy a number of benefits by contracting their intellectual property rights. These include permitting the innovator to have the benefits of a commercialized invention without incurring the cost of the assets needed to incorporate the invention into a product, which reduces both risk and cash requirements. *Id.* In addition, Professor Teece notes that "contractual relationships can bring added credibility to the innovator, especially if the innovator is relatively unknown when the contractual partner is established and viable." *Id.* at 101.

107. Paul J. Heald, *A Transaction Cost Theory of Patent Law*, 66 OHIO ST. L.J. 473, 482 (2005) (explaining that "partitioning an information asset through contract law and secrecy can be vastly more complex and costly").

peding or barring assignments may force inventors into becoming managers of those rights, even if ill-suited for that role.¹⁰⁸

At the same time, the private transfer of patent rights causes concern because control over the exclusive use of an idea has far broader implications than a typical private transfer of goods.¹⁰⁹ This is because patents have the potential to impact competition, society and future innovation. As has long been recognized, the patent system is fundamentally intended to benefit the public.¹¹⁰ Availability may affect such vital issues as public health,¹¹¹ education¹¹² and communication,¹¹³ among other things.

In effect, the patent rules create an incentive for inventors to liquidize, a circumstance that is perhaps inadvertent on behalf of those who create and implement patent law. The patent system readily permits private patent transfers, which carry the right to enforce against innocent infringers and which have enormous potential to impact public welfare and the future of innovation.

Such transfers have the ability to affect society and have a potential for abuse. Patent owners can single-handedly control an entire area of research merely by paying the price to which an inventor agrees. A solo inventor or nearly bankrupt inventing company finds such transfers not only profitable, but many find undertaking the risk of bringing an invention to market impossible. Transfers of otherwise unused patent rights may be profitable, providing an incentive to the fruits of research and development into the hands of those primarily interested in private gain.

108. See Mark A. Lemley, *Ex Ante Versus Ex Post Justifications For Intellectual Property*, 71 U. CHI. L. REV. 129, 137-38 (2004) (noting that “[c]reators are often terrible managers”).

109. Kimberly A. Moore, *Judges, Juries, And Patent Cases—An Empirical Peek Inside The Black Box*, 11 FED. CIR. B.J. 209, 224 (2002) (A patent “is not a private contract between two parties, but rather a property right that impacts all competition in a given technology.”).

110. See *Kendall v. Winsor*, 62 U.S. 322, 327-28 (1859).

It is undeniably true, that the limited and temporary monopoly granted to inventors was never designed for their exclusive profit or advantage; the benefit to the public or community at large was another and doubtless the primary object in granting and securing that monopoly. This was at once the equivalent given by the public for benefits bestowed by the genius and meditations and skill of individuals, and the incentive to further efforts for the same important objects.

Id.

111. Medecins Sans Frontieres, *A Matter of Life and Death: The Role of Patents in Access to Essential Medicines*, Nov. 2001, http://www.doctorswithoutborders.org/publications/reports/2001/doha_11-2001.pdf (arguing that “[p]atents can become obstacles in providing affordable treatment . . .”); see Keith Bradsher, *Pressure Rises on Producer of a Flu Drug*, N.Y. TIMES, Oct. 11, 2005, at 1 (describing international controversy over access to vaccine against avian flu pandemic, which is covered by a patent owned by Swiss pharmaceutical maker Roche).

112. Corey Murray, *Schools Targeted In Streaming Video Patent Claim*, ESCHOOL NEWS ONLINE, Mar. 3, 2004, <http://www.eschoolnews.com/news/showStory.cfm?ArticleID=4937> (detailing Acacia Research Corp.’s assertion of patent claims against university distance learning programs).

113. Tom Krazit & Anne Broache, *Blackberry Saved*, C|NET NEWS.COM, Mar. 3, 2006, http://news.com.com/BlackBerry+saved/2100-1047_3-6045880.html (describing settlement of patent dispute that appeared on the verge of shutting down wireless email communication system).

II. PATENT POLICIES THAT FOSTER THE PERSISTENCE OF LIQUID PATENTS

Some insight into specific provisions of existing patent law shed light on how liquid patents have facilitated—and perhaps even encouraged—liquid patent holders to use patents as assets. These provisions are the result of policy decisions made about the historic uses of patents as intended to create “new jobs and new industries, new consumer goods and trade benefits.”¹¹⁴ The cumulative effect of these doctrines is that liquid patent holders obtain their advantages without providing the societal benefits that these rules were intended to foster.

A. The Patent as Monolith: A Uniform System of Rights

Patent law has been viewed as an area of law where uniformity of application matters, although the extent to which uniformity should be permitted has been the subject of some controversy. The U.S. Federal Court of Appeals, which exercises jurisdiction over all patent appeals for the federal courts within the U.S., was formed by Congress in 1982 with the express purpose of enhancing uniformity in the administration of the patent system.¹¹⁵ This change has been observed to “have increased the respect enjoyed by patents in the United States and the value patents command in the global economy” and to have played in important part in the development of the U.S. economy.¹¹⁶ With these important principles at stake, the Federal Circuit treats patent rights as “central to the ne information-age economy in the United States and . . . as having significant value as intellectual assets.”¹¹⁷ Further, the Federal Circuit has been noted to have a pro-patent bias.¹¹⁸

As purchasers of these favored rights, liquid patent holders are the recipients of this system of strengthened rights. At present, the patent right is viewed as a document that is valuable and derives value from immutability.¹¹⁹ Once crystallized into a right, a patent’s strength does

114. Paulik v. Rizkalla, 760 F.2d 1270, 1276 (Fed. Cir. 1985).

115. See 28 U.S.C.A. § 1295 (West 2006) (providing that the U.S. Court of Appeals has exclusive jurisdiction over appeals of patent cases decided in the U.S. District Courts); Richard Linn, *The Future Role of the United States Court of Appeals for the Federal Circuit Now That It Has Turned 21*, 53 AM. U. L. REV. 731, 732 (2004) (Federal Circuit jurist noting the court’s “mission to bring understanding and uniformity to judicial interpretations of the patent statutes”).

116. Linn, *supra* note 115, at 734-35; see also Fed. Trade Comm’n, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy, Executive Summary*, 19 BERKELEY TECH. L.J. 861, 865 (2004) (“The Court of Appeals for the Federal Circuit, the sole court for most patent law appeals, has brought stability and increased predictability to various elements of patent law.”).

117. Linn, *supra* note 115, at 734.

118. *Id.* at 734 (recognizing the criticism that the court favors of patentees, and stating, “I admit to some bias . . .”).

119. *Id.* at 735 (noting the “reflection in the court’s opinions of the value patents command as legal documents, deserving of full and fair consideration by the courts and entitled to enforcement”).

not vary based on differences in use, lack of use or ownership. As discussed in a recent article:

Patents are bundles of rights, the most important of which is the right to exclude others from practicing the invention. Whether for business reasons, spite, or pure stupidity, a patent owner can exclude others from using his property, much as a land owner can keep out trespassers. A purchaser at auction, therefore, will have no rights different from or in addition to those of the original owner. The new owner may commercialize the invention or not as he wishes.¹²⁰

The Federal Circuit's administration of patent law has exhibited a trend toward preferring the promulgation of rules over flexible standards, emphasizing certainty and predictability.¹²¹ Uniformity has unquestionable benefits. Generally, the use of such rules fosters a sense of equal treatment consistent with a sense of justice and fair play, enhances predictability, and acts as a check on the judiciary and the influence of public will into the rule of law.¹²² The commercial context in which much patent law operates has contributed to the perception that stability is a necessary component for application.¹²³

As explained by now-Chief Judge Michel of the Federal Circuit, creating law for patent rights can be analogized to a country's efforts to draw borders based on citizenship.¹²⁴ According to Judge Michel, flexibility inherent in case-by-case determinations is undesirable because of the tendency of decision-makers to interject subjectivity in drawing lines and also because variation creates uncertainty among those trying to fix their own legal citizenship status.¹²⁵ Applying Judge Michel's analogy to the patent system leads to the concern that patent examiners, prospective patentees, their competitors and the public enjoy benefits from a uniform, predictable system that does not always require redress from the courts.¹²⁶

According to Judge Michel, absent such predictability, the Federal Circuit is in danger of impeding "the very commerce our court was cre-

120. Evans & Dolin, *supra* note 51.

121. John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 792-93 (2003) ("The Federal Circuit seems ever more prone to the pronouncement of categorical rules meant to govern future patent disputes.").

122. See Antonin Scalia, *The Rule of Law as a Law of Rules*, 56 U. CHI. L. REV. 1175 (1989).

123. Pauline Newman, *The Federal Circuit: Judicial Stability or Judicial Activism?*, 42 AM. U. L. REV. 683, 687 (1993) ("Like all commercial law, the cost of guessing wrong about the law and its application is rarely recoverable. The responsibility placed on the Federal Circuit mirrors that placed on all courts, for a useful and reliable law requires that the law is known and knowable.").

124. Paul R. Michel, *The Challenge Ahead: Increasing Predictability in Federal Circuit Jurisprudence for the New Century*, 43 AM. U. L. REV. 1231, 1235 (1994).

125. *Id.*

126. *Id.* at 1233-35; cf. Paul M. Janicke, *Do We Really Need So Many Mental And Emotional States in United States Patent Law?*, 8 TEX. INTELL. PROP. L.J. 279, 296-97 (2000) (arguing that case-by-case determinations made based on the inventor's or infringer's mental state encumbers the adjudication of patent disputes and makes such litigation too expensive and complicated).

ated to promote.”¹²⁷ Proponents of uniform application of patent law principles stress that consistency helps a number of those affected by patent rights.¹²⁸ Uncertainty about the categorization of rights creates difficulties for the U.S. Patent and Trademark Office’s patent examiners who must determine whether to grant patent rights in the first instance.¹²⁹

Once fixed, the patent right remains unchanged as the patent is licensed or assigned. Unlike other legal rights in which the plaintiff’s circumstances are legally relevant to the existence of the plaintiff’s right to recover,¹³⁰ the patent right is embodied in the document which leaves the patent’s owner entirely out of the picture. A liquid patent holder can purchase, sell, license and assert the patent without concern that the scope of the right is changed or diminished by any of this activity.

The uniformity with which the patent system has been administered has inured to the benefit of liquid patent holders. There are few, if any, policy-based exceptions to the administration of the patent law. The system, established for the benefit of inventors, society and the economy more generally, carries all of these rights forward when the patent right is transferred.

B. Patent Enforcement

The right to enforce the patent right has been economically justified as a means to prevent free-riding from significant invention investments. According to theorists, patent law’s protection for a patentee against infringers who independently developed their products is supported by the necessity to maintain a reward for initial inventor who may have made a high level of investment in the invention. As explained by William Landes and Judge Richard Posner:

If patents did not protect against independent duplication, then an inventor who had spent enormous sums to be the first to discover some useful new idea might find himself unable to recoup his costs because someone else, working independently toward the same goal,

127. Michel, *supra* note 124, at 1233, 1235, 1242 (recognizing that infringement decisions “may lead to plant closings or even business failures.”).

128. *Id.* at 1234-35.

129. *Id.* at 1233-34.

130. In this regard, patent law stands in contrast to trademark law, where the trademark owner’s conduct in using the trademark within particular channels of commerce is relevant to whether there is a likelihood of confusion with the defendant’s use of a mark. *See e.g.*, *Malletier v. Burlington Coat Factory Warehouse Corp.*, 426 F.3d 532, 539 (2d Cir. 2005) (describing the importance of analyzing effect on consumers in the markets for both the mark holder and the accused infringer); *Survivor Media, Inc. v. Survivor Prods.*, 406 F.3d 625, 631 (9th Cir. 2005) (listing the respective parties’ marketing channels as relevant to whether there is a likelihood of confusion as the test for trademark infringement).

had duplicated his discovery within weeks or months after he made it.¹³¹

Landes and Posner's rationale justifies maximum levels of patent protection most neatly for innovations which are expensive or time-consuming to develop.¹³²

However, liability for patent infringement extends much further, encompassing implementations that have been independently developed by the innocent infringers, where no free riding has or could have occurred. Specifically, patent infringement is demonstrated by a comparison between the patent claim and the accused device, method or process.¹³³ Infringement acts essentially as strict liability under tort law—that is, if the accused device incorporates the claim elements then infringement is found.¹³⁴ There is no requirement for a patent holder to show that the infringer actually copied the invention in order for liability to exist.¹³⁵ Patent infringement can be established where the infringer has independently developed the technology that is the subject of the patent holder's claim.¹³⁶ If the accused device includes the invention stated in the patent claims, the fact that the infringer included additional innovations or improvements does not preclude a finding of patent infringement.¹³⁷

Further, patent law does not distinguish levels of protection based on the level of investment required for the development of the invention. The patent protection afforded to a life-saving pharmaceutical¹³⁸ which requires hundreds of millions of dollars to develop is entitled to the same strength of protection as a fortuitously conceived invention.¹³⁹ One famous example is the invention of Teflon, invented in an experiment gone awry and ultimately incorporated into "everything from space capsules to

131. WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 295-96 (2003). Landes and Posner point out that this protection comes at an economic cost, because the rule "fosters patent races and the rent-seeking costs that such races can impose." *Id.* at 296.

132. See generally SUZANNE SCOTCHMER, *INNOVATIONS AND INCENTIVES* 16, 27 (2004) (recognizing the high cost of developing increasingly complex technological solutions).

133. See, e.g., *Kahn v. Gen. Motors Corp.*, 135 F.3d 1472, 1476 (Fed. Cir. 1998) (describing standard for determining patent infringement as a comparison of the claims with the accused device).

134. Timothy R. Holbrook, *The Intent Element of Induced Infringement*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 399, 401 n.8, 408 (2006); cf. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1353 (Fed. Cir. 2001) (refusing to construe a claim element as requiring any state of mind on the part of the infringer).

135. Holbrook, *supra* note 134, at 401 n.8; see also *Amazon.com, Inc.*, 239 F.3d at 1353 (refusing to construe a claim element as requiring any state of mind on the part of the infringer).

136. Holbrook, *supra* note 134, at 401 n.8.

137. *Atlas Powder Co. v. E.I. Du Pont de Nemours & Co.*, 750 F.2d 1569, 1580-81 (Fed. Cir. 1984).

138. See, e.g., Neal Masia, *The Cost of Developing a New Drug* (2006), <http://usinfo.state.gov/products/pubs/intelprp/cost.htm> (estimating that costs to develop a new pharmaceutical through delivery to customers range from \$800 million to \$2 billion).

139. 35 U.S.C.A. § 103(a) (West 2006) ("Patentability shall not be negated by the manner in which the invention was made.").

heart valves to frying pans” and patented in 1941.¹⁴⁰ Patentability does not require inquiry into the level of investment made by the patentee.

Additionally, the value, significance of the invention or the likelihood that a particular invention might be appropriated is not relevant to patentability.¹⁴¹ As a practical effect, the reward policies that protect incentives for the most expensive, valuable inventions set the level of legal protection for *all* patents.

Liquid patent holders benefit from these policies by seeking to maximize the obtainable profit for the lowest possible sum, perhaps more than the patent is worth based on an objective market measure. A liquid patentee can assert the patent against any infringer, including those who are innocently infringing. A liquid patent holder has the luxury of holding onto the patent, waiting to determine which infringers are going to be successful enough to pursue, as the patentability remains the same until the patent expires. Indeed, a liquid patent holder’s damages may be driven upward by infringers who have experienced market success after infringement has begun¹⁴² and may become locked into a particular design once the market has accepted their product.¹⁴³

Although the patent system rests on the prevention of free riding to protect significant incentives to invest in innovation, the system is administered with uniformity into areas where such policy considerations are factually absent. A liquid patent holder who purchases a patent right at low cost may assert the patent against an innocent infringer. Liquid patent owners thereby obtain the benefit of an economic policy justification for the patent system even where such justifications have no place in their practice.

C. The Utility Standard

35 U.S.C. section 101 requires that inventions be “useful” as a condition to patentability.¹⁴⁴ An appropriate level of patentability requires sensitivity to several underlying considerations. The trajectory of development ranges from the thought of a problem to be solved on one end of the spectrum, to a fully developed, commercialized product on the other end. The transition from one side of the spectrum to the other may take time, financial resources, research and development. When determining

140. See Robert Friedel, *The Accidental Inventor*, DISCOVER, Oct. 1996, at 58, available at <http://www.discover.com/issues/oct-96/features/theaccidentalinv893> (describing Roy Plunkett’s accidental invention of Teflon, which occurred while Plunkett was researching a new type of Freon); U.S. Patent No. 2,230,654 (filed Feb. 4, 1941) (Plunkett’s original Teflon patent).

141. LANDES & POSNER, *supra* note 131, at 300.

142. *Fromson v. W. Litho Plate & Supply Co.*, 853 F.2d 1568, 1575-76 (Fed. Cir. 1988), *overruled by* *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337 (Fed. Cir. 2004) (indicating that courts can consider post-infringement sales in determining royalty awards).

143. See Reitzig et al., *supra* note 21.

144. 35 U.S.C.A. § 101.

where on the spectrum to set the utility standard, courts are making a normative choice that influences a potential patentee's ability to obtain legal protection during a particular phase of development.

A utility standard that would grant patents for abstract ideas has the potential to harm innovation by granting a right to exclude others who may wish to research and develop within a new field, without providing a sufficient social benefit.¹⁴⁵ On the other hand, a utility standard might be set which requires a fully developed, commercialized product for a patent grant to issue. In *In re Brana*,¹⁴⁶ the Federal Circuit rejected this view, recognizing that usefulness "necessarily includes the expectation of further research and development" in the context of a pharmaceutical invention.¹⁴⁷ The *Brana* court reasoned that a contrary rule and its "associated costs would prevent many companies from obtaining patent protection on promising new inventions, thereby eliminating an incentive to pursue, through research and development, potential cures in many crucial areas"¹⁴⁸

Courts such as *Brana* have established a rule of law based on certain assumptions about how patents will be used which are not sustained by the use of liquid patents. Certainly in a traditional invention-innovation-commercialization cycle, the court's reasoning is sound and demonstrates how the patent system can lead to tremendous public benefits. However, liquid patent holders do not attempt to deliver on any promise of further research and development. Although the utility standard is set low enough in anticipation of further efforts at commercialization, liquid patent holders seek revenue by asserting patents against companies that have commercialized successfully.

D. Uniform Construction of the Patent Right

The strength, scope and nature of the patent right is viewed as one that should be objectively verifiable from the four corners of the patent itself and the public record of the patent's prosecution history whenever possible. For example, the doctrines surrounding patent interpretation favor the use of the four corners of the patent as the fundamental starting point.¹⁴⁹ Considerations which might be deemed "subjective" in the sense that these matters are outside the patent and prosecution history,

145. See *Brenner v. Manson*, 383 U.S. 519, 534 (1966) (explaining that a low standard of utility "may confer power to block off whole areas of scientific development, without compensating benefit to the public.") (footnote omitted).

146. 51 F.3d 1560 (Fed. Cir. 1995).

147. *In re Brana*, 51 F.3d at 1568.

148. *Id.* *Brana*, which considered an invention in the pharmaceutical area, is arguably at odds with the higher utility standard that the U.S. Supreme Court sought to establish in *Brenner*. See Rebecca S. Eisenberg, *Analyze This: A Law And Economics Agenda for the Patent System*, 53 VAND. L. R. 2081, 2087 (2000) (recognizing a conflict between the *Brenner* and *Brana* standards for utility).

149. See, e.g., *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388 (1996) ("A patent is a legal instrument, to be construed, like other legal instruments, according to its tenor").

such as inventor, expert or lay witness testimony about the meaning of patent claims, are considered the exception rather than the rule.¹⁵⁰

In *Phillips v. AWH Corp.*,¹⁵¹ the Federal Circuit set forth a hierarchy of interpretive sources for the interpretation of patent claims that relies most centrally on the intrinsic patent document.¹⁵² There, the court reaffirmed the primacy of the patent claim as delineating the meaning and scope of a patent claim.¹⁵³ In *Phillips*, the Federal Circuit further recognized that the claims must be considered in light of the patent specification.¹⁵⁴ *Phillips* places the strongest emphasis on these two interpretative sources—the patent claims and the written specification, both of which appear within the four corners of the patent document—for determining the scope of the patent right.¹⁵⁵ Evidence that is extrinsic to the patent, such as expert and inventor testimony, dictionaries, and treatises, are lower on the hierarchy of determining the meaning of patents.¹⁵⁶

The necessity for resting the meaning of the patent on the claims, written description and prosecution history has been viewed as a critical feature for placing the public on notice of the metes and bounds of the patent right.¹⁵⁷ The *Phillips* court outlined reasons that extrinsic evidence is disfavored and viewed with some suspicion. For example, *Phillips* viewed expert evidence as testimony created for litigation that “thus can suffer from bias.”¹⁵⁸

150. *Markman*, 517 U.S. at 388-89. In *Markman*, the U.S. Supreme Court rejected the contention that a jury—rather than a judge—should interpret the claims of a patent. *Id.* In doing so, the U.S. Supreme Court explained that cases the court was “doubtful that trial courts will run into many cases” in which witness credibility determinations were critical, stating, “[i]n the main, we expect, any credibility determinations will be subsumed within the necessarily sophisticated analysis of the whole document, required by the standard construction rule that a term can be defined only in a way that comports with the instrument as a whole.” *Id.* at 389.

151. 415 F.3d 1303 (Fed. Cir. 2005).

152. *Phillips*, 415 F.3d at 1312.

153. *Id.* (“It is a ‘bedrock principle’ of patent law that the ‘claims of a patent define the invention to which the patentee is entitled the right to exclude.’”) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)).

154. *Id.* at 1314-15 (noting that claims “are part of ‘a fully integrated written instrument,’ consisting principally of a specification that concludes with the claims. For that reason, claims ‘must be read in view of the specification, of which they are a part.’”) (citation omitted) (quoting *Herbert Markman & Positek, Inc. v. Westview Instruments, Inc.*, 52 F.3d 967, 978-79 (Fed. Cir. 1995)).

155. *Id.* at 1315 (“[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’”) (citation omitted) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

156. *Id.* at 1318-19; see also *N. Am. Vaccine, Inc. v. Am. Cyanamid Co.*, 7 F.3d 1571, 1577 (Fed. Cir. 1993) (suggesting that generally, the inventor’s testimony as to the meaning of the patent claims is not considered a relevant interpretive source).

157. See, e.g., *Phillips*, 415 F.3d at 1312 (“Because the patentee is required to ‘define precisely what his invention is . . . it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.’”) (quoting *White v. Dunbar*, 119 U.S. 47, 52 (1886)).

158. *Id.* at 1318.

Phillips also recognized that relying on extrinsic sources of information undermines “the public notice function of patents.”¹⁵⁹ The public notice function of patent claims has been viewed as important to the patent system’s goal of encouraging innovation. As the U.S. Supreme Court explains: “The monopoly is a property right; and like any property right, its boundaries should be clear. This clarity is essential to promote progress, because it enables efficient investment in innovation. A patent holder should know what he owns, and the public should know what he does not.”¹⁶⁰

The Federal Circuit’s reliance on the four corners of the patent gives the patent right a monolithic quality.¹⁶¹ The objective rules of patent interpretation militate toward a meaning that becomes crystallized into the patent document that is as immutable as engraving in stone.¹⁶² One who purchases the right can therefore be assured that no change in scope or meaning will occur due to the patent’s transfer.

E. The Headless Patentee

As set forth in the U.S. Constitution, the patent system was conceived as an incentive for inventors.¹⁶³ Giles Rich, a patent jurist and influential author in the patent field, presents this tongue-in-cheek view:

The inventor labors in his garret and brings forth something new and useful and beyond the capabilities of the ordinary worker in his field. He has spent his small savings and deprived himself and his family of comforts and invested much of his time. He has bettered the lot of mankind in some way. There is an instinct in human nature which holds him entitled to a reward or compensation for his achievement, partly out of gratitude, partly from a sense of fairness which engenders the feeling that he should be repaid his investment of time and money.¹⁶⁴

That such effort should be sheltered from the rigors of competition and rewarded through the grant of a valuable right is a powerful theme in

159. *Id.* at 1319.

160. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730-31 (2002).

161. See Timothy R. Holbrook, *Substantive Versus Process-Based Formalism in Claim Construction*, 9 LEWIS & CLARK L. REV. 123, 133 (2005) (noting that the Federal Circuit “trumpets in mantra fashion the public notice function served by a patent and its prosecution history, offering formalistic rules to protect against the evisceration of this policy objective”).

162. See Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1 (2000) (describing a hyper-textual approach to claim construction).

163. *Eldred v. Ashcroft*, 537 U.S. 186, 216 (2003) (stating “that ‘[p]atents are not given as favors . . . but are meant to encourage invention by rewarding the inventor with the right, limited to a term of years fixed by the patent, to exclude others from the use of his invention.’”) (quoting *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 299 (1964); *Graham v. John Deere Co.*, 383 U.S. 1, 8-9 (1966) (describing the patent system as “a reward, an inducement, to bring forth new knowledge”).

164. Giles S. Rich, *The Relation Between Patent Practices and The Anti-Monopoly Laws*, 14 FED. CIR. B.J. 21, 32 (2004). Rich stated that he believed that relying on the inventor “as inventor as though he were the principal character in this economic drama” was “a great mistake.” *Id.*

patent jurisprudence.¹⁶⁵ This imagery is particularly prevalent in cases decided before the 1952 amendments to the Patent Act. At that time, the “flash of creative genius” standard was used to determine the minimum standard of novelty for patentability.¹⁶⁶ The cases analyzed the inventive process in vivid detail, attempting to define circumstances under which it might be determined whether the inventor had “perceive[d] the vital forward step to which predecessors had been blind.”¹⁶⁷ Courts analogized to Edison’s inventive process, including reliance on such maxims as “genius as ‘2% inspiration and 98% perspiration,’”¹⁶⁸ and “genius has well been defined as ‘an infinite capacity for taking pains.’”¹⁶⁹

Although the 1952 Patent Act attempted to establish objective criteria for inventions,¹⁷⁰ the language of a reward for the inventor as a creative genius still resonates within court decisions. For example, in *Eldred v. Ashcroft*,¹⁷¹ the Supreme Court has reiterated that the purpose of the constitutional provision supporting the patent system is “by holding out a reasonable reward to inventors, and giving them an exclusive right to their inventions for a limited period, to stimulate the efforts of genius”¹⁷² Similarly, in *Markman v. Westview Instruments*,¹⁷³ the court underscored that a patent’s meaning must be defined for “[t]he encouragement of the inventive genius of others”¹⁷⁴

Modern courts maintain these assumptions in generalized terms, without a subjective inquiry into the *actual* inventor’s state of mind except for some limited circumstances.¹⁷⁵ This is because individualized inquiries into an inventor’s subjective mental states have been seen as

165. The use of narrative imagery as a device in judicial reasoning has been explored in legal literature. See Robert M. Cover, *The Supreme Court, 1982 Term—Foreword: Nomos and Narrative*, 97 HARV. L. REV. 4 (1982); Roberta Rosenthal Kwall, “Author-Stories”: Narrative’s Implications for Moral Rights and Copyright’s Joint Authorship Doctrine, 75 S. CAL. L. REV. 1 (2001) (describing the use of narrative in copyright cases).

166. *Cuno Eng’g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 91 (1941) (“That is to say the new device, however useful it may be, must reveal the flash of creative genius not merely the skill of the calling. If it fails, it has not established its right to a private grant on the public domain.”).

167. See, e.g., *Trabon Eng’g Corp. v. Dirkes*, 136 F.2d 24, 27 (6th Cir. 1943).

168. *Trabon Eng’g Corp.*, 136 F.2d at 28.

169. *U.S. Gypsum Co. v. Consol. Expanded Metal Cos.*, 130 F.2d 888, 892 (6th Cir. 1942).

170. Giles S. Rich, *The Vague Concept of “Invention” as Replaced by §103 of The 1952 Patent Act*, 14 FED CIR. B. J. 147, 158-59 (2004) (describing the amendments to the 1952 Patent Act).

171. 537 U.S. 186 (2003).

172. *Eldred*, 537 U.S. at 224 (quoting *Pennock v. Dialogue*, 27 U.S. 1, 19 (1829)).

173. 517 U.S. 370, 390 (1996).

174. *Markman*, 517 U.S. at 390 (quoting *Gen. Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 369 (1938)).

175. Some aspects of the inventor’s state of mind are relevant to U.S. patent law. See, e.g., Janicke, *supra* note 126. These include establishing the date of conception of an invention. 35 U.S.C.A. § 102(g) (West 2006). Another example is the statutory disclosure requirement, which mandates that the patent disclose the inventor’s subjective best mode of making the invention. 35 U.S.C.A. § 112 (requiring that the patent specification “set forth the best mode contemplated by the inventor of carrying out his invention”).

interfering with the objective nature of the patent right.¹⁷⁶ Additionally, subjective inquiries are viewed as introducing unnecessary factual complexity and expense into the litigation of patent cases.¹⁷⁷

The synergy between the perception of the inventor as genius and the view that subjective inquiries are disfavored leads to a curious thematic presumption that the patent system protects a creative genius even where the actual inventor has no such qualities. More significantly for the purpose of this analysis, patent owners are not considered *at all* in the patentability inquiry, yet as recipients of all rights to the patent get all of the attendant presumptions and benefits that the patent system provides. In many ways, the true patentee becomes invisible. Instead, the inventive genius takes the actual patentee's place as the driver of the justifications for the patent right.

Simplification and certainty are considered primary goals of patent law, but this view operates to mask that not every inventor is Thomas Edison and that not every patentee owner is interested in the larger goals of society and innovation. The patent system is built on the assumption that the inventor must be rewarded and protected, an assumption that has created a system that benefits liquid patent owners who use patents for individual gain. An emphasis on patents as a purely objective, streamlined system without inquiry into the circumstances of invention (or, into ownership) thus furthers the liquid patent's goal to create private wealth.

III. WHETHER LIQUID PATENTS SHOULD BE TREATED DIFFERENTLY: THE DEBATE OVER INDIVIDUALIZED VERSUS UNIFORM PATENT RIGHTS

Over the past several years, there has been some debate over whether more individualized treatment of patent law would better effectuate patent policy. These arguments shed light on whether different rules for liquid patent holders should be developed to curb the potential for abuses of the system and to maintain the patent system's consistent goal of encouraging invention.

As previously outlined, stability and predictability is the Federal Circuit's primary and clear goal.¹⁷⁸ More individualized treatments of patents have been proposed. One example is Professor A. Samuel Oddi's proposal to establish an alternative to the present utility patent

176. Janicke, *supra* note 126, at 296 (questioning "whether, by insisting on conduct norms in the form of mental states embedded in patent law, the U.S. patent law system is encumbered more than it needs to be and disproportionately so to any value achieved.").

177. See, e.g., COMM. ON INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY, NAT'L RESEARCH COUNCIL OF THE NAT'L ACADS., A PATENT SYSTEM FOR THE 21ST CENTURY 7, 117-23 (Stephen A. Merrill et al. eds., 2004).

178. Newman, *supra* note 123, at 688 ("[U]nless there can be reasonable reliance on legal advice given during the stages of invention and innovation, unless that advice can correctly predict the legal principles to be applied by the court, the court is not fulfilling its obligations to the public.").

system: a patent system for “revolutionary” patents.¹⁷⁹ Professor Oddi’s system would expand the categories of patentable inventions by broadening the classes of statutory subject matter and lowering the utility requirement.¹⁸⁰ At the same time, Professor Oddi’s system would modify the current novelty and non-obviousness standards to take into account other characteristics of the proposed invention is considered “revolutionary” or “extraordinary” based on the standards set by experts in the field of endeavor.¹⁸¹

In return, Oddi proposes that applicants who successfully obtain revolutionary patents would receive twice the term of protection than is available for utility patents under current law.¹⁸² Oddi’s proposal is intended to further proposition that the patent system produces a net benefit to society where patents are only granted for those inventions induced by the patent system—that is, patents should only be granted where the invention “would not have been made but for the availability of patents.”¹⁸³

The Federal Trade Commission (FTC) has proposed that patent policy be implemented in view of competitive policy.¹⁸⁴ Specifically, the FTC proposes that the inquiry of patent law’s non-obviousness standard¹⁸⁵ be shifted to consider “whether an invention likely would emerge in roughly the same time frame – that is, without significant delay – ‘but for’ the prospect of a patent.”¹⁸⁶

Another discussion concerning the modification of patent law’s uniform treatment of innovation include the work of Professors Dan Burk and Mark Lemley.¹⁸⁷ Burk and Lemley identify various points of the Federal Circuit’s disparate application of certain patent doctrines in the consideration of biotechnology patent cases when contrasted to the application of these same rules to computer software cases.¹⁸⁸ Specifically, Burk and Lemley state the courts have developed “a unique enclave of

179. See A. Samuel Oddi, *Beyond Obviousness: Invention Protection in the Twenty-First Century*, 38 AM. U. L. REV. 1097, 1115 (1989).

180. *Id.* at 1129-30.

181. *Id.* at 1131-32; see also *Roberts v. Sears, Roebuck & Co.*, 697 F.2d 796, 798 (7th Cir. 1983) (noting that an invention “was entitled to patent protection only if it was the kind of contribution unlikely to be induced except by the promise of a monopoly, and we do not think it was that kind of invention, because we think it would have been made anyway, and soon.”).

182. Oddi, *supra* note 179, at 1138-39 (“To provide an incentive for applicants to seek an early grant, the system should offer either the period of thirty-four years from grant or the longer period of thirty-six to forty years from the filing date.”).

183. *Id.* at 1101.

184. FED. TRADE COMM’N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY, EXECUTIVE SUMMARY 7-8 (2003), <http://www.ftc.gov/os/2003/10/innovationrpt.pdf> [hereinafter FTC PATENT REPORT].

185. 35 U.S.C.A. § 103 (West 2006).

186. FTC PATENT REPORT, *supra* note 184, at ch. 4, § II(A)(2).

187. See generally Dan L. Burk & Mark A. Lemley, *Biotechnology’s Uncertainty Principle*, 54 CASE W. RES. L. REV. 691 (2004).

188. *Id.* at 706-07.

patent doctrine for biotechnology” resting on assumptions about the person of ordinary skill in this art.¹⁸⁹ Burk and Lemley argue that the Federal Circuit’s choices fail to serve innovation in the biotechnology field.¹⁹⁰ They propose changes to the substantive requirements for patentability in order to facilitate an increased level of biotechnology invention.¹⁹¹ The authors conclude that “as a practical matter, it appears that, although patent law is technology-neutral in theory, it is technology-specific in application.”¹⁹²

The degree of variation that patent law should tolerate is controversial. Each of these proposals for change to the patent system has been made in the interest of furthering the patent system’s goals. Differences in the administration of patent law create uncertainty and complexity¹⁹³ and therefore stand in contrast to the congressional purpose in creating the Federal Circuit.¹⁹⁴ Likewise in this circumstance, proposed modifications to accommodate the use of liquid patents should be made only to the extent that such changes further patent policy.

Developing separate patentability rules for liquid patents is theoretically possible, of course.¹⁹⁵ For example, one might condition patent transfers on approval by a governmental agency, such as the U.S. Patent and Trademark Office. Utility standards for liquid patents could be raised to prevent potential interference with nascent markets.¹⁹⁶ A further proposal might be to create a standard whereby one considered the patent owner’s motives or reasons for asserting the patent in determining enforceability. Enforceability or remedies might be weakened for those engaged in licensing programs that have adverse economic consequences for innovation. Commercializing entities might be permitted an infringement defense of independent development for innocent infringement. Enforcement against abuses of the patent system could be considered under alternative causes of action such as through tort or antitrust theories.

Any proposed changes would be disruptive to the patent system’s goal toward preserving uniformity and objectivity in the patent system. For example, resting the standards of patentability on subsequent changes in ownership would interject a significant level of uncertainty into a decision to invest in invention. Certainly, the U.S. Patent and Trademark Office could not be expected to foresee transfer when issuing

189. *Id.* at 716.

190. *Id.* at 736-38.

191. *Id.* at 736-37.

192. *Id.* at 691.

193. R. Polk Wagner, *Exactly Backwards: Exceptionalism and the Federal Circuit*, 54 CASE W. RES. L. REV. 749, 755 (2004).

194. Newman, *supra* note 123, at 688.

195. See 35 U.S.C.A. § 101 (West 2006).

196. See *Brenner v. Manson*, 383 U.S. 519, 536, (1966) (discussing utility standard, stating “a patent system must be related to the world of commerce rather than to the realm of philosophy”).

patents in the first instance. Rendering the patent right vulnerable to later changes in ownership may hurt or discourage inventors who wish to engage in licensing or exchanging patent rights in return for funding that may be necessary for commercialization. However, such disruption may be warranted if liquid patents are inconsistent with the patent system's underlying justifications and Constitutional purpose. An examination of liquid patents in light of those policies follows.

IV. FOUNDATIONAL PUBLIC POLICIES SERVED BY THE PATENT SYSTEM

Although the creation and enforcement of liquid patents are well supported as a matter of patent law, their contribution to established patent policy is far less certain. To the extent that the patent system was created to facilitate invention and the commercialization of products which flow from those ideas, the creation of markets for patents as commodities seems to fall short. Further, to the extent that the patent system creates incentives to liquidize, measures should be undertaken to ensure that the use of patents is not contrary to the fundamental goals of the patent system.

A. The Constitutional Basis of the Patent Reward as Incentive

Patents are awarded to inventors for the development and disclosure of ideas that would otherwise be subject to copying.¹⁹⁷ Over the years, the incentive for which the patent system offers rewards has been refined to encourage: 1) invention of new and improved technology; 2) disclosure of this technology to the public; and 3) investment in the commercialization of patented ideas.¹⁹⁸

The patent as reward has infused U.S. patent policy since its inception in the U.S. Constitution, which authorized Congress to create the intellectual property protection "[t]o promote the Progress of Science and useful Arts"¹⁹⁹ As stated by the U.S. Supreme Court:

But in order to induce him to make that invention public, to give all a share in the benefits resulting from such an invention, Congress, by its legislation, made in pursuance of the Constitution, has guaranteed to him an exclusive right to it for a limited time; and the purpose of the patent is to protect him in this monopoly, not to give him a use which, save for the patent, he did not have before, but only to separate to him an exclusive use.²⁰⁰

197. See, e.g., Mark F. Grady & Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 VA. L. REV. 305, 310-11 (1992).

198. *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1575 (Fed. Cir. 1995) (Nies, J., dissenting).

199. U.S. CONST. art. I, § 8, cl. 8 (granting Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries").

200. *United States v. Am. Bell Tel. Co.*, 167 U.S. 224, 239 (1897).

The patent is "a reward, an inducement, to bring forth new knowledge" to further fields of human endeavor.²⁰¹

The reward for the inventor's effects is the limited time period to exclude others from making, using, selling or importing the invention.²⁰² This period of exclusivity prevents others from practicing the invention until the patent expires, at which time the invention falls into the public domain and can be freely practiced by the public without permission of the patent holder.²⁰³ Innovators are deemed to develop patentable inventions in expectation of receiving any rewards that can be reaped from the period of exclusivity.²⁰⁴

In addition to justifying the patent laws as a whole, the patent as an incentive has also long influenced specific policy choices in the jurisprudence of patent law. These include critical components of the patent system, such as substantive requirements for patentability.²⁰⁵ Other examples include the utility requirement,²⁰⁶ inventorship,²⁰⁷ and the enablement requirement.²⁰⁸ As an additional example, this policy also provides support for the rule that inventors are the presumptive owners of their inventions.²⁰⁹

The "reward" that is the heart of the reward theory is the right to exclude competitors for the entire patent term. As the Federal Circuit has explained, the patent system depends on the right to exclude as an essential component of the reward incentive, as "without the right to exclude the express purpose of the Constitution and Congress, to promote the progress of the useful arts, would be seriously undermined."²¹⁰ The

201. *Graham v. John Deere Co.*, 383 U.S. 1, 9 (1966).

202. *Pennock v. Dialogue*, 27 U.S. 1, 19 (1829) (stating "[w]hile one great object was, by holding out a reasonable reward to inventors, and giving them an exclusive right to their inventions for a limited period, to stimulate the efforts of genius; the main object was 'to promote the progress of science and useful arts'").

203. *Am. Bell Tel. Co.*, 167 U.S. at 239; see also *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186-87 (1933).

204. *King Instruments v. Perego*, 65 F.3d 941, 950 (Fed. Cir. 1995) ("[T]he Patent Act creates an incentive for innovation. The economic rewards during the period of exclusivity are the carrot. The patent owner expends resources in expectation of receiving this reward.").

205. *Graham*, 383 U.S. at 9 ("Only inventions and discoveries which furthered human knowledge, and were new and useful, justified the special inducement of a limited private monopoly.").

206. *Brenner v. Manson*, 383 U.S. 519, 536 (1966) ("But a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.").

207. *Univ. of Colo. Found., Inc. v. Am. Cyanamid Co.*, 196 F.3d 1366, 1372 (Fed. Cir. 1999) (noting that setting a uniform federal standard of inventorship is necessary to achieve the patent system's reward system goal).

208. *Genentech, Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997) (recognizing that sufficient detail must exist within the patent to demonstrate the invention to one of ordinary skill in the arts).

209. *Teets v. Chromalloy Gas Turbine Corp.*, 83 F.3d 403, 407 (Fed. Cir. 1996) ("Ownership springs from invention. The patent laws reward individuals for contributing to the progress of science and the useful arts. As part of that reward, an invention presumptively belongs to its creator." (citation omitted)).

210. *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 600, (Fed. Cir. 1985), modified on other grounds, 771 F.2d 480 (Fed. Cir. 1985).

right to exclude captures the idea into a legally enforceable ability to preclude others from practicing the invention, recognizing that the idea that is the subject matter of patents are, as with other intellectual property, a non-rivalrous knowledge good.²¹¹ That is, the information can be used by more than one party simultaneously. Because information can be easily shared and copied, a patentable idea could be copied and used by others. In economic terms, information is considered a “public good.”²¹² Absent an enforceable patent right, the inventor’s incentive would be destroyed by others who would use the invention to compete with the inventor. That is, because patent law requires inventors to publicly disclose sufficient details about their invention to permit reproduction as a condition of patentability, a patented invention can be copied by anyone willing to undertake that effort.²¹³ Those who choose to copy do not need to invest the time, money or risk that the initial inventor was required to undertake. The public goods problem that the patent system seeks to resolve is that, absent some form of legal protection, patents might be used as templates for copyists who could reproduce the invention without the burden of the investment risk undertaken by the inventor.²¹⁴ The legal protection afforded by the patent system permits enforcement and compensation for infringement as a legal barrier against free-riding and to protect the inventor based on the creation and disclosure of the invention.²¹⁵

The patent system acts to prevent a disadvantage to the inventor—who may have expended significant costs for the invention and development of a commercial application incorporating the invention—by a competitor who copies the product and therefore has “a cost advantage that may lead to a fall in the market price to a point at which the developer cannot recover his fixed costs.”²¹⁶

211. Non-rivalrous goods may be consumed by multiple users without diminishing the quantity or the utility of the good. In contrast, rivalrous goods are consumed as they are used and available only to one user at a time. Some rivalrous goods cannot be used again, such as when a particular apple is consumed. See, e.g., John F. Duffy, *The Marginal Cost Controversy in Intellectual Property*, 71 U. CHI. L. REV. 37, 40 (2004); Mark A. Lemley, *Property, Intellectual Property and Free Riding*, 83 TEX. L. REV. 1031, 1050-51 (2005) (describing the non-rivalrous nature of information as a public good).

212. See LANDES & POSNER, *supra* note 131, at 14 (explaining that a “public good” in the economic sense is that consumption by one person does not reduce its consumption by another).

213. 35 U.S.C.A. § 112 (West 2006) (requiring patent applicants to disclose information that enables one of ordinary skill in the art to reproduce the claimed invention); Lemley, *supra* note 108, at 129 (“Because ideas are so easy to spread and so hard to control, only with difficulty may creators recoup their investment in creating the idea. As a result, absent intellectual property protection, most would prefer to copy rather than create ideas, and inefficiently few new ideas would be created.”).

214. See Brett Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917, 947-48 (2005).

215. SCOTCHMER, *supra* note 132, at 34.

216. LANDES & POSNER, *supra* note 131, at 294.

B. Analysis of Liquid Patent and Patent Incentives

1. Incentive to Invent

Transfer of a patent right is temporally disconnected from invention. Liquid patents holders are interested in maximizing profits by asserting patents against infringers for licensing revenues.²¹⁷ Stated simply, the liquid patent holder's role takes place after invention has already taken place.

At best, liquid patent holders provide services that assist inventors in asserting their rights.²¹⁸ One could analogize liquid patent entities as supplemental to the inventive process as auction houses are to artistic and creative works. Such entities facilitate a secondary market to maximize private wealth and are not themselves the primary drivers of invention. At present, the secondary market for patents is a nascent one. The uncertain significance of this market, including the types and numbers of patents that can be supported, may provide an insufficient incentive to encourage investment in invention. The possibility of obtaining a financial reward in the market for liquid patents may not warrant the expense and time of developing an incentive, unless a clearer path to that market exists.²¹⁹

To the extent that a liquid market for patents becomes viable, care must be taken to avoid creating incentives to "invent" based on commercialized products already developed by others through the application of the novelty and non-obviousness standards, as well as through the application of prosecution history estoppel.²²⁰

217. See, e.g., Lisa Lerer, *Quick Draw*, IP LAW & BUSINESS, July 20, 2006 (describing attorney Raymond Niro's strategy of finding a buyer for a patent, then asserting the patent against forty companies in order to obtain \$65 million in licensing fees).

218. See Acacia Technology Group, *Why Use Acacia?*, <http://www.acaciatechnologies.com/whyuse.htm> (print on file with author).

219. For example, Intellectual Ventures has filed 500 patent applications to date, and holds invention sessions with scientists and engineers to generate ideas for patenting. See Press Release, Intellectual Ventures, Intellectual Ventures Files 500th Patent Application (June 26, 2006) (print on file with author), available at <http://www.intellectualventures.com/docs/500apps.pdf>. This organization is developing its own strategy to create a secondary market for patents, thus providing a comparatively certain path to market for patents that issue from these applications. A certain market also existed for the late Jerome H. Lemelson, who had been found to have "systematically extended the pendency of his applications by sitting on his rights . . . while waiting for viable commercial systems to be designed and marketed" and then "drafted and prosecuted hundreds of new claims in the late 1980's and 1990's specifically worded to cover those commercial systems." *Symbol Techs., Inc. v. Lemelson Med., Educ. & Research Found., Ltd.*, 301 F. Supp. 2d 1147, 1156 (D. Nev. 2004), *aff'd*, 422 F.3d 1378 (Fed. Cir. 2005) (invalidating Lemelson's patents). Because Lemelson's patents were based on an already-existing commercialized market, the path for obtaining revenue from Lemelson's efforts at "invention" was certain.

220. See *Symbol Techs.*, 301 F. Supp. 2d at 1156.

2. Incentive to Disclose

The patentability requirements include the inventor's obligation to disclose the details of the invention.²²¹ An inventor must include a written specification that describes the invention and tells the public how to make and use the invention.²²² In return, a patent applicant forgoes the potentially lengthier trade secret protection and the public gains the inventor's knowledge reproduced in the patent.²²³ Thus, meaningful description of the invention and its underlying technical information is part of the *quid pro quo* of the patentee's grant of the right to exclude²²⁴ "in the hope that, among other things, the disclosure of all inventions will add to the sum total of knowledge available to the general public."²²⁵ Including sufficient details about the invention permits members of the public to make and use the invention after the patent's expiration.²²⁶

As with invention, post-patent application transfers of the patent right are temporally disconnected from the inventor's decision to file a patent application. Non-commercializing inventors are likely to pursue patenting and the required disclosure. This is because non-commercializing inventors that seek to license are unlikely to be concerned about maintaining their inventions as trade secrets, as trade secrets are much more difficult to license compared to patent protection.²²⁷ Commercializing inventors will be unlikely to liquidize their patents, so long as they continue to commercialize the product made under the patent. Thus, the likelihood that the availability of a system of liquid patents will assist the disclosure policy of the patent laws is not significant.

Over time, patenting practices may increase if a stable asset market for patents emerges. If more patents are filed as the potential for profit becomes more readily realizable, the disclosure of more technical information may occur. As the Supreme Court has cautioned, however, "in light of the highly developed art of drafting patent claims so that they disclose as little useful information as possible—while broadening the

221. 35 U.S.C.A. § 112 (West 2006) states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Id.; see also *Paulik v. Rizkalla*, 760 F.2d 1270, 1276 (Fed. Cir. 1985).

222. *Capon v. Eshhar*, 418 F.3d 1349, 1355 (Fed. Cir. 2005).

223. See Margo A. Bagley, *Academic Discourse and Proprietary Rights: Putting Patents in their Proper Place*, 47 B.C. L. REV. 217, 238 n.95 (2006).

224. *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 977 (Fed. Cir. 2002).

225. *Litton Systems, Inc. v. Honeywell, Inc.*, 145 F.3d 1472, 1474 (Fed. Cir. 1998) (Gajarsa, J., dissenting).

226. See *J.E.M. AG Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.*, 534 U.S. 124, 142 (2001).

227. *Heald*, *supra* note 107, at 482.

scope of the claim as widely as possible—the argument based upon the virtue of disclosure must be warily evaluated.”²²⁸

i. Commercialization

Commercialization has been called “the fundamental purpose”²²⁹ of the patent system, and is intended to encourage public benefits in the form of available commercial products and the private rewards generated in the sale or licensing of the patent. In the 1974 case *Kewanee Oil Co. v. Bicron Corp.*,²³⁰ the U.S. Supreme Court explained the reward incentive in terms of the need to use the patent system to develop, commercialize and sell products that derive from the inventions:

The patent laws promote this progress by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research, and development. The productive effort thereby fostered will have a positive effect on society through the introduction of new products and processes of manufacture into the economy, and the emanations by way of increased employment and better lives for our citizens.²³¹

Commercialization of the ideas embodied in patents has been argued to provide significant social benefits that outweigh costs that the patent system imposes on society.²³² By way of example, innovative products and cost reductions that flow from research and development have been argued to be “quite remarkable,” and to outweigh the economic loss that society pays in licensing rates and other rents.²³³ One Federal Circuit jurist has explained that the court has allowed patent law to be “placed in the perspective of the marketplace: the destination contemplated in the Constitution.”²³⁴

The importance of commercialization as an incentive to the patent system was thoroughly discussed at the time of the 1952 amendments to the patent laws and the writings of a significant proponent and co-author

228. *Brenner*, 383 U.S. at 534.

229. See *Mossinghoff*, 758 F.2d at 599; see also, *Rohm & Haas Co. v. Crystal Chem. Co.*, 722 F.2d 1556, 1571 (Fed. Cir. 1983) (“Another policy of the system is to stimulate the investment of risk capital in the commercialization of useful patentable inventions so that the public gets some benefit from them, which may not occur in the absence of some patent protection.”).

230. 416 U.S. 470 (1974).

231. *Kewanee Oil Co.*, 416 U.S. at 480.

232. Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247, 252 (1994) (explaining that innovation “leads directly to consumer benefits in the form of new products and lower prices”). The expansion of output and the reduction in price achieved through technological progress resulting from research and development may be quite remarkable, far beyond any possible social loss from rent seeking.

233. *Id.* (citing Andrew S. Rappaport & Shmuel Halevi, *The Computerless Computer Company*, 7/1/91 HARV. BUS. REV. 69, 70 (finding the price of computers measured in millions of instructions per second fell from about \$250,000 in 1980 to less than \$2,500 in 1990)).

234. See, e.g., Newman, *supra* note 123, at 687.

of those amendments, Giles Rich.²³⁵ In a five-part essay that described the tension between the patent system and antitrust law, Rich placed the greatest emphasis on the last of these as “by far the greatest in practical importance” as “responsible for the actual delivery of the invention into the hands of the public.”²³⁶

Rich’s article quoted Conway P. Coe, then-Commissioner of Patents, emphasizing that, “[a]n inventor will not be rewarded and society will not be benefited until the invention passes into commercial channels.”²³⁷ Coe likened the U.S. Patent and Trademark Office to “sort of a national suggestion box” which others could use to further innovation.²³⁸ Critically, Rich recognized that many patents which had been submitted to this “national suggestion box” had never and would never be exploited, and opined that these “unused potential rights to exclude . . . do not adversely affect the public.”²³⁹ However, liquid patent holders have disturbed Rich’s calculus that unused patents impose no social costs.²⁴⁰ This is because holders of liquid patents have taken the unused patents out of the U.S. Patent and Trademark Office’s so-called “suggestion box”²⁴¹ to seek royalties on those engaged in commercialization.²⁴²

Liquid patents contradict the commercialization goal of patent law, because such patents are expressly not commercialized. Rather, such patents are used to generate revenue without undertaking the risks that innovation, commercialization and marketing would require.

Generally, economists assume that those willing to be exposed to increased risk might be expected to earn higher returns than if they had less exposure to risk.²⁴³ Applying this rule to patent principles, however, liquid patents provide inventors with the option of declining to avoid the risks of commercialization and instead sell their patents to a liquid patent holder for a specific and certain sum. Liquid patent holders have the luxury of holding onto the patent right until an appropriate and perhaps innocent commercializing infringer emerges. This raises the potential for waste, as the commercializing infringer independently develops the invention and incorporates the design into a product. In this scenario, all

235. Kieff, *supra* note 95, at 741.

236. *Id.* at 741-42 (citing Rich, *supra* note 164, at 133-34).

237. Rich, *supra* note 164, at 35.

238. *Id.*

239. *Id.*

240. *Id.*

241. *Id.* (quoting then-U.S. Patent and Trademark Commissioner Coe).

242. According to the U.S. Patent and Trademark Office, patentees abandon patents by failing to pay maintenance fees. Specifically, 20% of patentees abandon their patents by failing to pay their first maintenance fee at 3.5 years, 43% abandon by failing to pay at 7.5 years, and 75% abandon at 11.5 years. See United States Patent and Trademark Office *Questions and Answers Regarding the GATT Uruguay Round and NAFTA Changes to U.S. Patent Law and Practice* (Feb. 1995), available at <http://www.uspto.gov/web/offices/com/doc/uruguay/QA.html>.

243. See *Economics A-Z*, THE ECONOMIST.COM, <http://www.economist.com/research/Economics/alphabetic.cfm?LETTER=R#RISK> (defining “risk”) (print on file with author).

the risk of commercialization is on the infringer. Further, liquid patents are likely to encourage the anticommons problem²⁴⁴ by creating a potentially lucrative market for patents that are not commercialized into products for use by the public. That is, given the choice an inventor may sell the patent to a liquid patent holder rather than brave the market by creating a product. The patent system has allowed a right to be created without the corresponding social benefit that encourages the inventor to innovate and commercialize based on the original idea. Moreover, the opportunity to generate more ideas in the process of innovation (such as the better means of manufacture) or during commercialization (for example, improvements to the original idea based on customer feedback) are lost.

The courts' view of the reward system as a means to assist firms in invention and ultimately in taking steps toward commercialization has created an anomaly in the discussion of the goals of the patent system. Although the courts long ago recognized that as a policy matter the public was intended to benefit from products created by the patent owner's commercial exploitation of invention,²⁴⁵ more recently courts have made clear that the strength and existence of the patent right is unaffected where the owner decides not to commercialize or license the invention.²⁴⁶ Thus, the rule of patent law is that the existence of the patent right is entirely separate from those considerations—stated simply, one does not have to practice or license the patent as a condition of patentability.²⁴⁷

As a consequence, the problem of liquid patents sits squarely between the fundamental policy of reward theory and the rule of law. That is, reward policy favors implementation of the claimed invention, but patent law rules do not require incorporation of the patented idea into any product or service. Liquid patents seek the full level of protection that the patent system can provide despite their failure to contribute to the commercialization goal of the patent system.

244. The anticommons problem occurs where multiple early patent owners restrict development for later innovators. See Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 624 (1998). This results in inefficient pricing. See Burk & Lemley, *supra* note 187, at 729 ("If a product must include components A and B, and A and B are each covered by patents that grant different companies monopoly control over the components, each company will charge a monopoly price for its component. As a result, the price of the integrated product will be inefficiently high—and output inefficiently low—because it reflects an attempt to charge two different monopoly prices."). Further, if a single patentee of a key component refuses to license, all subsequent innovation relying on that component may be impossible.

245. See *Kendall v. Winsor*, 62 U.S. 322, 327-28 (1859).

246. *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 213-14 (1980); *Cont'l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 424-25 (1908).

247. See, e.g., *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1547 (Fed. Cir. 1995). When invoking this rule, Rite-Hite invoked the disclosure policy without crediting the commercialization policy. *Id.* ("A patent is granted in exchange for a patentee's disclosure of an invention, not for the patentee's use of the invention.").

C. Ex Ante Justifications for the Patent System: Kitch's Prospect Theory

A further goal of the patent system is outlined in a prominent 1977 article by Edmund Kitch describing his "prospect theory" of patents.²⁴⁸ In that article, Kitch describes certain *ex post* justifications for the patent system.²⁴⁹ Liquid patents operate *ex post*, that is, such transfers and related assertions occur after the patent has issued. Thus, an examination of how liquid patents fare under Kitch's theory may be helpful in determining where liquid patents fit within the current theoretical framework of the *ex post* use of patents.

1. Kitch's Prospect Theory

Analogizing patents to the mining claim system for public lands in the developing American West in the latter half of the nineteenth century, Kitch theorizes that the patent system confers socially beneficial activity after a patent right is created.²⁵⁰ Kitch's prospect theory is grounded on the patent system's award of exclusive and publicly recorded rights to first inventors who seek to develop a particular technology solution—typically, one who seeks the status of a pioneer in a particular field.²⁵¹ Just as the former mineral claim system created incentives "for prospectors to pack their burros and walk off in the desert in search of mineralization," Kitch believed that the patent system could allow pioneering inventors to control the development of their field of technology as an *ex post* reward for obtaining the patent right.²⁵²

Kitch argued that once a patent is granted, the public disclosure of the patent's issuance signals rivals to stop duplicative innovative activity for that technological field.²⁵³ According to the prospect theory, this circumstance puts the first inventor in the exclusive position to efficiently coordinate resources to enhance the patent's value.²⁵⁴ Under this theory, patent exclusivity provides an incentive to invent first to capture the patent, and prevents the waste of resources that would otherwise result if competing inventors continue duplicative inventive activity.

Kitch's theory makes a clean separation between the inventions which appear in patent claims, and the later commercial embodiments which typically require additional research, refinement and optimiza-

248. Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 266 (1977).

249. *Id.*

250. *Id.* at 271, 274.

251. *Id.* at 266.

252. *See id.* at 274, 276.

253. *Id.* at 278. As Kitch explains, "[n]o one is likely to make significant investments searching for ways to increase the commercial value of a patent unless he has made previous arrangements with the owner of the patent." *Id.* at 276.

254. *Id.* at 276.

tion.²⁵⁵ Further to this same point, Kitch argued that the patents encourage their owners to undertake the investment necessary to finalize and manufacture a commercial product based on the patent prospect without concerns about the competitive disadvantages that might be created, such as where a patent owner expends resources to promote consumer demand for a product in a manner that might benefit others firms within the same market.²⁵⁶ Kitch's prospect theory also recognizes a patent owner's incentive to seek licenses before the patent issues, based on the likelihood that the patent will issue.²⁵⁷ Indeed, Kitch proposes that patent licenses could be used to prevent wasteful duplication of innovative activity by allowing the patent holder to seek agreements that preclude competitors from designing around the patent owner's invention.²⁵⁸

At its core, Kitch's prospect theory argues in favor of early, broad grants of patent protection to a single inventor. In Kitch's world, the public grant to a single pioneer prevents wasteful duplicative technological investigation by others, because a publicly disclosed patent grant signals others that a winner has been declared. As one commentator has noted, "[b]ecause the right to innovate is a common right (it is not under exclusive control of any one firm), competition among firms will lead to inefficient races to invent that can dissipate any social surplus associated with an invention."²⁵⁹ The prospect theory holds that permitting a broad patent granted in the early stages of an innovative activity prevents this inefficiency as a disincentive to perform wastefully duplicative research.²⁶⁰

2. Application of the Prospect Theory to Liquid Patents

Although Kitch's prospect theory has been subject to criticism,²⁶¹ Kitch argued that "the prospect function is a significant, if not predominant, function of the American patent system as it has operated in fact."²⁶² Yet Kitch's prospect theory as proposed does not address how the patent system operates in situations where the invention as embodied in a patent is created to be transferred or sold to another.²⁶³ The theory focuses on *ex post* incentives that are intended to drive the inventor's initial decision to engage in innovative activity as well as the prevention

255. *Id.* at 271 ("Many inventions, including many important ones, are patented in a commercially significant form, yet the patented form is trivial in significance as compared to the later derived and improved versions.").

256. *Id.* at 277.

257. *Id.* at 278 ("[T]he patent gives [the] owner an affirmative incentive to seek out firms and inform them of the new technology, even before issuance, if the most efficient and hence patent-value-optimizing way to exploit the invention is to license it.").

258. *Id.* at 279.

259. John F. Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L. REV. 439, 440 (2004).

260. *Id.* at 444.

261. See *id.* at 442-43 (recognizing scholarly criticism of Kitch's prospect theory).

262. Kitch, *supra* note 248, at 267.

263. See, e.g., *id.* at 269 (examining priority rules).

of socially wasteful activity in the commercial market by non-inventors.²⁶⁴

It might be argued that liquid patents are entirely consistent with Kitch's theory, which hypothesizes that the patent system puts "the patent owner in a position to coordinate the search for technological and market enhancement of the patent's value so that duplicative investments are not made and so that information is exchanged among the searchers."²⁶⁵ Liquid patents may be argued to carry out the view that patent transfers permit a patent's maximum value and potential exploitation.²⁶⁶

There are several problems with this argument that demonstrate that the prospect theory fails to account for liquid patents. As an initial matter, the patentee's right of control—using the term "control" in the same sense as Kitch described as continuing to invent and commercialize around the original grant—ends with the patent's transfer of ownership to another. Kitch's fundamental assumption that a single inventor/owner has an incentive to mine the innovative activity that led to the patent grant simply disappears when the patent is sold.

Although it is possible that liquid patents can be used in a manner consistent with the rewards that Kitch identified by permitting transferability to an entity which is better positioned to market the benefits of the patent in the most economically and socially desirable manner possible, nothing in the patent law requires or even encourages a patentee to do so.²⁶⁷ Liquid patents can be readily sold to a licensing entity which adds the patent to its portfolio in the hopes of using the patent to generate licensing revenue, without any further incentive to invent or innovate around the original patent. That is, Kitch's interest rewarding patentees as prospectors is not backed by any patent rules that provide the benefits of commercialization of the products incorporating the patented invention. This is because the strength of the patent does not depend on whether or how a patentee seeks to reap the benefits of the right in a commercialized product.²⁶⁸ Further, nothing in patent laws requires that

264. *Id.* at 266 (noting the patent system's ability to achieve efficiency in the development and management of technological prospects "by awarding exclusive and publicly recorded ownership of a prospect shortly after its discovery").

265. *Id.* at 276. Burk and Lemley point out that Kitch's Prospect Theory operates in this respect as classic Coasean bargaining. Burk & Lemley, *supra* note 187, at 725 ("This is the Coase theorem at work. Under that theory, giving one party the power to control and orchestrate all subsequent use and research relating to the patented technology should result in efficient licensing, both to end users and to potential improvers . . ."); see, e.g., R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960) (setting forth the Coase theorem).

266. See, e.g., Robert P. Merges, *Of Property Rules, Coase and Intellectual Property*, 94 COLUM. L. REV. 2655, 2656 (1994) (describing the Coase Theorem as a system of allocating rights which permits transfer of rights to permit their highest-value use through private bargains).

267. See, e.g., *Bement v. Nat'l Harrow Co.*, 186 U.S. 70, 90-92 (1902) ("[T]he general rule is absolute freedom in the use or sale of rights under the patent laws of the United States."); *United States v. Studiengesellschaft Kohle, m.b.H.*, 670 F.2d 1122, 1127 (D.C. Cir. 1981).

268. See, e.g., *Cont'l Paper Bag*, 210 U.S. at 424-25.

a patent transfer be socially beneficial, economically efficient or allow for public access to the benefits of the invention.

Fundamentally, Kitch's theory envisions an inventor who undertakes efforts to manage resources, such as manufacturing, raising consumer interest in the product and resources necessary to finalize a commercial embodiment based on the patented invention, to maximize a patent's value.²⁶⁹ The benefits that flow from single stewardship of a broad patent granted early in the life of a patent do not necessarily flow where the patentee relinquishes that benefit to an entity engaged in licensing as a revenue generation model.²⁷⁰ The subsequent sale of the patent to an entity that does not itself engage in innovative activity is entirely attenuated from a patent system designed—to use Kitch's analogy—“for prospectors to pack their burros and walk off in the desert in search of mineralization.”²⁷¹ Kitch's prospect theory does not stretch far enough to justify the full range of rights afforded to those who purchase patents at an open market.

D. Summary of Liquid Patents and the Relation to Patent Theory

Liquid patents are geared to take financial advantage of rules that have stabilized and maximized patent protection in order to serve the overarching goals of innovation. Yet liquid patents do not serve—and in some cases act in contravention to—the policies developed by the courts and in the legal scholarship. While these rules may serve the goals of the patent system well in most instances, their application to permit profit-taking from using patents as assets is not supportable.

Patents raise the opportunity for strategic behavior²⁷² that does not always maximize social access to the fruits of inventive activity. An entity that seeks to license patents is interested in maximizing negotiating leverage against those who are commercializing products in order to obtain the maximum amount of licensing fees or damages in a lawsuit. Some of this behavior can adversely affect innovation by seeking to “tax” subsequent innovation with license fees that exceed an objective market licensing rate for the patent.²⁷³ Moreover, liquid patent holders can use their patents to threaten or even prevent entire areas of research while attempting to maximize their negotiating position.

269. See Kitch, *supra* note 248, at 276 (theorizing that ex ante benefit of a patent is that the right “puts the patent owner in a position to coordinate the search for technological and market enhancement of the patent’s value”).

270. This circumstance might occur where a patent is purchased solely to “hold up” one’s competitors or seeks to use the patent only to raise money through licensing revenue.

271. See Kitch, *supra* note 248, at 274.

272. See Merges, *supra* note 266, at 2659.

273. See *supra* text accompanying notes 32-46.

To the extent that patents are viewed as a system of regulation,²⁷⁴ the patent laws have not attempted to regulate liquid patent holders' strategic behavior. The disposition of post-grant patent rights are considered private rights which can be freely used to further the owner's—and not the public's—interest.²⁷⁵ Although in formation the patent right is fundamentally intended to benefit the public, post-grant uses of patents are generally deemed to be essentially free of regulation even when those rights are used in contravention to the public interest.

Proposed changes that would specifically target liquid patents conflict with the goal of uniformity that pervades the patent system. The patent as an immutable right has been entrenched in the U.S. patent system for the past two hundred years, and this circumstance has not been interfered with lightly. Modifications to the patentability standards or the ability to transfer patent rights create the possibility of interfering with favorable goals.

The patent laws currently consider the patentee's status primarily in determining remedies for patent infringement. A proposal that focuses on the remedies aspect of the patent statutes is therefore most consistent with the current structure of the patent system as a set of uniform rules. As liquid patent holders are primarily interested in maximizing licensing rates, a proposal for change that affects remedies may have the greatest potential effect on patent holders' negotiating conduct.²⁷⁶ Moreover, limiting the immunities that patent holders obtain under tort theories, such as the antitrust law, may serve to curb abuses of the patent system that are currently insulated from liability.

V. A PROPOSAL: USING PATENT REMEDIES AS A SOLUTION

A. Injunctive Relief

Before the recent case of *eBay Inc. v. MercExchange L.L.C.*²⁷⁷ was decided, as a general rule, a district court would issue a permanent injunction in patent cases that prohibited the future manufacture, import and sale of an infringing device after a judgment of infringement had been entered.²⁷⁸ At that time, the Federal Circuit noted that "courts have in rare instances exercised their discretion to deny injunctive relief in

274. See, e.g., Shubha Ghosh, *Patents and The Regulatory State: Rethinking the Patent Bargain Metaphor After Eldred*, 19 BERKELEY TECH. L.J. 1315, 1317 (2004).

275. See, e.g., Lemley, *supra* note 108, at 149 ("Individual companies are neither omniscient, pure-hearted, nor necessarily rational. Indeed, at best, they are out to line their pockets with as much money as they can find. No less a capitalist than Adam Smith warned us not to expect individual private companies to behave in the public interest.").

276. Cf. Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950, 950-52 (1979) (arguing that parties reach agreements in private ordering based on considerations on the alternatives that adjudication would likely award).

277. 126 S. Ct. 1837 (2006).

278. *MercExchange, L.L.C. v. eBay, Inc.*, 401 F.3d 1323, 1338 (Fed. Cir. 2005), *rev'd*, 126 S. Ct. 1837 (2006).

order to protect the public interest.²⁷⁹ A case had to be “sufficiently exceptional” to the degree that, as a practical matter, the discretion to deny injunctive relief was very rarely exercised.²⁸⁰

The general rule favoring injunctive relief was reversed in *eBay Inc. v. MercExchange L.L.C.*²⁸¹ In that case, the U.S. Supreme Court held that a patentee must satisfy the traditional test before a court would exercise its power to grant permanent injunctive relief.²⁸² In order to obtain a permanent injunction, the patentee must demonstrate:

- (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.²⁸³

By requiring courts to meaningfully apply this four-factor test, the *eBay* court severed the patent right to exclude from the previously held law that permanent injunctions nearly always and almost inevitably followed a judgment of infringement.

Justice Kennedy’s concurring opinion in the *eBay* case agreed that the well-established, four-factor test must be used to determine whether a permanent injunction should be granted against a defendant who has been found to have infringed a valid patent.²⁸⁴ Justice Kennedy’s concurrence proposed that the historic outcome that injunctive relief should be granted may be different now that “[a]n industry has developed in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees.”²⁸⁵ Justice Kennedy recognized that in those circumstances the patent “can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent.”²⁸⁶ Although Justice Kennedy singled out licensing entities as a potentially inappropriate case for permanent injunctive relief, Justice Kennedy’s opinion expressly rejected that such determinations should turn on “categorical rules.”²⁸⁷ Thus, Justice Kennedy’s opinion appears to reject any notion that *all* non-commercializing patentees be barred from permanent injunctive relief.

279. *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d at 1538, 1547 (Fed. Cir. 1995).

280. *MercExchange*, 401 F.3d at 1339.

281. *eBay*, 126 S. Ct. at 1841.

282. *Id.* at 1839.

283. *Id.*

284. *Id.* at 1842 (Kennedy, J., concurring).

285. *Id.* (Kennedy, J., concurring).

286. *Id.* (Kennedy, J., concurring).

287. *Id.* (Kennedy, J., concurring).

The *eBay* case presents an opportunity to solve part of the problem that liquid patents create—that is, the hold up problem that can prevent the implementation of subsequent invention and commercialization by others. Justice Kennedy’s concurrence should be adopted as an instructive example of how the majority opinion can be applied to liquid patents. As a practical matter, many liquid patent holders may have difficulty establishing a right to permanent injunctive relief now that *eBay* has shifted the legal standard. Primarily, liquid patent holders may have difficulty demonstrating irreparable harm, a critical element of the four-part test adopted by the *eBay* court.

Generally, irreparable harm is defined as an injury that cannot be compensated by monetary damages.²⁸⁸ Violation of the patent right alone is not irreparable harm, at least in the manner in which courts have defined that term in determining motions for preliminary injunctions.²⁸⁹ Companies can show irreparable harm by demonstrating an inability to calculate their injury by demonstrating, for example, a harmful impact to goodwill, erosion of a customer base or the diminishment of a competitive position in the marketplace.²⁹⁰ Liquid patent holders who do not sell product cannot establish any irreparable harm relevant to their competitive market position or lost customer base, because such companies have no market or customer base to protect. As the Federal Circuit has acknowledged in the context of considering preliminary injunctive relief, “[a]lthough a patentee’s failure to practice an invention does not necessarily defeat the patentee’s claim of irreparable harm, the lack of commercial activity by the patentee is a significant factor in the calculus.”²⁹¹

The remaining three factors of the *eBay* four-factor test are more fact-dependent and therefore the result may vary depending on the liquid patent holder’s conduct. For example, a liquid patent holder’s willingness to license has been viewed to demonstrate that an adequate remedy at law exists.²⁹² As for the balance of the parties’ hardships, an infringing product that brings significant public benefits may be found to outweigh a non-producing patentee’s interest in enforcement through injunction.²⁹³ Similarly, if a liquid patent holder can be made whole with

288. See, e.g., *Dominion Satellite, Inc. v. Echostar Satellite Corp.*, 356 F.3d 1256, 1257-58 (10th Cir. 2004).

289. *Reebok Int’l Ltd. v. J. Baker, Inc.*, 32 F.3d 1552, 1557 (Fed. Cir. 1994) (rejecting argument that harm to the patent right to exclude constitutes irreparable harm); *Ill. Tool Works, Inc. v. Grip-Pak, Inc.*, 906 F.2d 679, 683 (Fed. Cir. 1990) (“Application of a concept that every patentee is always irreparably harmed by an alleged infringer’s pretrial sales would . . . disserve the patent system.” (emphasis omitted)).

290. *Dominion*, 356 F.3d at 1261.

291. *High Tech Med. Instruments v. New Image Indus. Inc.*, 49 F.3d 1551, 1556 (Fed. Cir. 1995).

292. *T.J. Smith & Nephew Ltd. v. Consolid. Med. Equip., Inc.*, 821 F.2d 646, 648 (Fed. Cir. 1987) (licensing is “incompatible with the emphasis on the right to exclude that is the basis for the presumption” of irreparable harm).

293. See *MercExchange, L.L.C. v. eBay, Inc.*, 275 F. Supp. 2d 695, 714 (E.D. Va. 2003) (“[I]n a case such as this, the public does not benefit from a patentee who obtains a patent yet declines to

licensing fees awarded in the form of monetary relief, a court may be reluctant to hold that the balance of hardships warrants an injunction.

As for the public interest factor, courts are generally reluctant to assist a defendant who has been adjudged an infringer. This is because the public interest is generally considered to favor relief for those whose valid patent rights have been violated, and an injunction might be viewed as integral to the reward theory's encouragement of invention and disclosure. However, a patentee who does not make or sell any product cannot establish that the patent system's interests have been served.

eBay's requirement for an individualized assessment of the parties' positions will necessarily ask courts to examine the liquid patent holder's position in relation to the patent system and the public, both as a general matter and within the specific factual circumstances of the case. Liquid patent holders are likely to encounter significant impediments to permanent injunctive relief. If Justice Kennedy's guidance is adopted in the lower court's application of the *eBay* case, liquid patent holders will not have the threat of injunction as a negotiation tool.

B. Monetary Remedies

1. Background: Money Damages Under the Patent Act

According to the patent statute, "[u]pon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement"²⁹⁴ A key term in the statutory language is "compensate."²⁹⁵ Section 284 was enacted to "ensure that the patent owner would in fact receive full compensation for 'any damages' he suffered as a result of the infringement."²⁹⁶

Monetary compensation includes the patentee's lost profits, a reasonable royalty, or a combination of both. A patentee can establish recovery for lost profits by demonstrating that the infringing products or services resulted in the patentee's loss of earnings.²⁹⁷ The fundamental

allow the public to benefit from the inventions contained therein."), *rev'd*, 401 F.3d 1323 (Fed. Cir. 2005), *rev'd*, 126 S. Ct. 1837 (2006).

294. 35 U.S.C.A. § 284 (West 2006).

295. *Id.*

296. *Gen. Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654-55 (1983). A patentee may also seek damages for infringement for up to three times the damages award. 35 U.S.C.A. § 284; *see, e.g., Transclean Corp. v. Bridgewood Serv. Inc.*, 290 F.3d 1364, 1377-78 (Fed. Cir. 2002). In addition, a patentee obtains attorney fees, prejudgment interest and costs under certain circumstances. 35 U.S.C.A. §§ 284, 285 (West 2006).

297. Typically, patentees demonstrate lost profits by relying on the test in *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152 (6th Cir. 1978). To meet the *Panduit* test, "a patent owner must prove: (1) demand for the patented product, (2) absence of acceptable non-infringing substitutes, (3) [its] manufacturing and marketing capability to exploit the demand, and (4) the detailed profit he would have made." *Id.* at 1156. A patentee does not need to demonstrate these factors with absolute certainty, but rather a reasonable probability that such sales would have been made absent infringement. *Rite-Hite*, 56 F.3d at 1545. Polaroid's burden of proof on the lost profits is not absolute, but one of "reasonable probability." *Id.* To obtain lost profits, a patentee does not

question for determining whether a patentee can obtain lost profits is whether the patentee can demonstrate with reasonable probability that, but for the infringement, the patentee would have made the sales that were made by the infringer.²⁹⁸

As liquid patent holders do not sell product, the more realistic means of recovery is a reasonable royalty, which also derives from section 284. This section explains that “[u]pon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, *but in no event less than a reasonable royalty for the use made of the invention by the infringer . . .*”²⁹⁹ Typically, a patentee who has never commercialized a product will be in a poor position to demonstrate lost profits.³⁰⁰ This provision was enacted to “ensure that the patent holder would in fact receive full compensation for ‘any damages’ he suffered as a result of the infringement.”³⁰¹ The inquiry to find reasonable royalty consists of two steps: 1) determination of a reasonable compensation base, i.e., the total value of the infringing items on which the patentee is entitled to royalty payments; and 2) determination of a reasonable royalty rate to apply to that compensation base.³⁰²

To determine the royalty rate, courts consider evidence from a number of sources. These include a fifteen-factor test from the *Georgia Pacific* case, otherwise known as the *Georgia Pacific* factors.³⁰³ The most salient portions of the *Georgia Pacific* test are the prior license rates obtained by the licensee, the commercial relationship between the patentee and the infringer, and the market rate for the patented invention that the parties would have reached if a rate had been negotiated between them.³⁰⁴ All factors do not need to be considered in every case, but rather fact finders have discretion to consider those that the court deems most relevant.³⁰⁵ Generally, a very important factor in this inquiry is the hypo-

need to prove that the patentee’s product incorporates the asserted patent, so long as the patentee’s product competes with the infringing product. *Id.* at 1548-49.

298. *Id.* at 1545.

299. 35 U.S.C.A. § 284 (emphasis added).

300. *Rite-Hite*, 56 F.3d at 1548 (“Normally, if the patentee is not selling a product, by definition there can be no lost profits.”). *But see* *King Instruments Corp. v. Perego*, 65 F.3d 941, 944 (Fed. Cir. 1995) (holding that a patent holder who did not practice the patent could recover lost profits where both parties marketed competing tape loading machines that that court found sufficient related to the patented technology for tape reel changing assembly). Specifically, the Federal Circuit affirmed a district court finding that the patentee would have made sales of the patentee’s machine absent infringement by the defendant. *Id.* at 953.

301. *Devex*, 461 U.S. at 654-55.

302. *See generally* *Gargoyles, Inc. v. United States*, 113 F.3d 1572, 1581 (Fed. Cir. 1997) (affirming trial court’s use of royalty rate multiplied by a royalty base).

303. *See, e.g.*, *TWM Mfg. Co., v. Dura Corp.*, 789 F.2d 895, 899 (Fed. Cir. 1986). The test derives from *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified and aff’d*, 446 F.2d 295 (2d Cir. 1971), *cert. denied*, 404 U.S. 870 (1971).

304. *Georgia-Pacific Corp.*, 318 F. Supp. at 1120.

305. *TWM Mfg. Co.*, 789 F.2d at 899 (affirming reasonable royalty and rejecting the argument that the calculation method was flawed due to the special master’s determination not to analyze all of the *Georgia Pacific* factors).

thetically negotiated rate between the parties.³⁰⁶ Despite the fact that the fundamental purpose of patent damages is compensation for the patentee, the reasonable royalty test contains no linguistic tether to the patentee's actual harm.

2. Disparities between Patent Value and the Value of a Liquid Patent

a. The Problem of Using Patent Purchase Prices In Litigation

One misconception that relates to liquid patents is whether price paid for the patent equates to the liquid patent holder's damages. This error fails to appreciate the theoretical distinction between the two. Patent damages represent compensation for harm suffered by the patentee for the infringer's use of the invention in a particular product, process or method.³⁰⁷ Because patent damages have a causative requirement, recovery for patent infringement is necessarily the specific harm from the use of a particular patent *in a particular infringing device*.³⁰⁸ That is, the right to recover for patent infringement measures the right of the patent holder to recover as against one particular party, the infringer, as that patent is being used in the infringer's products.³⁰⁹ By contrast, market prices represent an amount paid for an entire patent right separate and apart from the context of actual use.

This issue becomes significant because liquid patent purchasers who seek to exploit patents as commodities may base the potential value of the patent on licensing expectations drawn from anticipated jury awards. A court's acceptance of the purchaser's assumptions of the patent's value as correlative of an appropriate liability amount would both usurp the jury's role and create an unfortunate echo effect of the buyer's expectations of a patent's value influencing the measure of their own

306. *Rite-Hite*, 56 F.3d at 1554.

307. *Id.* In this case, the Federal Circuit explained the modern formulation of compensation under the patent statute. The *Rite-Hite* court emphasized that compensation for harm to the patentee was the fundamental purpose of the patent damages statute. *Id.* at 1544-45. The court found that damages required a causative relation between the infringement and the patentee's harm. See Paul E. Strand, *Back to Bedrock: Constitutional Underpinnings Set "New" Standards for Patent Infringement Causation*, 8 B.U. J. SCI. & TECH. L. 375, 392 (2002).

308. See *Riles v. Shell Explor. & Prod. Co.*, 298 F.3d 1302, 1311 (Fed. Cir. 2002); *TWM Mfg. Co.*, 789 F.2d at 901 (calculating damages separately based on the particular point in time at which the infringing act occurred). This rule has been expanded by the Federal Circuit's reading of the entire market value rule, as well as the court's willingness to permit recovery for bundled and conveyed sales into the base figure of a reasonable royalty award for damages. Amy L. Landers, *Let the Games Begin: Incentives to Innovation in the New Economy of Intellectual Property Law*, 46 SANTA CLARA L. REV. 307, 356-62 (2006); see also *Union Carbide Chem. & Plastics Tech. Corp. v. Shell Oil Co.*, 425 F.3d 1366, 1378 (Fed. Cir. 2005).

309. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 508 (1964). Patent holders can recover only nominal damages if the infringer's use causes no actual harm to the patentee. *Aro Mfg. Co.*, 377 U.S. at 510.

harm. This result interferes with the objective standards by which liability rules operate.³¹⁰

Further, a patent purchaser's expectations of value may not reflect the patent's actual market value. For example, patents obtained at a liquidation bankruptcy or from a distressed company may have prices that fail to represent the full potential value of the invention.³¹¹ A bankruptcy trustee or individual responsible for the transfer may not have sufficient experience with technology assets or sufficient contacts to maximize the asset's value.³¹²

The price paid for a liquid patent may be of limited usefulness in a damages award, as the circumstances of the patent's acquisition and ultimate use of the patented invention play an important role.³¹³ The purpose of providing compensation for the patentee's harm may not be served with reference to the price paid by the liquid patent holder.

b. The Problem of Using Patent Auction Pricing in Litigation

Just as there are misconceptions surrounding the effect of a patent's purchase price on monetary damages, patent auctions have been erroneously argued to represent an objective measure of a liquid patent's licensing value:

In an auction, the determination of the fair price of the patent will not be the blind man's bluff exercise that often characterizes two-party negotiations, where neither party knows exactly what the other side is willing to accept and where both therefore risk either overpaying or underselling. In an open auction, the true value of the patent can be measured by the interest of multiple buyers. The seller can gauge the market value of his patent in the bidding process and the buyers can gauge the behavior of rival buyers.³¹⁴

An examination of these assumptions demonstrates that the dynamics of auctions do not deliver the same results as a negotiated royalty. This issue is significant because the patent holder may seek to pin the

310. Calabresi & Melamed, *supra* note 88, at 1107-08 (noting that liability awards are based on objective measures and that "there is no reason to believe that a market, a decentralized system of valuing, will cause people to express their true valuations and hence yield results which all would in fact agree are desirable").

311. David E. Leta & James H. Jones, *Valuing Intangible Assets in Bankruptcy Cases*, 18 UTAH B.J. 22, 22 (2005) ("In general, an intangible asset will have the highest value when it is being used in the business that created the asset, rather than when it is being sold apart from that business.").

312. Ronald J. Mann, *An Empirical Investigation of Liquidation Choices of Failed High Tech Firms*, 82 WASH. U. L.Q. 1375, 1390-92 (2004).

313. See, e.g., *Integra Life. I, Ltd. v. Merck KGaA*, 331 F.3d 860, 871 (Fed. Cir. 2003) (amended December 3, 2003), *rev'd on other grounds*, 545 U.S. 193 (2005) (recognizing that where the purchase price of an entire company was \$20,000,000, "[a] \$15,000,000 award figure to compensate for infringement of only some of [the patent owner's] patents before [the] acquisition seems unbalanced in view of the overall acquisition price").

314. Evans & Dolin, *supra* note 51.

patent's actual value to the auction price. Secondly, the patentee may attempt to license the patent based on the price paid at auction. Further, the liquid patent holder may argue that the auction price represents a significant figure for purpose of setting a damage award. However, there are a number of reasons why an auction price varies from each of these.

For example, the number of bidding parties at auction influences price, while bargaining power tends to be more significant in a two-party negotiation.³¹⁵ Competition among a number of bidders tends to drive prices higher at auctions when compared with prices resulting from two-party negotiations.³¹⁶ Moreover, it has been recognized that an auction winner is not the bidder who paid *market value* but rather the bidder with the *highest estimated value* for common value items, a phenomenon known as the "winner's curse."³¹⁷ This factor is difficult to quantify, as the price differential associated with the winner's curse varies with the structure of the auction and the sophistication of the bidder.³¹⁸

The auction value paid may also vary due to an individual bidder's circumstances, such as his or her ability to learn from the information disclosed during an open auction, and the bidder's attitudes toward taking risks more generally.³¹⁹ Research on the effect of emotions on bidding behavior is in a nascent stage, one recent study has introduced the emotional state of the bidder as another factor that affects bidding behavior.³²⁰ This study was based on a controlled experiment found that bid-

315. Jeremy Bulow & Paul Klemperer, *Auctions Versus Negotiations*, 86 AM. ECON. REV. 180, 180 (1996) (study analyzing auctions for the sale of a company).

316. See Paul Milgrom, *Auctions and Bidding: A Primer*, 3 J. ECON. PERSP. 3, 19 (1989).

[W]hen a seller employs an English auction to sell an item worth \$100 to himself to a pair of potential buyers with reservation values of \$170 and \$200, the equilibrium theory suggests that the sale will occur at \$170. Not only is the result efficient, but the seller gets a good price: By bargaining singly with the \$200 evaluator, the seller can at best hope to split the gains, getting a price at \$150

Id. (citation omitted).

317. Paul R. Milgrom & Robert J. Weber, *A Theory of Auctions and Competitive Bidding*, 50 ECONOMETRICA 1089, 1094 (1982). Most literature finds that the winner's curse does not exist for purely private value auctions, because bidder evaluations for such auctions are inherently individualized and therefore it cannot be said that one overpaid relative to an objective price. See, e.g., Robert C. Marshall & Michael J. Meurer, *Bidder Collusion and Antitrust Law: Refining the Analysis of Price Fixing to Account for the Special Features of Auction Markets*, 72 ANTITRUST L.J. 83, 95 (2004).

318. Dan Levin, et. al., *Revenue Effects and Information Processing in English Common Value Auctions*, 86 AM. ECON. REV. 442, 442-43 (1996); see also Marshall & Meurer, *supra* note 317, at 95 ("A sophisticated bidder avoids the winner's curse by recognizing that winning means all other bidders received less favorable signals, so she should adjust her expected valuation and bid accordingly.").

319. See John H. Kagel & Dan Levin, *The Winner's Curse and Public Information in Common Value Auctions*, 76 AM. ECON. REV. 894, 912 (1986) (noting that some bidders who adopted more aggressive bidding strategies were more successful than others, suggesting that bidders' attitudes toward risk and individual abilities toward processing information were important to auction outcomes).

320. Ronald Bosman & Arno Riedl, *Emotions and Economic Shocks in a First-Price Auction: An Experimental Study*, Tinbergen Institute Discussion Paper No. 2003-056, 1 (May 2003), available at <http://ssrn.com/abstract=417660>.

ders who were in a negative emotional state tended to increase their bid amounts.³²¹ The authors concluded, “emotions influence behavior of economic agents in a non-trivial way, even in competitive environments [such] as first-price auctions.”³²²

Prices obtained at an auction may vary from the market price for other reasons, including either explicit or implicit collusion among bidders or predatory behavior.³²³ One famous example involves the auction of ten blocks of spectrum sold by Germany in 1999,³²⁴ where two parties used signals embedded in bid amounts to divide a market between them.³²⁵ Such collusion may be difficult to detect, as an auction seller may not wish to police collusion by eliminating bidders because seller may be in a better position by keeping more bidders in the auction even if a depressed price is expected to result from the collusive activity.³²⁶ Thus, the effect of collusion may cause an effect on the patent price that makes calibration to the patent’s actual licensing value difficult to measure.

Prices set at auction may vary significantly for a number of reasons unrelated to an objective market measure of the good that is the subject of the auction, or as measured by a negotiated rate between the parties. The statement that “the true value of the patent can be measured by the interest of multiple buyers”³²⁷ fails to consider the full complexity that underlies auction pricing.

3. Compensation for Patent Infringement: Innovating Patentees and Liquid Patent Holders

One reason that the damages calculation presents an appropriate place for proposed changes is that damages focus precisely on the patentee. Proposed changes to the damages rules are also appropriate because some of the potential for harm to invention and innovation concern

321. *Id.* at 17.

322. *Id.* at 18.

323. Paul Klemperer, *Collusion and Predation in Auction Markets* 1 (February 2001 draft), available at <http://ssrn.com/abstract=260188>.

324. *Id.* at 2-3.

325. *Id.* In that instance, Germany set a rule that new bids on a block of spectrum had to exceed the previous high bid by at least 10 percent. *Id.* One company, Mannesman, submitted a high first bid on blocks 1-5 of 18.18 million deutschmarks per megahertz and 20 million on blocks 6-10. As one economist explains:

[t]he point . . . is that 18.18 plus a 10% raise equals 19.998 ≈ [approximately] 20. It seems T-Mobil understood that if it bid 20 million [deutschmarks] on blocks 1-5, but did not bid again on blocks 6-10, the two companies would then ‘live and let live’ with neither company challenging the other on ‘the other’s’ half. Exactly that happened.

Id. One of T-Mobile’s managers confirmed, “There were no agreements with Mannesman. But [T-Mobile interpreted] Mannesman’s first bid was a clear offer.” *Id.*

326. Klemperer, *supra* note 323, at 5 (noting a government seller that took no action against collusive bidding because the seller was afraid to reduce the number of potential bidders). The U.S. Department of Justice has expressed concerns about collusive bidding. See Marshall & Meurer, *supra* note 317, at 83 (noting the antitrust community’s lack of attention to auction collusion).

327. Evans & Dolin, *supra* note 51.

a liquid patent holder's ability to use strategies to increase licensing rates above the market. As illustrated by the comparison of two cases—*Polaroid Corp. v. Eastman Kodak*³²⁸ and *MercExchange LLC v. eBay Inc.*³²⁹—there is a distinction between the nature of the harm suffered by a patentee who commercialized a patented invention and the owner of a liquid patent.

a. *Polaroid v. Kodak*: The Nature of A Commercializing Patentee's Harm

Polaroid's patent infringement case against Kodak³³⁰ provides a useful illustration of a case involving an innovating patent holder. Polaroid filed suit against Kodak, who was found to have infringed twenty claims of seven patents that the court determined incorporated instant photography as implemented by both parties.³³¹ Polaroid sought damages on the two available damages theories—lost profits and a reasonable royalty.

Polaroid's case represents the paradigmatic case for the reward and prospect policies embodied in the patent laws. Polaroid's technology was developed by the company's founder, Edwin H. Land,³³² who obtained his first patent in the field in 1933.³³³ Upon the introduction of product to the market in 1948, "[i]nstant photography created a sensation"³³⁴ At that time, the technology was relatively crude. After taking a picture, end users had to pull out a positive and negative "sandwich" packet from the camera.³³⁵ The end user then had to separate the sandwich by peeling the negative away, to reveal a monotone, sepia-colored photograph.³³⁶

As Kitch's prospect theory might have foretold, Polaroid continued to innovate in the instant photography field and ultimately developed an "elegant, highly sophisticated camera and film system" such that "[t]he photographer needs to do nothing but focus the camera and expose the film to obtain a finished print."³³⁷ Polaroid continued to obtain patent improvements, some of which were asserted against Kodak in the law-

328. No. 76-1634-MA, 1990 U.S. Dist. LEXIS 17968 (D. Mass. Oct. 12, 1990, corrected Jan. 11, 1991).

329. 275 F. Supp. 2d 695 (E.D. Va. 2003), *aff'd in part, rev'd in part on other grounds*, 401 F.3d 1323 (Fed. Cir. 2005), *rev'd on other grounds*, 126 S. Ct. 1837 (2006).

330. *Polaroid Corp.*, 1990 U.S. Dist. LEXIS 17968.

331. *Id.* at *1.

332. *Id.* at *12.

333. *Polarizing Refracting Bodies*, U.S. Patent No. 1,918,848 (filed Apr. 26, 1929) (issued July 18, 1933).

334. *Polaroid Corp.*, 1990 U.S. Dist. LEXIS 17968, at *12.

335. *Polaroid Corp. v. Eastman Kodak Co.*, 641 F. Supp. 828, 830 (D. Mass. 1985) (describing the earliest versions of the technology).

336. *Polaroid Corp.*, 641 F. Supp. at 830.

337. *Id.* at 831.

suit.³³⁸ Consistent with the reward incentive, Polaroid enjoyed market exclusivity from 1948 until Kodak entered the market in 1976.

Beginning in 1969, Kodak began research and development efforts for an instant photography system for projected entry into the market in 1976.³³⁹ Several parallel projects were pursued with at least one project becoming abandoned after Kodak spent as much as \$94 million dollars in research and development.³⁴⁰ Kodak purchased large quantities of Polaroid's products, and ordered several groups to familiarize themselves with Polaroid's technology.³⁴¹ In September 1973, Kodak's Development Committee stated that Kodak's "development should not be constrained by what an individual feels is potential patent infringement."³⁴² Kodak ultimately entered the market with a series of simple cameras that sold at a lower price range than Polaroid's more sophisticated versions.³⁴³

After Kodak was found to have infringed Polaroid's patents, Polaroid asserted that Kodak's entry into the market had forced a price war, that Polaroid had been forced to change business strategy to prioritize lower-priced cameras to hold market share against Kodak's inexpensive products, and that Polaroid was unable to raise prices based on the fear that the market would tip in Kodak's favor.³⁴⁴ After reviewing substantial evidence submitted by the parties, the court found that Polaroid lost profits of over \$248 million.³⁴⁵ In addition, the court awarded a reasonable royalty of ten percent of Kodak's sales and prejudgment interest for a total award of over \$870 million.³⁴⁶

Kodak's infringement harmed Polaroid in a number of ways. Polaroid's right to exclude under the patent right was being violated by Kodak. Polaroid had incurred significant research and development costs for the technology at issue, building on work since the company had been founded several decades earlier.³⁴⁷ In addition, Polaroid suffered direct market harm by lost sales to Kodak as a competitor.³⁴⁸ Polaroid also claimed that its "historical business practices, and the sensible business direction it would have taken, was altered and diverted because it had to respond to Kodak's entry into the instant photography mar-

338. *See id.* at 830 (describing the patents at issue).

339. *Id.* at 831.

340. *Id.*

341. *Id.* at 832.

342. *Id.*

343. *Polaroid Corp.*, 1990 U.S. Dist. LEXIS 17968, at *17.

344. *See id.* at *28-30.

345. *Id.* at *208.

346. *Id.* at *220, 246; *see also* *Polaroid Corp. v. Eastman Kodak Co.*, No. 76-1364-MA, 1991 U.S. Dist. LEXIS 344, at *12 (D. Mass. Jan. 11, 1991) (noting the corrected final judgment amount).

347. *See Polaroid Corp.*, 1990 U.S. Dist. LEXIS 17968, at *183.

348. *See id.* at *20-21.

ket.”³⁴⁹ Polaroid further argued that Kodak had waged a price war that in turn forced Polaroid to reduce prices for its products.³⁵⁰

b. *MercExchange, L.L.C. v. eBay, Inc.*:³⁵¹ The Nature of a Liquid Patent Holder’s Harm

MercExchange, L.L.C. v. eBay, Inc. provides an opportunity to examine the damage positions of a liquid patent holder. MercExchange technology concerned particular methods for purchasing on the internet.³⁵² The patent was developed by MercExchange’s founder, Thomas Woolston, an electrical engineer and patent attorney.³⁵³ Woolston filed his first patent application in April 1995, which was the parent of the patent asserted against eBay in the lawsuit.³⁵⁴ Woolston invented his system to use in a business that would practice his invention.³⁵⁵ MercExchange developed a business plan, sought capital and hired employees to put the patents into practice.³⁵⁶ In addition, MercExchange sought to license the patents,³⁵⁷ including through discussions with eBay.³⁵⁸ In 2000, it became clear to MercExchange that it lacked the capital to commercialize its inventions.³⁵⁹

MercExchange filed suit against eBay, a successful Internet company, and two other entities alleged to be using MercExchange’s technology.³⁶⁰ At trial, these defendants were held to have willfully infringed MercExchange’s patent.³⁶¹ Despite the Schumpeterian view that “[a]s long as they are not carried into practice, inventions are economically irrelevant,”³⁶² the trial court entered judgment for \$29.5 million in favor of MercExchange.³⁶³ The amount awarded by the jury was three times higher than the figure proposed by MercExchange’s expert.³⁶⁴

349. *Id.* at *29.

350. *Id.*

351. 275 F. Supp. 2d 695 (2003), *aff’d in part, rev’d in part on other grounds*, 401 F.3d 1323, 1339–40 (Fed. Cir. 2005), *rev’d on other grounds*, 126 S. Ct. 733 (2006).

352. Brief for Respondent at 2, *eBay Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837 (2006) (No. 05-130).

353. *Id.* at 1.

354. *Id.*

355. *Id.* at 3.

356. *Id.*

357. *Id.*

358. *Id.*

359. *Id.* at 4.

360. *Id.* at 4, 29.

361. *Id.* at 6. The U.S. Supreme Court vacated a permanent injunction against eBay and remanded the case, directing the trial court to consider equitable principles in determining whether such relief was appropriate in the case. *eBay Inc.*, 126 S. Ct. at 1841.

362. See Julie S. Turner, *The Nonmanufacturing Patent Owner: Toward a Theory of Efficient Infringement*, 86 CAL. L. REV. 179, 188 (1998) (quoting JOSEPH A. SCHUMPETER, *THE THEORY OF ECONOMIC DEVELOPMENT* 88–89 (Redvers Opie trans., Harvard Univ. Press 1951)).

363. *MercExchange*, 275 F. Supp. 2d at 722.

364. *Id.* at 709.

The difference between the economic harm that Polaroid suffered compared to the type of harm suffered by MercExchange lies in the critical details of each plaintiff's position. Unlike Polaroid, MercExchange did not lose sales because MercExchange did not sell any product or provide any selling service relating to the patent. Rather, MercExchange's sole use of the patent was to license the patent to infringers.³⁶⁵ The argument that lost profits should be recoverable because the infringer effectively prevented the patentee's ability to enter the market was not at issue in the *MercExchange* case. Likewise, MercExchange did not argue that eBay's infringement prevented MercExchange's ability to obtain the financing necessary for MercExchange to commercialize. Rather than pursuing such theories, MercExchange sought a reasonable royalty and damages for willful infringement.³⁶⁶ MercExchange also took the position that eBay's infringement made licensing to others more difficult.³⁶⁷

In short, the type of harm that MercExchange suffered was different in kind than that suffered by Polaroid. Although both MercExchange and Polaroid developed technology, unlike Polaroid MercExchange was not harmed by the infringement with respect to costs relating to the creation of a market, lost sales to a competitor or by losing the costs to develop and commercialize a product. MercExchange did not suffer competitive harm.

There are a number of sound reasons why patentees do not commercialize their inventions.³⁶⁸ As with the patentee in the *MercExchange* case, the inventor may lack sufficient financial resources to bring the patented idea to the market. The patent may be targeted to a market that has not sufficiently developed to support manufacture and sale. There may be implementation problems for the commercial application of the idea. A patent holder may determine that licensing the patent is more profitable or poses fewer risks than commercialization. Under patent law, there is no question that compensation for non-commercialized patents is available.³⁶⁹

However, the case law has not clearly defined the analysis to sufficiently compensate harm from infringement of liquid patents. As a lost

365. Brief for Respondent, *supra* note 352, at 4.

366. See *MercExchange*, 275 F. Supp. 2d at 718.

367. Brief for Respondent, *supra* note 352, at 4.

368. Roger D. Blair & Thomas F. Cotter, *Rethinking Patent Damages*, 10 TEX. INTELL. PROP. L.J. 1, 75-76 (2001). This article cites the following: (1) the invention is not commercially viable, due to circumstances such as lack of demand, cost, lack of financing, inability to develop a marketable embodiment, or underestimation of its commercial value; (2) the technology is commercially viable but less promising than other technologies the patent owner is investigating; (3) the technology lacks commercial applications within the area of the patent owner's expertise; (4) the patent owner has been unable to find a willing licensee to commercialize the patent; and (5) the patent owner resists commercialization, because the new invention would compete against some other product the patent owner currently markets. *Id.*

369. *King Instruments*, 65 F.3d at 949.

profits analysis is unlikely to apply to an entity that is solely devoted to licensing, the relevant standard for damages for infringement of a liquid patent is reasonable royalty.³⁷⁰ Both the U.S. Supreme Court and the Federal Circuit agree that patentee compensation is the fundamental purpose of patent damages.³⁷¹ In short, "while the statutory text states tersely that the patentee receive 'adequate' damages, the Supreme Court has interpreted this to mean that 'adequate' damages should approximate those damages that will fully compensate the patentee for infringement."³⁷² However, there is no test which assists the lower courts in determining how much a violation of the patent right—in the abstract and without any related market harm—is worth. Further, and somewhat curiously, no *Georgia Pacific* factor asks the fact finder to consider the type or extent of the patentee's harm although this is the fundamental statutory purpose of section 284.³⁷³

Both the U.S. Supreme Court and the Federal Circuit have recognized that damages must have a *causative relation* to the harm suffered by the patentee to the damages awarded.³⁷⁴ Yet the *Georgia Pacific* factors, which represent the fundamental test for reasonable royalty damages, do not contain *any* causative requirement.

Where both parties are competitors that innovate and sell products, the absence of considerations, such as the nature of the patentee's harm from the *Georgia Pacific* factors creates little difficulty. Just as Polaroid's right to exclude was accompanied by actual harm to Polaroid's efforts to commercialize instant photography, many patentees suffer harm to business in a measurable, tangible way when encountering infringing competitors even though such harm is not compensable as lost profits under section 284.

At present, the reasonable royalty test does not include a concrete framework for differentiating between the types of harms suffered by liquid patent holders from those patentees who have undertaken the expense and risk of innovation and commercialization. A jury is given no criteria to measure harm that flows from the violation of the right to exclude in isolation. Yet it is precisely this violation that is at stake when a liquid patent is asserted in litigation. Creating a method to quantify such

370. See *supra* text accompanying note 299.

371. See, e.g., *Devex*, 461 U.S. at 653–54; *Rite-Hite*, 56 F.3d at 1544–45.

372. *Rite-Hite*, 56 F.3d at 1545.

373. See 35 U.S.C.A. § 284 (West 2006).

374. *Aro Mfg. Co.*, 377 U.S. at 507 (The question to be asked in determining damages is "how much had the Patent Holder and Licensee suffered by the infringement. And that question [is] primarily: had the Infringer not infringed, what would the Patentee Holder-Licensee have made?") (quoting *Livesay Window Co. v. Livesay Industries, Inc.*, 251 F.2d 469, 471 (5th Cir. 1958); see also *Rite-Hite*, 56 F.3d at 1545.

harm would permit more accuracy in jury awards, and would also provide parameters for licensing discussions with liquid patent holders.³⁷⁵

4. Proposal for Modifications: Addressing Monetary Damage Awards for Infringement of Liquid Patents

Proposals to change the patent system to accommodate the practices of liquid patent holders fit within the contours of existing law for patent damages. The damages calculation, which is directed to compensate harm to the patentee, should specifically consider the patent owner's use and exploitation of the patent. The following proposals are therefore appropriate for the damages calculation for a liquid patent.

- a. Fact finders should expressly consider the nature of the harm to the patentee.

The patent holder should outline the nature of the harm that is suffered, consistent with the acknowledged statutory purpose of 35 U.S.C. section 284. Currently, both innovating patentees and liquid patent holders may seek reasonable royalty recovery under the general rubric of the *Georgia Pacific* test.³⁷⁶ However, the nature of the harm suffered by each may be quite different in kind, as one who undertakes the risk and expense of innovation is likely to suffer different harm than one who purchases a patent. The *Georgia Pacific* test should be modified to expressly require patentees to identify the nature of the harm that has been suffered.

Additionally, the patentee should identify the causative relation between the amount sought to recover for infringement and the harm suffered by the patentee. Thus, those patentees who have been precluded from entering the market by an infringer are likely justified in seeking a higher royalty award than those who have made an independent decision to refrain from commercialization independent of any conduct of the infringer.

This proposal should not suppress royalty awards, as one would expect the owner of a very valuable liquid patent to obtain a substantial royalty award based on the infringer's use. If the patentee's harm is based on the infringer's failure to take a license, the standard is intended to focus the fact finder's attention on the effect of that conduct on the patentee.

375. Cf. Mnookin & Kornhauser, *supra* note 276, at 950–51 (arguing that parties reach agreements in private ordering based on considerations on the alternatives that adjudication would likely award).

376. See *Georgia-Pacific Corp.*, 318 F. Supp. at 1116.

- b. If the harm to the right to exclude a liquid patent is infringer's failure to take a license, the parties should proffer a proposed royalty rate that does not depend on the availability of a mandatory injunction against future infringement.

Until *eBay Inc. v. MercExchange, L.L.C.*³⁷⁷ was decided by the U.S. Supreme Court in 2006, the Federal Circuit applied a "general rule that courts will issue permanent injunctions against patent infringement absent exceptional circumstances."³⁷⁸ As a practical matter, permanent injunctions were routinely granted in the district courts after a finding of patent infringement.³⁷⁹

Historical license rates have been skewed upward by the practice that patent holders have been able to threaten to shut down production with these nearly automatic injunctions that would prevent their licensee targets from selling any future products.³⁸⁰ The widespread and certain availability of a permanent injunction in patent cases permitted patent holders to hold out and negotiate royalty rates that exceed the value of the patented invention.³⁸¹ Under those circumstances, patent owners were overcompensated for the inventions, particularly in those cases where the invention covered only a portion of the accused device or process.³⁸²

Negotiated royalties established under the threat of the entry of an automatic permanent injunction have been subject to the hold out effect. At the same time, the reasonable royalty damages calculation favors a rate based on historical licensing rates to the extent that such rates exist.³⁸³ To the extent that a patentee has had the benefit of licensing negotiation leverage based on the ready availability of injunctive relief, the established royalty should be discounted to reflect the patentee's harm.

377. 126 S. Ct. 1837 (2006).

378. *Id.* at 1839 (quoting *MercExchange, L.L.C. v. eBay, Inc.*, 401 F.3d 1323, 1339 (Fed. Cir. 2005)).

379. See Brief Amici Curiae of 52 Intellectual Property Professors in Support of Petitioners at 2, *eBay Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837 (2006) (No. 05-130) (noting the trend toward the automatic entry of an injunction in patent cases).

380. *eBay Inc.*, 126 S. Ct. at 1842 (noting that for licensing entities, "an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent") (Kennedy, J., concurring).

381. Carl Shapiro, *Injunctions, Hold Ups and Patent Royalties*, Aug. 2006, <http://faculty.haas.berkeley.edu/shapiro/royalties.pdf> ("Royalty over-charges are greatest for weak patents covering patented features that offer minor contributions to complex products sold at prices well above margin cost.").

382. *Id.* at 1 ("The principal finding in this paper is that the current U.S. patent system systematically overrewards the owners of weak patents, especially in the information technology sector where a single product can incorporate many patented features.").

383. *Rite-Hite*, 56 F.3d at 1554 ("The royalty may be based upon an established royalty, if there is one, or if not, upon the supposed result of hypothetical negotiations between the plaintiff and defendant.").

The patent holder's ability to hold out based on the threat of an permanent injunction under the former law should not supersede the fundamental purpose of the damages statute, which is to provide the patentee with compensation for harm.

- c. The amount paid for the patent by the patent holder should not be determinative of the royalty rate for infringement in the litigation.

As detailed above,³⁸⁴ the amounts paid by a patentee have limited assistance in determining the current value of a patent or in setting the measure of a patentee's harm. The circumstances and dynamics of the acquisition should be examined to determine whether the patent holder paid a price that is informative of the patent's fair market value.

Further, 35 U.S.C. section 284 dictates that damages be awarded "adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer..." This statutory language puts a clear focus on an examination of the patent as implemented in the infringing product. Thus, a patentee's recovery is in the nature of a non-exclusive license for a particular use for a specific time frame. The price paid to obtain the patent has limited usefulness for that purpose.

- d. The award to the patentee should not award the risks of innovation to the liquid patent holder.

Unless there is a causal relation between the infringement and the patentee's determination to license rather than to commercialize the patent, the fact finder should not award innovation costs to the patentee. The *Georgia Pacific* test asks the jury to consider as the thirteenth factor "[t]he portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer."³⁸⁵ However, this factor is stated too narrowly to allow attribution of all innovative activity to the infringer. For example, the popularity of a product that is due to the infringer's advertising, development of a market, superior consumer support, the infringer's name or development of marketing and distribution channels are not valid components of the patentee's harm.

Even if this issue were resolved, however, difficulties remain. A jury should be presented with relevant, scientifically valid evidence that permits consideration of the relevant contribution of both parties to the infringing product. The jury would then calculate a royalty that considers the efforts of both parties to product sales. Such a procedure would

384. See *supra* Part V.B.2.

385. See *Georgia-Pacific Corp.*, 318 F. Supp. at 1120.

attempt to isolate the value of the invention as used in the infringing product. To the extent that courts wish to include some damages to accomplish deterrence by increasing the damage award, that measure could then be added. Because courts have failed to apply damages policies and evidentiary standards meaningfully, royalties awarded in patent cases fail to be accurate measures of a patentee's harm.³⁸⁶

Moreover, the trend over the past several years has been to award more of the infringer's innovative activity to the patentee and not less. In part, this has been because the court has expanded the "entire market value" rule.³⁸⁷ The entire market value rule is applied where both patented and unpatented components are sold together.³⁸⁸ Essentially, the entire market value rule expands the royalty base to permit the patentee to recover for unpatented components, in recognition that "the economic value of a patent may be greater than the value of the sales of the patented part alone."³⁸⁹ Formerly, royalty awards were increased by expanding the royalty base if the patented components were of "substantial importance" the sale a multi-invention product.³⁹⁰ For example, the Federal Circuit permits expansion of the royalty base where the unpatented components are foreseeably sold with the patented components.³⁹¹ This broad foreseeability standard permits a jury to award damages for unpatented component to the patentee so long as all components are sold together. Indeed, recently the Federal Circuit has upheld a royalty award that was based on sales of products to the parent company of the patent holder.³⁹² In that case, the parent company commercialized the product, but the patent holder did not.³⁹³ The entire market value rule as recently applied awards more of the value of infringer innovation and commercialization to the patentee.

For liquid patent holders who have made a conscious decision not to engage in any product development, marketing or sales, expanded awards are not adequate reflections of the patentee's harm. Permitting liquid patent holders to recover the full benefit of the defendant's innovative activity does not serve the purpose of compensating patentees for the harm suffered, which for liquid patent holders amounts to a lost opportunity to grant a non-exclusive license to the infringer. Patentees operating under the current standards may determine that undertaking the risk of

386. Landers, *supra* note 308, at 334-35.

387. See *King Instruments*, 65 F.3d at 951 n.4.

388. See *id.*

389. See *id.*; see also *Site Microsurgical Sys., Inc. v. Cooper Cos.*, 797 F. Supp. 333, 340 (D. Del. 1992) ("The rule merely recognizes the actual economic value of the patented technology.").

390. *Leesona Corp. v. United States*, 599 F.2d 958, 962, 973-974 (Ct. Cl. 1979).

391. *Minco, Inc. v. Combustion Eng'g, Inc.*, 95 F.3d 1109, 1118 (Fed. Cir. 1996) (although the patent claims covered only a *device* for fusing materials, the court awarded damages on the *fused materials themselves*, as a foreseeable harm from the infringement).

392. *Union Carbide Chem. & Plastics Tech. Corp. v. Shell Oil Co.*, 425 F.3d 1366, 1378 (Fed. Cir. 2005).

393. *Union Carbide Chem.*, 425 F.3d at 1377.

commercialization is irrational, as the monetary rewards of selling product will flow to them by succeeding against an infringer who has already done so. Thus, a more balanced approach that prevents patentees to recover more than their harm will better serve the commercialization purpose that the patent laws are intended to promote.

Fundamentally, the patent right provides patentees with the right to exclude and is intended to foster the encouragement of investment-based risk.³⁹⁴ The patent right provides no assurance of market acceptance, that manufacture will be feasible and cost effective nor that a more desirable means to solve the same problem will not compete with the patented invention. The concepts embodied by the term "investment-based risk" stand on uncertainty, and the risks of approaching the marketplace with a patented invention may be significant.³⁹⁵ A liquid patent holder is not entitled to obtain the benefits of the risks that the patentee did not undertake.

VI. LIQUID IP: PATENTS AND MONOPOLIES

Liquid patent holders have the potential to purchase some measure of power through acquisition of patent rights. The purchase of even a single key patent can prevent an entire industry from engaging in research, development and sales in a particular field. The liquid patent holder may be demanding fees based on a patent of questionable validity. License rates demanded by liquid patent holders may be far above the patent's value. Although the parties can litigate the merits in court, the mere fact that a patent lawsuit is pending can harm an alleged infringer's sales³⁹⁶ even if the lawsuit is ultimately dismissed or the patent is adjudicated as invalid.

Generally, a patentee's activity in asserting and licensing is insulated from such forms of liability as antitrust law, even where the patent holder's conduct is injurious. This protection is policy based, grounded in an assumption that subjecting a patentee to antitrust scrutiny would "severely trample upon the incentives provided by our patent laws and thus undermine the entire patent system."³⁹⁷ However, this policy-based rationale lacks support for liquid patent holders. In many cases, the in-

394. *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 599 (Fed. Cir. 1985).

395. The phrase "investment-based risk" stands on much more uncertain ground than the phrase "investment backed expectation" that is used to define a compensable property right under takings law. *See, e.g., Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528, 538-39 (2005).

396. *See, e.g., Andrew R. Hickey, Experts: Don't Deploy BlackBerry*, MOBILE COMPUTING NEWS, December 9, 2005, http://searchmobilecomputing.techtarget.com/originalContent/0,289142,sid40_gci1151223,00.html (reporting warnings to potential customers not to invest in accused wireless messaging device, despite the fact that an appeal was pending and a request to invalidate the patent in suit was pending before the U.S. Patent and Trademark Office).

397. *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1209 (2d Cir. 1981); *Miller Insituform, Inc. v. Insituform of N. Am., Inc.*, 830 F.2d 606, 609 (6th Cir. 1987) (finding "[t]here is no adverse effect on competition since, as a patent monopolist, [the patentee], from the start, had exclusive right to manufacture, use, and sell his invention").

ventor and innovator have sold the patent to a liquid patent holder, who is engaging in conduct similar to any other business. To such entities, patents operate as an asset and not as a vehicle for invention.

A. Antitrust Protection for Exploitation of the Patent Right

As background, there is an inherent tension between the patent law's right of exclusivity and the antitrust law's disfavor of economic monopolies.³⁹⁸ Antitrust laws were enacted to protect competition.³⁹⁹ Although not all patents confer monopoly power in the antitrust sense,⁴⁰⁰ a patent or the product based on a patented invention may develop into dominance in an industry. Fundamentally, a patent grants a patentee the right to exclude others entirely from profiting from the patented invention in one or several markets.⁴⁰¹ In such cases, a patentee's exercise of the right to exclude—whether by refusing to license or asserting the patent against an infringer—may prevent the type of competition that the antitrust laws were enacted to protect.

Yet a patentee's conduct in exploiting the patent right is typically insulated from antitrust scrutiny. The patent right includes the right to suppress the invention while continuing to prevent all others from using it, to refuse to license others and, if a patentee decides to license, to charge the highest royalty that the market permits during the patent term.⁴⁰² Although such actions may have anticompetitive effects, the government grant of exclusivity embodied in a patent in most cases shields patent holders against antitrust liability for exercising the patent right because such anticompetitive effects are considered "part and parcel of the patent system's role in creating incentives for potential inventors."⁴⁰³ Thus, courts have drawn a distinction⁴⁰⁴ between the economic monopoly prevented by the antitrust laws and patent assertion because a patentee is "the owner of a monopoly recognized by the Constitution and by the statutes of Congress."⁴⁰⁵

398. *United States v. Studiengesellschaft Kohle*, 670 F.2d 1122, 1128 (D.C. Cir. 1981) (recognizing "the fundamental fact that a patent by definition restrains trade, and in effect makes most exclusive patent licenses per se violations of the antitrust laws").

399. *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104, 115 (1986).

400. *See, e.g., Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 126 S. Ct. 1281, 1292 (2006) (finding that products that are patented are not entitled to a presumption of market power on the patentee); LANDES & POSNER, *supra* note 131, at 374.

401. *Kohle*, 670 F.2d at 1127.

402. *Id.*

403. *Monsanto Co. v. McFarling*, 363 F.3d 1336, 1343 (Fed. Cir. 2004).

404. Some scholars have observed that this distinction is not considerable, as the antitrust laws "are generally hostile to" claims of refusing to deal, even where no intellectual property rights are at stake. Herbert Hovenkamp, Mark D. Janis & Mark A. Lemley, *Unilateral Refusals to License*, 2 J. COMPETITION L. & ECON. 1, 5 (2006) ("The Supreme Court's repeated invocation of the rule that the antitrust laws 'protection of competition, not competitors' seems applicable here." (citing *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962))) (footnote omitted).

405. *E. Bement & Sons v. Nat'l Harrow Co.*, 186 U.S. 70, 88 (1902).

The Federal Circuit has promulgated a general rule that “the conduct at issue is illegal if it threatens competition in areas other than those protected by the patent, and is otherwise legal.”⁴⁰⁶ For example, in *U.S. v. Studiengesellschaft Kohle*, the court rejected the United States’ argument that the patentee’s refusal to license created such anticompetitive harms as excluding potential sellers from the market, selling products made with the patented process in excess of competitive levels, and restraining trade in related technology were insufficient to establish an antitrust violation.⁴⁰⁷ The court found that “[n]one of these restraints go beyond what the patent itself authorizes,” and that the “exclusion of competitors, and charging of supracompetitive prices are at the core of the patentee’s rights, and are legitimate rewards of the patent monopoly.”⁴⁰⁸

According to the Federal Circuit, conduct that excludes competitors from competing in a market that may raise concerns under antitrust law will typically present no legal liability where that conduct is a legitimate exercise of a patent right.⁴⁰⁹ Further, in the Federal Circuit, a competitor’s subjective motivation to exclude a competitor is irrelevant if those circumstances are met.⁴¹⁰

The protection against antitrust penalty provided to patent owners is founded on the policy of preserving patent law’s incentives. The Federal Circuit has explained that certain protections against antitrust suits based on a patentee’s conduct are necessary to preserve intellectual property’s incentive system.⁴¹¹ As one scholar elaborates, the public benefit gained from innovation justifies permitting intellectual property holders to engage in conduct necessary to enforce their rights without antitrust scrutiny:

Even the introduction of a product subject to monopoly power can represent a gain to society. That is the underlying logic of our patent system, in which the monopoly profit expected from innovation cre-

406. *Kohle*, 670 F.2d at 1128.

407. *Id.* at 1125-26.

408. *Id.* at 1128.

409. *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1427 n.4 (Fed. Cir. 1997); see Robert Pitofsky, *Challenges of the New Economy: Issues at the Intersection of Antitrust and Intellectual Property*, 68 ANTITRUST L.J. 913, 921-23 (2001).

410. *In re Indep. Serv. Org. Antitrust Litig.*, 203 F.3d 1322, 1324, 1329 (Fed. Cir. 2000); see Simon Genevaz, *Against Immunity for Unilateral Refusals to Deal in Intellectual Property: Why Antitrust Law Should Not Distinguish Between IP and Other Property Rights*, 19 BERKELEY TECH. L.J. 741, 744 (2004) (noting that the case “establishes a rule of per se legality” for the exercise of the exclusionary rights under copyright and patent law). *But see* *Image Technical Serv., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1212 (9th Cir. 1997) (noting patent owner’s intellectual property justification for alleged exclusionary conduct could be rebutted by a showing that the justification was pretextual).

411. *Monsanto*, 363 F.3d at 1343-44; see *In Re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d at 1327-29; *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1068-69 (Fed. Cir. 1998); *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 876-78 (Fed. Cir. 1985), *overruled on other grounds by Nobelpharma AB*, 141 F.3d at 1059.

ates an incentive to provide the gain to society. It has been estimated that the social return to invention significantly exceeds the private return. That means that antitrust should be especially wary when its action reduces the return to innovators of intellectual property because we know that there already is too little incentive to create such intellectual property.⁴¹²

Some criticize the Federal Circuit's rulings as going too far by "exalt[ing] protection of intellectual property rights" to the detriment of antitrust enforcement.⁴¹³ Typical of this view, one commentator notes, "[t]oday it is quite clear that an antitrust claim at the Federal Circuit will fail."⁴¹⁴

B. Antitrust Limitations on Anticompetitive Patentee Conduct

There are exceptions to the doctrine that the exercise of a patent right is protected against antitrust liability. For example, a patent holder who procured the patent through "knowing and willful fraud" is not immune from antitrust liability.⁴¹⁵ Further, a patent holder is not shielded by antitrust liability if the patent owner asserts an objectively baseless suit that is subjectively motivated by a desire to impose collateral, anticompetitive injury rather than to obtain a justifiable legal remedy.⁴¹⁶ Conduct that reaches outside the patent may be actionable, for example where patent holders have pooled their patents and fix prices on the products for themselves and their licensees,⁴¹⁷ tying,⁴¹⁸ use the patent to or restrict sales of unpatented products⁴¹⁹ or to seek royalties beyond the expiration of the patent term.⁴²⁰ However, liquid patent holders can exercise a significant amount of market power without violating any of these exceptions.

There are antitrust principles which consider the problem that purchasing patents creates the possibility that monopoly power can be ac-

412. Dennis W. Carlton, *A General Analysis of Exclusionary Conduct and Refusal To Deal—Why Aspen and Kodak Are Misguided*, 68 ANTITRUST L.J. 659, 673-74 (2001) (footnote omitted) (citing Charles I. Jones & John C. Williams, *Measuring the Social Return to R&D*, 113 Q.J. ECONOMICS 1119 (1998)).

413. Pitofsky, *supra* note 409 at 921-22. ("[Q]uestions arise as to what the Federal Circuit's approach portends—i.e., an approach that seems to exalt protection of intellectual property rights—with respect to continuing validity in the Federal Circuit of the long-standing balance between antitrust and intellectual property."); J. Robert Robertson, *FTC Part III Litigation: Lessons from Chicago Bridge and Evanston Northwestern Healthcare*, 20 ANTITRUST 12, 13 (Spring 2006) (noting that the federal circuit "is not known to be pro-enforcement in the antitrust area").

414. Thomas, *supra* note 121, at 794.

415. *In re Indep. Serv. Org. Antitrust Litig.*, 203 F.3d at 1326.

416. *Id.*

417. *United States v. New Wrinkle, Inc.*, 342 U.S. 371, 380 (1952).

418. *See Atari Games Corp. v. Nintendo of Am., Inc.*, 897 F.2d 1572, 1576-77 (Fed. Cir. 1990).

419. *United States v. Westinghouse Elec. Corp.*, 648 F.2d 642, 647 (9th Cir. 1981); *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 136-37 (1969).

420. *Brulotte v. Thys Co.*, 379 U.S. 29, 32-33 (1964).

cumulated.⁴²¹ The antitrust laws create liability for the accumulation of market power through patent acquisition.⁴²² In particular, section 7 of the Clayton Act⁴²³ and Section 2 of the Sherman Act⁴²⁴ provide arguable grounds to address such conduct.⁴²⁵ Over the past several years, however, private parties have had an increasingly difficult time bringing such claims.

Although the U.S. Department of Justice has brought some enforcement actions under the antitrust laws for the accumulation of market power in patents during a corporate merger,⁴²⁶ and historically such relief was available to private parties, courts have become more reluctant to permit private litigants to succeed.

For example, in the 1952 case of *Kobe, Inc. v. Dempsey Pump Co.*,⁴²⁷ the court examined the conduct of patent holder Kobe, who had obtained seventy-two patents from a predecessor and entered into a closed pooling arrangement with another company to dominate the market for oil drills.⁴²⁸ Kobe asserted five of these patents against defendant Demsey, a new entrant competitor who was held to have infringed one of the patents that had been held valid.⁴²⁹ In assessing Demsey's counterclaim under the Sherman Act, the court found that "Kobe did not institute the infringement action in bad faith," but nonetheless found that Kobe had violated antitrust laws.⁴³⁰ The *Kobe* court explained that "although Kobe believed that some of its patents were infringed, the real purpose of the infringement action and the incidental activities of Kobe's representatives w[ere] to further the existing monopoly and to eliminate Dempsey as a competitor."⁴³¹

More recently, courts have been reluctant to grant relief for non-government plaintiffs. Examples include both *Axis, S.p.A. v. Micafil*,⁴³²

421. See Kitch, *supra* note 91, at 1740 (noting that "agreements which concentrate a number of single rights under common control have the obvious potential to create monopoly power").

422. *Id.*

423. 15 U.S.C.A. § 18 (West 2006).

424. 15 U.S.C.A. § 2.

425. 15 U.S.C.A. § 18; see also *Kobe, Inc. v. Dempsey Pump Co.*, 198 F.2d 416 (10th Cir. 1952); *SCM Corp.*, 645 F.2d at 1205; Yee Wah Chin, *Unilateral Technology Suppression: Appropriate Antitrust and Patent Law Remedies*, 66 ANTITRUST L.J. 441, 446 (1998).

426. See e.g., *United States v. 3D Sys. Corp.*, No. CIV. 1:01CV01237(GK) (D.D.C. Sept. 4, 2001), available at <http://www.usdoj.gov/atr/cases/f9000/9019.pdf>; *United States v. Miller Inds.*, No. CIV. 1:00CV00305 (D.D.C. Feb. 17, 2000), available at <http://www.usdoj.gov/atr/cases/f4100/4188.pdf>; In the Matter of CIBA-Geigy Ltd., CIBA-Geigy Corp., Chiron Corp., Sandoz Ltd., Sandoz Corp., and Novartis AG, Docket No. C-3725, File No. 961 0055, at 1, 19-20 (F.T.C. Apr. 8, 1997) (complaint, decisions, and orders available at <http://www.ftc.gov/os/caselist/c3725.htm>).

427. *Dempsey Pump*, 198 F.2d at 419-21.

428. *Id.* at 420-21.

429. *Id.* at 418.

430. *Id.* at 424.

431. *Id.* at 425.

432. 870 F.2d 1105 (6th Cir. 1989).

and *SCM Corp. v. Xerox Corp.*,⁴³³ both of which challenged the patentee's acquiring certain patents as a violation of the antitrust laws. In *Axis, S.p.A. v. Micafil*, antitrust plaintiff Axis asserted a violation of section 7 of the Clayton Act against defendant Micafil, who had acquired a company along with a number of patents on the only two methods of cutting wire for components used in small appliances.⁴³⁴ Axis alleged that Micafil's acquisition of those patents were "the only things preventing Axis' entry into the market."⁴³⁵ Axis further alleged that had suffered an antitrust injury—that is, an injury that reflects a causal connection to the anticompetitive act that is the subject of the antitrust violation.⁴³⁶ An antitrust injury is a necessary although not always sufficient requirement to demonstrate certain antitrust claims.⁴³⁷

The *Axis* court accepted that the acquisition violated section 7 of the Clayton Act, and that "the patents presented an impenetrable barrier to the plaintiff's entry" to the market.⁴³⁸ Rejecting Axis' damages claim for lost sales and lost profits, the court found that Axis could not establish an antitrust injury.⁴³⁹ Specifically, the court reasoned that the patents presented as much a barrier before the merger as afterwards, and therefore Axis would have suffered the injury regardless of the antitrust violation.⁴⁴⁰ On this basis, the *Axis* court affirmed dismissal of the antitrust claims.⁴⁴¹

The *Axis* case appears to create an impenetrable bar to antitrust suits brought by infringers where an antitrust injury is an essential element. An infringer can never establish antitrust injury from the acquisition of an existing patent, since a patent is always owned by someone and so the potential for enforcement exists regardless of the owner's identity.⁴⁴² The antitrust injury requirement for section 7 of the Clayton Act strictly thus limits the ability to enforce that provision.

Additionally, in *SCM Corp. v. Xerox Corp.*, the Second Circuit has held that liability under Section 7 of the Clayton Act for the acquisition of a patent with monopoly power cannot occur where the patent has not been commercialized at the time of the acquisition. In *SCM Corp.*, Xerox had acquired patents relating to copying that did not require using

433. 645 F.2d 1195 (2d Cir. 1981).

434. *Axis, S.p.A.*, 870 F.2d at 1105-06.

435. *Id.* at 1106 (quoted source contains an alteration to the original).

436. *See Cargill*, 479 U.S. at 111-12; *Axis, S.p.A.*, 870 F.2d at 1107.

437. *See id.*; *Axis, S.p.A.*, 870 F.2d at 1105-07.

438. *Axis, S.p.A.*, 870 F.2d at 1107.

439. *Id.*

440. *Id.*

441. *Id.* at 1111.

442. *Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1558 (Fed. Cir. 1997) (denying antitrust claim for lack of antitrust injury finding that "[t]he cause of [the infringer's] injuries was not that [the patentee] enforced the . . . patent, but that the patent was enforced at all"), *abrogated on other grounds by Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448 (Fed. Cir. 1998).

any wet chemistry.⁴⁴³ After entering into a series of license agreements for the patents, Xerox purchased various patents for the technology between 1956 and 1959.⁴⁴⁴ However, Xerox did not commercially sell a plain paper copier until 1960.⁴⁴⁵ Plaintiff SCM Corp. sued Xerox, alleging that Xerox's acquisition of the patents violated Section 7 of the Clayton Act in the market for plain and coated paper copiers in the office copier market.⁴⁴⁶ The Second Circuit held that SCM Corp. could not establish this claim, because Xerox did not begin selling products into the market until one year after the last patent had been acquired.⁴⁴⁷

As with cases examining protections for a patentee to assert or refuse to license a patent, both the *Axis* and *SCM Corp.* courts rely on patent policy of encouraging incentives to invent as bases for their decisions.⁴⁴⁸ Acknowledging that "the acquisition of a patent can create the potential for tremendous market power,"⁴⁴⁹ the *SCM Corp.* court invoked the image of the inventor who bestows the benefit of genius on the public: "That the first patent laws were enacted at the second session of our first Congress manifests the importance our founding fathers attached to encouraging inventive genius, a resource that proved to be bountiful throughout this nation's history."⁴⁵⁰ Further, *SCM Corp.* acknowledged that the patent law's reward "with the power to exclude others from exploiting his invention" is balanced with "the public benefits from the disclosure of inventions, the entrance into the market of valuable products whose invention might have been delayed but for the incentives provided by the patent laws, and the increased competition the patented product creates in the marketplace."⁴⁵¹ Significantly, the SCM court found that these policies and protections apply to those who invest—and not only those who invent—within the patent system.⁴⁵²

More generally and because of these policy justifications, antitrust law provides leeway to liquid patent holders to acquire and assert patents, in some instances even where the patent has monopoly power. Particularly for cases adjudicated in the Federal Circuit where antitrust

443. *Id.* at 1199; see THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS, THE DEVELOPMENT OF XEROGRAPHY 4 (1983) (print on file with author), available at <http://files.asme.org/ASMEORG/Communities/History/Landmarks/5663.pdf>.

444. *SCM Corp.*, 645 F.2d at 1199-1200.

445. *Id.* at 1200.

446. *Id.* at 1199 n.1.

447. *Id.* at 1207, 1211 (inferring that the court left open the possibility that an acquisition made into a reasonably foreseeable economic market might violate section 1 and section 2 of the Sherman Act and section 7 of the Clayton Act).

448. *Axis, S.p.A.*, 870 F.2d at 1111 (noting "[o]ur patent and antitrust laws seek to further different and opposing policies. Patent laws grant a monopoly for a limited time in order '[t]o promote the Progress of Science and useful Arts' Further, 'a lawfully acquired patent creates a monopoly that does not violate the antitrust laws.'"); *SCM Corp.*, 645 F.2d at 1203-05.

449. *SCM Corp.*, 645 F.2d at 1205.

450. *Id.* at 1203.

451. *Id.*

452. *Id.* at 1206 n.9.

claims have been most difficult to bring, a liquid patent holder with a colorable assertion of infringement can assert the patent so long as exceptions to antitrust immunity are not present. If the liquid patent holder performs adequate due diligence to ensure against fraud, tying and frivolous claims, many of these exceptions can be eliminated as a legal or factual possibility.⁴⁵³ Assuming that the liquid patent holder does not itself possess monopoly power, those who seek to obtain patents in underdeveloped commercial markets may be able to avoid scrutiny for acquisitions of patents by a private actor who infringes, particularly under *Xerox* in a market that has not yet been commercialized.⁴⁵⁴ The courts have therefore left liquid patent holders with considerable room to acquire and use patents in a manner which might cause harm to the market or to consumers.

C. Liquid Patent Holders and Antitrust Law

The deference that antitrust law provides to liquid patents is not supported by the incentive policy justification. Patent purchasers who seek to profit from another's inventive activity lack any connection with those who require an incentive to invent. Unlike those who fund invention or patent prosecution, those who seek to profit by purchasing patents to assert against those engaged in commercial activity appear too late in the process to have contributed to the incentive to invent or disclose patented inventions.

The societal benefits of the assertion of liquid patents are not substantially supported by the traditional patent law policies. As evidenced by the need to enact section 7 of the Clayton Act, the acquisition of concentrated power may cause harm by foreclosing consumer choice through acquisition.⁴⁵⁵ Even where industry is content with the state of competition, the broader public interest may be harmed by the elimination of those engaged in commercial activity.⁴⁵⁶ The patent laws do not

453. Pitofsky, *supra* note 409, at 921 (explaining, for example, the fraud exception is not exceptionally difficult to avoid, having been described as "more difficult to prove than almost any antitrust allegation" because the patent applicant must be shown to have "made knowing and willful misrepresentations that resulted in a patent that would not have issued in the absence of a misrepresentation.") (citing *Nobelpharma*, 141 F.3d at 1070-71).

454. However, governmental inquiry into an already existing or reasonably foreseeable market may lead to liability into a patent acquirer's conduct.

455. *United States v. Phila. Nat'l Bank*, 374 U.S. 321, 367 (1963) ("A fundamental purpose of amending [section 7 of the Clayton Act] was to arrest the trend toward concentration [and] the tendency to monopoly, before the consumer's alternatives disappeared . . ." (punctuation deleted)).

456. See *United States v. Bethlehem Steel Corp.*, 168 F. Supp. 576, 588 (D.C.N.Y. 1958) (noting the types of harm that were sought to be remedied by enacting section 7 of the Clayton Act include:

- (1) elimination in whole or in material part of the competitive activity of an enterprise which has been a substantial factor in competition, (2) increase in the relative size of the enterprise making the acquisition to such a point that its advantage over its competitors threatens to be decisive, (3) undue reduction in the number of competing enterprises, or (4) establishment of relationships between buyers and sellers which deprive their rivals of a fair opportunity to compete.

themselves allow consumers court access to challenge any patent-related anticompetitive conduct even when such patents are invalid.⁴⁵⁷ Likewise, the patent laws provide no relief for those against whom the patent is asserted. Any redress must be through other causes of action, such as the antitrust laws.

Antitrust protections for patentee conduct are concurrent with the scope of the claim language—that is, limited to the scope of the government-granted monopoly—look opaquely at the incentive rewards in the broadest sense. The decisions do not address the more complex and nuanced policy issues raised by liquid patent holders' methods of exploiting patents that provide—and indeed may interfere—with the patent system's purpose of serving innovation. For example, the *SCM Corp.* court notes that antitrust protection is appropriate for more than the inventor, explaining that:

Investors . . . play a key role, if not an indispensable one today, in both the inventive process and commercialization of inventions. And it is fair to say, we think, that the contribution of the investor in both the funding of research that leads to inventions and the promotion that necessarily must follow to achieve successful commercialization is of comparable value.⁴⁵⁸

The *SCM Corp.* court's justifications do not extend to liquid patent holders who do not fund research or assist in commercialization. The public benefit that is presumed to flow from the activity of an investor who funds research or bringing products to market is simply absent for many liquid patent holders. The *SCM Corp.* court's policy justification is illustrative of the larger problem. That is, the courts have articulated a policy basis that protects all patent holders but falls short for a liquid patent holder that engages in conduct that may harm a market as the public benefits that are presumed to flow from the operation of the patent system are substantially minimized.

Fundamentally, those who hold patents have the power and ability to foreclose consumer choice and forestall competition. Because the justifications for such conduct is lacking, there is little reason to continue to shield liquid patent holders as under the current law. Specifically, some consideration should be provided for the fact that liquid patent holders are engaged in profit-making enterprises that are no different from those in other industries. The continued deference that antitrust law provides to liquid patent holders may, in the end, tolerate conduct that harms both markets and innovation.

(citing H.R. REP. NO. 1191, at 8)).

457. *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 541 (E.D.N.Y. 2005).

458. *SCM Corp.*, 645 F.2d at 1206 n.9.

CONCLUSION

The patent system's preference for the uniform administration of the patent laws has created an opportunity for liquid patent holders to create markets for patents as commodities. Currently, liquid patent holders work within the patent laws to create the right. Although at odds with the policies that support the patent system, liquid patents are likely to stay so long as their practice remains profitable and the long-established drive for a uniform patent system remains.

Creating modifications to patentability and enforcement laws based on use and ownership of the patent right may introduce a troubling and counterproductive uncertainty into the patent system. Much of the potential harm caused by liquid patent holders is financial in nature—that is, a liquid patent holder who is able to demand more than a patent is worth has the potential to harm subsequent innovators who are seeking to commercially exploit ideas. Some of this is due to the fact that liquid patent holders are able to extract above market prices due to the threat of an injunction. Although the *eBay* case opened the door to the possibility that such threats may be diminished, modification to the damages provisions should be adopted to prevent abuses of the system. As the law currently accommodates consideration of patent use and ownership into its remedies provisions, modifications to those portions of the patent law may best serve the overall goal of innovation. Further, the protections against abuse that are currently built into laws, such as the antitrust law, should be re-examined in light of the liquid patent holder's failure to support the policy goals of the patent system.