

RISE OF THE PATENT INTERMEDIARIES

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Patents are evolving from purely exclusionary instruments into intellectual property assets that play a part in business strategy and have value as transactional goods.¹ Businesses operating in the intellectual property marketplace have experienced an unprecedented explosion of activity involving these intangible but valuable assets.² The new market for intellectual property has inspired entrepreneurial legal professionals and business professionals alike to create new companies and expand existing ones to act as middlemen, encouraging the continued proliferation of patent transactions.³ These entities operate and thrive in the intermediary market between buyers and sellers of intellectual property as well as auxiliary markets related to the protection of intellectual property.⁴

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1. See Ashby H. B. Monk, *The Emerging Market for Intellectual Property: Drivers, Restraints, and Implications*, 9 J. ECON. GEOGRAPHY 469, 469 (2009) (stating that new corporate IP strategies are driving the evolution of the IP market).

2. See Suzanne Stevens, *Distress Continues Driving Patent Deals*, THE DEAL, July 27, 2009, http://www.thedeal.com/corporatedealmaker/2009/07/patent_protection.php (last visited Sept. 5, 2009) (discussing how distressed companies are attempting to deal with the economic downturn by monetizing their IP assets); *Trolls Demanding Tolls*, ECONOMIST, Sept. 12, 2009, at 84 (describing how IP assets are becoming a more mainstream investment vehicle).

3. See Steve Lohr, *Patent Auctions Offer Protections to Inventors*, N.Y. TIMES, Sept. 20, 2009, available at <http://www.nytimes.com/2009/09/21/technology/21patent.html> (stating that a “flurry of new companies and investment groups has sprung up to buy, sell, broker, license, and auction patents” and that “venture capital and private equity is starting to pour into the field”); Raymond Millien & Ron Laurie, *A Survey of Established and Evolving IP Monetization Models*, 984 PLI/PAT 1033, 1038 (2009) (“[The] new era [of the IP marketplace] is characterized by the rise of ‘market-maker’ intermediaries who seek to make IP a liquid asset class and, of course, profit from it.”).

4. See *Thinkfire Establishes Patent Brokerage Division*, IPFRONTLINE.COM, Oct. 3, 2005, <http://www.ipfrontline.com/depts/article.asp?id=6231&deptid=8> (describing Thinkfire’s expansion from a purely advisory role into the brokerage space); Joe Mullin, *“Patent Trolls” – With Them or Against Them?*, THE PRIOR ART, May 12, 2008, http://thepriorart.typepad.com/the_prior_art/2008/05/patent-trollsar.html (describing Thinkfire founder Dan McCurdy’s new company PatentFreedom, created to establish a database of information to help subscribers defend themselves from NPEs); William-Arthur Haynes, *Companies Share Patent Pools to Head Off Costly IP Litigation*, SILICON VALLEY / SAN JOSE BUSINESS JOURNAL, July 24, 2009, available at <http://sanjose.bizjournals.com/sanjose/stories/2009/07/27/focus2.html> (describing the new business model of defensive patent aggregation).

This discussion categorizes these intermediate entities into three groups: brokers, defensive aggregators, and offensive aggregators. Brokers are companies that serve a connective and advisory function in linking patent sellers with potential buyers. Defensive aggregators, on the other hand, are services that acquire patent rights and license them to subscriber companies. Finally, offensive aggregators acquire and develop patent portfolios for the purpose of collecting licensing fees from alleged infringers. The “intermediary” classification for these entities is appropriate because their business models treat patents as transactional assets, meaning that their activities are one level removed from typical market participants, whose patent strategies are more likely to revolve around obtaining patents as up-front protection for the research, development, and production of actual goods and deriving competitive advantage.⁵

This Note discusses patent intermediaries, how they affect the market, and how their behavior relates to the goals of the patent system. Part I describes the background and original purpose of the patent regime. Part II explains how the differences between information assets and traditional physical assets make patents difficult for businesses to understand and manage. Part III profiles the three different categories of patent intermediaries mentioned above and their roles in the patent market. Part IV hypothesizes the catalysts driving the formation of patent intermediaries. Part V discusses the possibility of legislation, regulation, or private ordering to ensure that these intermediaries act in harmony with the patent system. Finally, this Note concludes with observations on the future of patent intermediaries.

I. PURPOSE OF THE PATENT SYSTEM

Determining how patent intermediaries may adhere to or deviate from the patent law requires a contextual foundation. Accordingly, this Part considers the historical reasons for implementing a patent regime, and highlights United States Supreme Court decisions that have directly addressed the goals of the patent system.

The Constitutional Convention of 1789 established the patent system, modeled after the English Statute of Monopolies, in order to provide patent rights that represented “strong, enforceable incentives for innovation,” not

5. See Stuart J. H. Graham & Ted Sichelman, *Why Do Start-ups Patent?*, 23 BERKELEY TECH. L.J. 1063, 1064–70 (2008) (listing possible reasons to patent, such as building preemptive defenses, securing investment, blocking competition, or enhancing sales).

merely “cultural obsessions with novelty.”⁶ The patent system is embodied in the Patent Clause from Article I, Section 8 of the Constitution, which gives Congress the power to “promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writing and Discoveries.”⁷ The first part of the Clause plainly states that one purpose of the patent system is to encourage innovation.⁸ Accordingly, entities acting to incentivize innovators are doing so in alignment with the goals of the patent system. On the other hand, entities that only engage in other activities such as litigation or rent-seeking may be operating outside or even against the intended purpose of the patent system. The latter portion of the Clause regarding “exclusive Right[s]” indicates that those who advance the field have a monopoly in their work product, and the Supreme Court has characterized this monopoly as a property right.⁹ Like other property rights, patent rights may be transferred to new owners through assignment or license, giving them the freedom to exercise those patent interests as they see fit.¹⁰

Several Supreme Court cases have articulated the purposes of the patent system along these lines. In *Quanta Computer, Inc. v. L.G. Electronics, Inc.*, the Court stated that “the primary purpose of our patent laws is not the creation of private fortunes for the owners of patents but is ‘to promote the progress of science and useful arts.’”¹¹ In *Eldred v. Ashcroft*, the Court described the patent system as “a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in technology, in return for an exclusive monopoly for a limited period of time.”¹² This wording suggests that the primary purpose of the patent system is the advancement of technology, and granting temporary monopolies is a necessary sacrifice to provide an economic incentive for the individuals

6. ROBERT P. MERGES & JOHN F. DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS, 5–7, 13 (4th ed. 2007).

7. U.S. CONST. art. I, § 8, cl. 8.

8. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989) (“The Patent Clause itself reflects a balance between the need to encourage innovation and the avoidance of monopolies . . .”).

9. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730 (2002); see also *Fla. Prepaid Postsecondary Educ. Expense Bd. v. College Sav.*, 527 U.S. 627, 642 (1999) (“A patent for an invention is as much property as a patent for land.” (citing *Consolidated Fruit-Jar Co. v. Wright*, 94 U.S. 92, 96 (1876))).

10. Patents have the attributes of personal property and may be assigned by a written instrument. 35 U.S.C. § 261 (2006).

11. *Quanta Computer, Inc. v. L.G. Elecs., Inc.*, 128 S. Ct. 2109, 2116 (2008) (citing *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 511 (1917)).

12. *Eldred v. Ashcroft*, 537 U.S. 186, 225–26 (2003).

producing those advances. Otherwise, without a means to prevent competitors from profitably exploiting a company's innovations before it even recoups research and development costs, companies would not invest in developing new technologies.¹³ This is a sacrifice on the part of the public, because monopolies can harm consumers and discourage second-generation innovators from building on first-generation technology.¹⁴

The Supreme Court characterized this trade-off as a balancing act between two opposing parties: (1) inventors, who need assurances from the law in the form of exclusive rights; and (2) the public, who should be encouraged to innovate and create in the area outside of those exclusive rights.¹⁵ Practically, the public should benefit from the actual products and advances derived from these inventions. The public should also expect to use and be enriched by the formerly protected knowledge once it enters the public domain.¹⁶

II. UNIQUE FEATURES OF INFORMATION ASSETS

The emerging market for intellectual property has expanded significantly over the past decade,¹⁷ and commentators believe that intellectual property assets have supplanted traditional, tangible assets as the most powerful and valuable asset class.¹⁸ Whereas traditional physical assets still make up a significant portion of more traditional companies in industries like

13. See Peter S. Menell, *Intellectual Property and the Property Rights Movement*, 30 REGULATION 36, 38 (Fall 2007).

14. See *id.* at 38–39.

15. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 730–31 (2002). See also KEVIN G. RIVETTE & DAVID KLINE, REMBRANDTS IN THE ATTIC 25 (Harvard Business School Press 2000) (stating “all evidence indicates that when you deny others the right to copy your technology, you force them to innovate by designing around and improving upon your patent with more advanced discoveries of their own”).

16. Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 151 (1989) (“[T]he ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure.”).

17. See Monk, *supra* note 1, at 469–70 (describing the market as “a recent development” but also noting an earlier prediction of this “paradigm shift[] in the economic environment” (citing P. B. Evans & T. S. Wurster, *Strategy and the New Economics of Information*, 75 HARVARD BUS. REV. 70 (1997))).

18. See Millien & Laurie, *supra* note 3, at 1037 (stating that intangible assets have overtaken the traditional capital assets of real property, plants, and equipment as the most powerful asset class); RIVETTE & KLINE, *supra* note 15, at 1–2 (arguing that in the “new knowledge based economy[,] . . . ideas and innovation rather than land or natural resources have become the principal wellsprings of economic growth and competitive business advantage”); Monk, *supra* note 1, at 470 (“intellectual property lies at the center of the modern company’s economic success or failure” (citing L.C. Thurow, *Needed: A New System of Intellectual Property Rights*, 75 HARVARD BUS. REV. 96 (1997))).

manufacturing and distribution, intellectual property assets lie at the forefront of company valuation and strategic decisions in high-growth fields like software, electronics, and biotechnology.¹⁹ Intellectual property has “transformed from a sleepy area of law and business to one of the driving engines of a high-technology company.”²⁰

Patents, as information assets, possess unique features that make them more complicated to analyze and value than traditional physical assets. For example, one party’s possession of a tangible good necessarily excludes another party from possessing that same good. Without appropriate manufacturing facilities and detailed plans, tangible assets are also difficult to replicate. On the other hand, patents are information goods that can be shared, allowing parties to benefit from arrangements like non-exclusive licenses that do not inhibit the original owner’s ability to generate revenue through licenses to other parties. Patents are also “nonexcludable,” because it is inherently difficult to prevent others from using knowledge even if someone claims ownership.²¹ This added complexity mandates a different type of analysis in transactions involving information goods as opposed to traditional assets.

Despite the new perception of high value in information assets, even industry participants consider the overwhelming majority of patents ineffective at preserving value.²² Only a small percentage of patents end up generating great value through monetization opportunities like licensing or sale, resulting in a very low expected value for each individual patent; accordingly, commentators have likened patents to lottery tickets.²³

Why, then, does the number of patent filings continue to increase? Why are patents, as an asset class, now perceived to be so valuable? One

19. See Monk, *supra* note 1, at 482 (stating that business managers now view patents as “an important asset class that can be monetized to generate income”).

20. RIVETTE & KLINE, *supra* note 15, at 2 (citing Sabra Chartrand, *Patents: A Federal Agency, in Transition, Reaches out to Independent Inventors with a New Department*, N.Y. TIMES, Apr. 5, 1999, at C2).

21. Menell, *supra* note 13.

22. R. Polk Wagner & Gideon Parchomovsky, *Patent Portfolios*, 154 U. PA. L. REV. 1, 14 (2005) (stating that “empirical research consistently demonstrates that industry participants do not consider patents an effective appropriation mechanism”).

23. See David E. Martin & Jason O. Watson, *Patent Valuation: Is Fair Market Fair?* (July 10, 2005) (unpublished manuscript, presented at the FOSSTEC/WMSCI), at 5, *available at* http://www.m-cam.com/downloads/FOSSTEC05-PaperF95800-Patent_Valuation_Is_Fair_Market_Fair.pdf; Robert Pitkethly, *The Valuation of Patents: A Review of Patent Valuation Methods with Consideration of Option Based Methods and the Potential for Future Research 2* (The Judge Institute of Management Studies, Working Paper No. 21/97, 1997), *available at* http://www.cambiotec.org.mx/cyted/documentos/avaluo/doc_rpitkethly1.pdf.

compelling argument is simply that patents, through aggregation into a portfolio, acquire a value greater than they would alone.²⁴ This theory could explain the increased interest of businesses in the development and growth of patent portfolios.²⁵

Regardless, the new focus on patent assets has not corresponded to a rise in sophistication among parties to intellectual property transactions — it is a “rare company . . . that has any clue whatsoever about how to value, analyze, and structure . . . IP asset transfers.”²⁶ Companies attempting to apply the usual acquisition strategies suitable for tangible assets may later stumble into unexpected problems, and the need to guard against these pitfalls generates high transaction costs. Patent rights that have been sold could end up returning to harm the seller;²⁷ for example, a business divestiture might be acquired by a competitor planning to assert patent rights against the original parent company. Even in situations where tangible asset business strategies can be applied to intellectual property, some adaptations are in order. Consider as an example the complexities of intellectual property asset securitization.²⁸ The granting of security interests in personal property is governed by UCC Article 9, but non-exclusive patent licenses are not considered personal property.²⁹ Thus, a party seeking to securitize a non-

24. Wagner & Parchomovsky, *supra* note 22, at 27 (arguing that the true value of patents lies in their strategic combination into portfolios, which then “confer an array of important advantages upon the patent holder”).

25. Professors Wagner and Parchomovsky describe several examples of this growth: (1) a sharp increase each year for Qualcomm’s U.S. patents issued during 1999–2003; and (2) IBM’s numerous records for number of patents received each year in the time span from 1995–2005. *Id.* at 46–47.

26. RIVETTE & KLINE, *supra* note 15, at 163. *See also* Mario Benassi & Alberto Di Minin, *Playing in Between: Patent Brokers in Markets for Technology*, 39 R&D MANAGEMENT 68, 70 (2009) (stating that for patents, “with no standardized tools with which to gauge [their] . . . value and potential usage . . . , browsing through an overcrowded technology market is indeed a difficult task and requires specialized know-how”).

27. *See* RIVETTE & KLINE, *supra* note 15, at 170 (describing possible limitations to the rights sold, such as by line of business, by product, or even by geography, to avoid precisely this problem).

28. *See* Peter S. Menell, *Bankruptcy Treatment of Intellectual Property Assets: An Economic Analysis*, 22 BERKELEY TECH. L.J. 733, 822 (2007) (stating that numerous problems exist that hinder the use of securitized intellectual property as collateral, stemming from fragmented systems with high transaction costs); Ariel Glasner, *Making Something out of “Nothing”: The Trend Towards Securitizing Intellectual Property Assets and the Legal Obstacles that Remain*, 3 J. LEGAL TECH. RISK MGMT. 27, 27 (2008) (stating that “[w]hile the mechanics of structuring traditional asset securitizations are well-established, intellectual property (IP) securitizations raise a host of complex issues that must be resolved before this particular asset class can be leveraged on a more regular basis”).

29. Glasner, *supra* note 28, at 52.

exclusive patent license must take care to contract around this limitation.³⁰ Further complicating these transactions, the landscape of information available to market players is also quite limited. Transactional partners have only minimal sets of data to work with and lack a standard context for negotiation.³¹

The increased importance of intellectual property assets like patents and patent portfolios, along with the added complexity of valuing and analyzing risk for these information goods, has created a marketplace populated by players ill-equipped to handle the high transaction costs and information asymmetries representative of intellectual property transactions. Accordingly, entities that can lower net transaction costs and improve information access will be able to take advantage of the unique nature of these assets.

III. ROLES THAT INTERMEDIARIES PLAY IN THE PATENT MARKET

Do patent market intermediaries play a role in furthering the goals of the patent system, or are they a disruptive force? An answer to this question must be framed in the context of the reward-sacrifice distinction inherent in the patent system—that in exchange for the temporary grant (or sacrifice) of a limited monopoly to patent rights holders, the public can obtain a beneficial disclosure and eventual release of valuable advances in technology.³² The majority of intermediaries focus on connecting parties that wish to monetize existing patent rights, which has little to do with benefiting the public through disclosure and more to do with rights holders exploiting their patents. Therefore, in terms of the goals of the patent system, intermediaries operate more heavily on the side of private incentive rather than that of the advancement of public knowledge.³³ Though intermediaries share this characteristic, the different ways in which they interact with the producers and consumers of technological innovation indicate that a proper answer to the question posed above must distinguish between the major types of

30. *Id.* at 52–53.

31. *See infra* Part III.A (describing this lack of context in relation to demand for brokers).

32. *See supra* Part I.

33. Admittedly, some entities do contribute to the public knowledge, like offensive aggregators that conduct research or defensive aggregators that grant to their members the generally beneficial effect of enhanced freedom to operate. However, most of this is still closer to the goal of providing incentives rather than furthering the public level of technology.

intermediaries. There are many ways to categorize intermediaries;³⁴ for simplicity, this discussion splits them into those that assist in patent acquisitions and those that acquire patents, and the latter group is further divided based on motivations for purchase. Consider the following categorization of entities into three broad groups: (1) brokers, who play a bridging or market-making role for producers and consumers of intellectual property; (2) defensive aggregators, who acquire patents to provide their subscribers with freedom of operation and safety from litigation; and (3) offensive aggregators, who develop and acquire patents to realize revenue through licensing or asserting their portfolios.

Whether an intermediary advances the goals of the patent system depends on the category to which it belongs. Ultimately, patent brokers do appear to support innovation by encouraging transaction fluidity and improving the incentive value of obtaining a patent. Offensive aggregators appear more disruptive because their activities have only a minimal effect on the incentive balance while increasing the demand for brokerage services and defensive aggregators. Though defensive aggregators are in part a response to offensive aggregators, they also help defend against litigious competitors and increase the amount of resources that can be devoted to innovation. On balance, defensive aggregators appear to be aligned with the goals of the patent system.

Following is a discussion of specific roles that each type of intermediary plays in the patent market. For each category, a short list of companies is provided for reference. Though the lists are by no means exhaustive, they indicate key players based on their representation in the business and legal media.³⁵

34. Millien and Laurie divide the intermediaries into seventeen highly detailed categories, including distinctions between Patent Licensing and Enforcement Companies and IP/Technology Development Companies (even if they also license). *See* Millien & Laurie, *supra* note 3, at 1038–54.

35. The same group of patent intermediaries are often mentioned and discussed together in an article, sometimes with representatives of one commenting on the activities of another. *See, e.g.* Tomas Kellner, *Perot Backs \$200 Million Bet on Patents*, FORBES.COM, Aug 9, 2005, http://www.forbes.com/2005/08/09/perot-patents-fund-cz_tk_0809patents.html (announcing Perot's investment in a fund managed by Ocean Tomo, with a mention of Intellectual Ventures); Rick Merritt, *Patent Startup Gains High Profile Backing*, EE TIMES, Sept. 17, 2008, <http://www.eetimes.com/news/latest/showArticle.jhtml?articleID=210602186> (describing the formation of two defensive aggregators, RPX Corp. and Allied Security Trust, and their relation to Intellectual Ventures, including commentary from John Chernesky, president of a patent brokerage called iPotential); Zusha Elinson, *Intellectual Ventures Takes Indirect Route to Court*, RECORDER, Sept. 1, 2009, <http://www.law.com/jsp/article.jsp?id=1202433490140> (describing Intellectual Ventures' strategy with

A. BROKERS

Brokers play key roles in establishing market value for patents and removing information asymmetry from transactions.³⁶ They assist sellers of intellectual property find buyers, obtain a fair price, and conduct an efficient transaction. At the same time, an unscrupulous broker might take advantage of the information gap and abuse its position as the go-between for transacting parties by withholding or selectively disclosing information. However, this type of broker is likely to fade away as public information in the market steadily grows,³⁷ and the majority of brokers focus on building solid reputations to continue conducting business well into the future.

The activities of brokers are generally consistent with the goals of the patent system because brokers provide a safety net for inventors, supplementing other incentives like reputation or financial success. This safety net makes it easier for inventors to monetize the intangible results of their labor in light of possible setbacks.³⁸ Even if an inventor, when trying to reduce his invention to practice in the form of a marketable product, fails outright or otherwise falls short of establishing a sustainable business model, the inventor can recoup his investment by licensing or selling the rights with the help of a broker.

Another way that brokers act in accordance with patent system goals is by establishing a more consistent system for determining market value, something that is notoriously difficult to do for intellectual property.³⁹ For patents, this is difficult because so few of them result in profitable licensing

commentary from the founders of patent brokers PatentFreedom and Inflexion Point Strategy).

36. See Benassi & Di Minin, *supra* note 26, at 72 (stating that “[b]rokers can . . . provid[e] reliable, trustworthy information, and offer[] legal assistance and control for free-riding behavior”).

37. See *id.* (stating that opportunistic brokers are “doomed to disappear as industry matures”).

38. Posting of Jackie Hutter to IP Asset Maximizer Blog, *An Introduction to Patent Monetization Resources for Corporations and Entrepreneurs*, <http://ipassetmaximizerblog.com/?p=71> (Mar. 20, 2009) (describing how difficult it is for a company to sell their IP rights without the assistance of intermediaries who have the connections to make it happen and the information to maximize return).

39. See Letter from Michael F. Martin to Federal Trade Commission, re: Evolving IP Marketplace – Comment, Project No. P093900, at 15 (May 15, 2009), *available at* <http://www.ftc.gov/os/comments/iphearings/540872-00038.pdf> (stating that market prices are generally not available to the public for reference); Karl F. Jorda, Intensive Patent Valuation, Address at the IncreMental Advantage: Intellectual Property Valuation Seminar, at 5–7 (Mar. 19, 2009) (describing on the one hand a 20+ step method of valuation and on the other hand a 100 factor test to apply).

or are found valid and infringed at trial.⁴⁰ Even those that are licensed are likely to be part of a cross-licensing deal, which may indicate the value of a patent portfolio in the aggregate but not the value of individual patents. Furthermore, a company looking to divest a portion of its patent portfolio generally does so based on one of three reasons: (1) it is in distress and needs to deal with financial difficulties;⁴¹ (2) the patents that it wishes to sell are not correlated with its core business; or (3) it has a surplus of patents in one area and intends to divest a portion of them to save on maintenance costs.⁴² In the first scenario, the weakened bargaining position makes it likely that the company, without protective assistance from a broker, will not receive true market rate for the patents. In the second and third scenarios, the patents may be considered “extra” and could suffer from an inherent bias devaluing their worth. In these cases, a broker could assist by providing a neutral value assessment.

However, another problem with any attempt to determine market value for patents is that there may be a discrepancy in value depending on the valuation context if, for instance, the patent is being considered for securitization or for a sale.⁴³ This supports simply letting the market do the calculations. Then again, for market players to arrive at a truly fair valuation of an asset, the buyer and seller must be “acting . . . in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.”⁴⁴ The intellectual property market prevents fair market valuation on multiple

40. See Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. ECON. PERSP. 75, 79–80 (2005) (“Only 1.5 percent of all patents are litigated, and only 0.1 percent are litigated to trial Of patents litigated to a final determination, . . . 46 percent are held invalid.”); Martin & Watson, *supra* note 23, at 3 (stating that “over 95% of all patents are of no appreciable business value” (citing Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495 (2001)) and that the “vast majority [of patents] provide little basis for use as financial instrument constituents”); Dennis Crouch, *Patent Lotteries: A Question for the Crowd*, PATENTLY-O, Sept. 11, 2006, http://www.patentlyo.com/patent/2006/09/patent_lotterie.html (stating that getting a patent is like buying a lottery ticket because so many of them are worthless).

41. See Stevens, *supra* note 2; see also John Letzing, *Silicon Valley Woes Create Buyer's Market for Ideas*, MARKETWATCH, Apr. 9, 2009, <http://www.marketwatch.com/story/silicon-valley-woes-create-buyers> (describing how failed start-ups are flooding the market with patents).

42. See RIVETTE & KLINE, *supra* note 15, at 67 (recommending an IP audit to discover whether patents are integral to products planned for current and future production or if those patents do not have room in the company plan and should be licensed or sold to reduce management costs).

43. See Martin & Watson, *supra* note 23, at 4.

44. *Id.* at 5.

counts: a buyer may be compelled to purchase to protect against patent assertion, a seller in distress may be compelled to sell, and neither party may have sufficient information about the value of the patent as seen by other peers in the market. Even in the best case where a party does have good information, it cannot possibly predict the lottery outcome of each patent.⁴⁵

Aside from the largely unavoidable exception of the patent-as-lottery information gap, other gaps can be mitigated for the most part, provided that each party to a transaction conducts sufficient due diligence.⁴⁶ However, due to the circumstances under which most intellectual property transactions arise, compulsion and duress for purchase or sale will probably persist. Therefore, a truly fair market value may not be attainable, and a buyer and seller will need to rely on a broker's experience to determine the most accurate value achievable under the circumstances. Thus, broker-assisted valuation appears to be a valuable service in enhancing the overall fluidity of the patent market, and the increased number of successful transactions in such a market serves as a powerful incentivizing force in line with the goals of the patent system.

In addition to offering valuation assistance, brokers also serve to bring other useful third party information to the negotiation table. Even though an inventor may know more about a patent's worth than a potential buyer, a broker handling a higher volume of transactions than a typical industry participant would be even more familiar with the relevant patent market sector; such a broker could bring a wealth of relevant contextual knowledge to the bargaining table. Without the assistance of a broker, transacting parties would need to face the patent market's notorious lack of transparency on their own.⁴⁷ In a situation like this, a large purchaser of patents (such as an offensive aggregator) could use its prior transactional experience to out-negotiate a smaller first-time seller (such as a startup in distress), who would have little information on which to base a decision. As with fair price determination, a broker performs an important service by mitigating this information imbalance. Again, enabling transactions in this manner appears to align with the goals of the patent system.

45. *Id.*; see sources cited *supra* note 40.

46. The patent-as-lottery information gap may only be avoidable in cases where the patent under consideration has already been proven valid in court or has a successful history of profitable licensing.

47. Ron Laurie, *Foreword* to MATTHEW Y. MA, *FUNDAMENTALS OF PATENTING AND LICENSING FOR SCIENTISTS AND ENGINEERS*, at xvi (2009), available at http://www.worldscibooks.com/etextbook/6993/6993_foreword.pdf ("The current patent trading market is inefficient and immature, due to the lack of transparency and liquidity as compared with real estate or corporate securities.").

The following are examples of brokers, based on representation in the media:

- Inflexion Point Strategy⁴⁸

Inflexion Point helps its clients monetize their patent portfolios and buttress their defensive positions through patent acquisitions. Inflexion Point also advises on intellectual property-based mergers and acquisitions as well as other business transactions like corporate spin-offs.

- iPotential⁴⁹

This company has three main services: strategic consulting for intellectual property portfolio management, a patent brokerage, and licensing. iPotential consults on how to use intellectual property assets offensively as well as how to respond to asserted patents, including acquiring patents through the brokerage service for defensive purposes.

- Ocean Tomo⁵⁰

A self-titled “merchant bank” of intellectual capital, Ocean Tomo provides a wide range of services related to intellectual property investment and protection. The comparison is apt because merchant banks, historically, were entities that not only dealt in commodities but also advised clients on transactions. Similarly, Ocean Tomo engages in patent brokerage and valuation and provides other related services, including expert testimony for damages, patent valuation-based investment indexes, and intellectual property insurance. Ocean Tomo has also pioneered the patent auction model, although the economic downturn has dampened auction activity causing Ocean Tomo to recently sell its auction unit.⁵¹

- PatentFreedom⁵²

Focusing exclusively on information and advisory services, PatentFreedom provides information on non-practicing entities (NPEs)⁵³ to

48. Inflexion Point Strategy, <http://www.ip-strategy.com/> (last visited Oct. 28, 2009).

49. iPotential, <http://www.ipotential.com/> (last visited Sept. 5, 2009).

50. Ocean Tomo, <http://www.oceantomo.com/> (last visited Sept. 5, 2009).

51. See Joe Mullin, *Bummer Before the Summer: Ocean Tomo Auction a Bust*, LAW.COM: IP LAW & BUSINESS, Mar. 29, 2009, <http://www.law.com/jsp/article.jsp?id=1202429504127>; Zusha Elinson, *Ocean Tomo IP Auction Unit Draws Low Bid*, RECORDER, June 17, 2009, <http://www.law.com/jsp/law/careercenter/lawArticleCareerCenter.jsp?id=1202431526024&rss=careercenter> (describing Ocean Tomo's sale of its auction unit to British brokerage ICAP for \$10 million). ICAP is a broker dealing in the wholesale markets in interest rates, credit, commodities, FX, emerging markets, equities and equity derivatives. ICAP: About the Group, <http://www.icap.com/about-the-group.aspx> (last visited Sept. 7, 2009).

52. PatentFreedom, <https://www.patentfreedom.com/> (last visited Mar. 15, 2010).

improve transparency in the market and assist operating companies with business strategies to counter NPE assertions. Its subscriber services include access to a database of NPEs and their subsidiaries, information on their patent holdings and litigation histories, email alerts for proactive monitoring, and advice on best practices.⁵⁴ The founder and chairman of PatentFreedom, Dan McCurdy, is also the founder and former CEO of Thinkfire and present CEO of Allied Security Trust.⁵⁵

- Thinkfire⁵⁶

This broker provides a variety of services, including analysis of patent portfolios, due diligence for potential investors, patent licensing, and litigation management. In 2005, Thinkfire Executive Vice President Peter Spours indicated that because it had become too difficult for companies to rely on “internal patent generation,” patent acquisitions were necessary to maintain the flexibility of existing patent portfolios. As a result, Thinkfire officially created a brokerage division.⁵⁷

B. DEFENSIVE PATENT AGGREGATORS

Some of the larger companies that face patent assertions by offensive aggregators and especially NPEs banded together to invest in defensive patent aggregation groups, while others have signed on as members.⁵⁸

53. A non-practicing entity (NPE) is a company that licenses and asserts patents but does not use them to produce goods or services. Such entities may develop their portfolios organically through in-house research in addition to acquisitions. NPEs gained public notoriety after a prominent lawsuit where an NPE called NTP sued Research In Motion, the creators of BlackBerry, and obtained a large settlement on threat of injunction. Mark Heinzl and Amol Sharma, *RIM to Pay NTP \$612.5 Million to Settle BlackBerry Patent Suit*, WALL ST. J., Mar. 4, 2006, available at <http://online.wsj.com/article/SB114142276287788965.html>. A somewhat related idea is the proposal of patent investment trusts, publicly traded corporations that purchase and license patents with the backing of new tax laws that emulate those of real estate investment trusts. See Elizabeth D. Ferrill, Comment, *Patent Investment Trusts: Let's Build a PIT to Catch the Patent Trolls*, 6 N.C. J.L. & TECH. 367, 385 (2005). These trusts would differ from typical NPEs because they could purchase patents in exchange for equity stake (and presumably some sort of license grant-back), making them somewhat of a hybrid with the defensive aggregation model.

54. PatentFreedom: Service Offerings, <https://www.patentfreedom.com/serviceofferings.html> (last visited Dec. 22, 2009).

55. PatentFreedom: About Us: Executive Team, <https://www.patentfreedom.com/aboutus-exec.html> (last visited Dec. 22, 2009).

56. Thinkfire, <http://www.thinkfire.com/> (last visited Sept. 5, 2009).

57. *ThinkFire Establishes Patent Brokerage Division*, IPFRONTLINE.COM, Oct. 3, 2005, <http://www.ipfrontline.com/depts/article.asp?id=6231&deptid=8>.

58. See John Cook, *Looking to Fend off Patent Trolls*, IBM, Cisco, Support Startup RPX, TECHFLASH, Nov. 23, 2008, http://www.techflash.com/seattle/2008/11/IBM_Cisco_support_RPX_in_defensive_patents34959854.html.

Whereas counter-suits or cross-licensing can ward off a standard operating company asserting a patent, these strategies are ineffective against NPEs because they have neither potentially infringing products nor any use for patent licenses. Defensive aggregation groups frustrate litigious NPEs by acquiring or licensing patent interests before the NPEs can. Alternatively, they may buy patents or licenses from NPEs and in turn sub-license them to their members for protection.⁵⁹ Membership in a defensive aggregation group protects organizations against rent-seeking NPEs at a cost lower than litigation and settlement. The resources saved can be redirected to research and development, promoting innovation.

Member organizations also gain increased freedom to operate. In this age of patent thickets,⁶⁰ an organization must tread carefully lest it infringe countless patents just by doing business,⁶¹ and an aggregate license to a large cluster of patents in the appropriate field of technology can provide peace of mind. Moreover, an aggregate license lowers the search costs for a member company planning to embark on a plan of research and development in a particular field. Defensive aggregation services strive for complete adoption by all players in the market and the resulting obsolescence of expenditures on patent searches and license negotiations. Though this scenario may never actually come to pass, companies are likely to have great interest in partnering with an entity able to bring them closer to this ideal.

Importantly, these defensive aggregators are profit-seeking businesses and are generally not motivated by altruism or some other sense of public duty. For instance, they can perform a “catch and release” by first licensing acquired patents to their members and then turning around and selling the patents to other entities that may wish to monetize them through litigation.⁶²

59. Saul Hansell, *Trolling for Patents to Fight Patent Trolls*, N.Y. TIMES, Mar. 30, 2009, (Bits Blog), <http://bits.blogs.nytimes.com/2009/03/30/trolling-for-patents-to-fight-patent-trolls/> (discussing some of RPX’s recent purchases, including valuable patents and a license to a patent from Acacia, a large and litigious NPE).

60. Carl Shapiro defines 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.” Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in 1 INNOVATION POLICY AND THE ECONOMY 119, 120 (Adam B. Jaffe et al. eds., 2001).

61. This is an example of an intellectual property anticommons, as described by Heller and Eisenberg. See Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698, 699 (1998) (highlighting the difference between the necessary societal cost of a patent monopoly and the “more complex obstacles that arise when a user needs access to multiple patented inputs to create a single useful product”).

62. Elinson, *supra* note 35; see Hansell, *supra* note 59.

Not only does this recoup some of the acquisition cost, it also rewards early membership because the release sales are encumbered with grant-back provisions protecting current members. At the same time, this may result in fueling offensive aggregators, which could be a net negative result.⁶³

Despite the potential pitfalls, defensive patent aggregators may have the most beneficial effect on the market for intellectual property out of all the intermediary entities. The way they operate, by purchasing patent rights and licensing them to fee-paying members, provides a two-fold benefit. First, these aggregators serve as buyers of intellectual property assets, driving demand for and consequently raising the market values of assets. Second, they also reduce their members' potential costs by precluding patent assertions against them. In the long term, if enough members buy in to the idea of defensive patent aggregation, they may form entities fulfilling a role similar to what the American Society of Composers, Authors, and Publishers (ASCAP) does in the copyright space.⁶⁴

ASCAP is an association representing composers, authors, and publishers in order to protect their public performance rights by licensing and distributing royalties.⁶⁵ Payment collections are categorized by licensee types, and then distributed to members in amounts proportional to the number of performances for each licensee type.⁶⁶ This greatly reduces the number of transactions that would otherwise need to occur before parties could enter into a licensor-licensee relationship, making it more convenient for people to use copyrighted material and for copyright holders to receive payments for the use.

ASCAP claims that “the public interest demands that such an organization exist,” and it is “the only practical way to give effect to the right of public performance which the Copyright Law intends creators to have.”⁶⁷

63. See *infra* Part III.C and note 112.

64. See Lohr, *supra* note 3 (indicating that a partner at a venture capital firm backing RPX has a long term vision of RPX becoming a “marketplace or clearinghouse, perhaps the way ASCAP is for copyrighted music, collecting fees and distributing payments to artists”).

65. ASCAP: About ASCAP, <http://www.ascap.com/about/> (last visited Dec. 22, 2009).

66. For example, payments from restaurants would be distributed to artists holding rights for works that were performed at restaurants, to be determined by census or sample surveys. See ASCAP: About ASCAP: How You Get Paid at ASCAP, <http://www.ascap.com/about/payment/paymentintro.html> (last visited Dec. 23, 2009); ASCAP: About ASCAP: Keeping Track of Performances, <http://www.ascap.com/about/payment/keepingtrack.html> (last visited Dec. 23, 2009).

67. Harvey Reid, ASCAP & BMI – Protectors of Artists or Shadowy Thieves? (2005) (unpublished manuscript), available at <http://www.woodpecker.com/writing/essays/royalty-politics.html>.

Defensive aggregators could be ASCAP analogues in the patent system, meeting public interest demands and balancing inventors' incentives with the growth of public knowledge through accession. Of course, there are many major differences between the copyright and patent systems: the number of copyrighted works far exceeds the number of patents;⁶⁸ the number of potential infringers of copyrighted works also far exceeds the number of potential infringers of patents;⁶⁹ copyrights are far easier and less costly to acquire and maintain than patents;⁷⁰ copyrights have a much longer duration than patents;⁷¹ and finally, copyrights cannot be infringed without copying, whereas patents can be infringed even by completely independent activity.⁷² All these differences make it much more difficult for a defensive patent aggregator to acquire enough momentum to evolve into a service like ASCAP. In particular, while ASCAP can provide a solid guarantee that members will not run afoul of the law if they perform music produced by certain studios from which ASCAP has acquired licenses, a defensive

68. About half a million voluntary copyright registrations are filed with the Copyright Office each year, with probably many millions of new copyrighted works created each year that remain unregistered, and billions of existing copyrighted works. Edward Lee, *Warming up to User-Generated Content*, 2008 U. ILL. L. REV. 1459, 1478 (2008). Because patents must be filed with and issued by the USPTO to be valid legal instruments, and filings have not broken the half million per year mark as of 2008 after a decade of steady increases, there are clearly far fewer patents out there than copyrighted works, even before considering the fact that copyrighted works have far longer durations. See *infra* Figure 1.

69. To make a reproduction of a copyrighted work is very easy these days, especially with computers, but it generally takes some additional know-how and resources to infringe a patent.

70. Copyrights have only a minimal originality requirement, nothing like the novelty, non-obviousness, and disclosure requirements of patents. Compare 17 U.S.C. § 102 (2006) (describing copyright's originality requirement) with 35 U.S.C. §§ 101–103 (2006) (describing patent law's significantly more involved patentability requirements). As for cost, a copyright is free and obtained as soon as the work is "fixed in any tangible medium of expression," though registration is required to file infringement suits and derive other benefits. See 17 U.S.C. §§ 102, 411–12 (2006). The registration fee is minimal, ranging from \$35 for basic online registration to \$220 for registration of a claim in a vessel hull. U.S. Copyright Office: Fees, <http://www.copyright.gov/docs/fees.html> (last visited Feb. 7, 2010). In contrast, an individual looking to get patent protection would need to pay much more than that for prosecution, application, and maintenance fees. See Greg Blonder, *Cutting Through the Patent Thicket*, BUSINESSWEEK, Dec. 20, 2005, available at http://www.businessweek.com/technology/content/dec2005/tc20051220_827695.htm (describing a "\$50,000 to \$100,000 lifetime cost of patent application, protection, and maintenance").

71. Copyrights last for 70 more years after the author's death, whereas a utility patent lasts merely 20 years from the filing date. Compare 17 U.S.C. § 302(a) with 35 U.S.C. § 154(a)(2).

72. Copyright infringement is any violation of an exclusive right granted to copyright holders, all of which require some form of copying. See 17 U.S.C. §§ 106, 501.

aggregator has no analogous patent “playlist” to grant its members a guarantee of sufficient freedom to operate.⁷³

Defensive aggregators also share some traits with patent pools, which are agreements between patent owners to cross-license their patents or license to third parties.⁷⁴ Unlike defensive aggregators, pools do not generally have a membership program to supply capital for acquiring and licensing patents and instead focus on earning royalties from the patents owned by pool participants. However, pooling has some benefits similar to those of defensive aggregation. Pools allow companies to obtain the basic licenses required to practice in a particular field and avoid the effects of blocking patents, while also reducing license transaction costs.⁷⁵ At the same time, anticompetitive concerns about pools appear less applicable to defensive aggregators because defensive aggregators are less about sharing and extending their members’ exclusive rights than acquiring useful patent rights from other sources.⁷⁶

Along the same lines as ASCAP and patent pools, defensive aggregation seems to have largely beneficial effects on the patent marketplace that are consistent with the goals of the patent system, though this practice has probably gained traction mainly as a response to litigious NPEs. This is not to say that defensive aggregators could not have negative effects on the market. A successful defensive aggregator with a massive portfolio would possibly have only the conscience of its leadership to prevent it from becoming an aggressive and litigious licensor and NPE in its own right, though contractual safeguards would protect members from litigation.⁷⁷

73. Even if a company has rights to a given set of patents, its processes or products could infringe a patent not held or licensed by the defensive aggregator and of which the company (or aggregator) may be completely unaware. This can occur when a broad patent on a process or product covers a later-developed improvement. ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* 126–27 (4th ed. 2007) (describing blocking patents, where “the holder of an improvement patent has the right to exclude everyone from her improvement — including the holder of the broad patent — while at the same time being barred from use of the improvement herself unless the holder of the broad patent authorizes such use”).

74. Jeanne Clark et al., U.S. Patent and Trademark Office, *Patent Pools: A Solution to the Problem of Access in Biotechnology Patents?* 4 (2000), available at <http://www.uspto.gov/web/offices/pac/dapp/opla/patentpool.pdf>.

75. *Id.* at 8–9.

76. Some concerns are that patent pools allow cost inflation, price fixing, and shielding of invalid patents. For example, a company may wish to introduce a patent of questionable validity or value to a pool to earn royalties in the aggregate. *Id.* at 10. A defensive aggregator would not bother acquiring such a patent in the first place, so this problem does not apply in that context.

77. See *infra* Part V.B.

Following are some examples of defensive patent aggregators, based on representation in the media:

- Allied Security Trust⁷⁸

Started by a consortium of eleven high technology companies, AST plans to combat the NPE problem by purchasing patents and granting licenses to its members before NPEs can get to them.⁷⁹ AST claims that it is “not an investment vehicle” and will not assert any of these patents, litigate them, or seek to generate patent royalties.⁸⁰ Instead, it is funded by members that want to develop a purely defensive portfolio. One interesting practice that AST engages in is using an independent legal entity to conduct transactions, preventing other parties from recognizing the large businesses behind AST’s name and adjusting prices accordingly.⁸¹

- Open Invention Network⁸²

The Open Invention Network is solely focused on one narrow area: the promotion and defense of Linux. CEO Jerry Rosenthal has stated that the goal of OIN is to promote “a positive, fertile ecosystem for the Linux operating system and to drive innovation and choice into the marketplace.”⁸³ Instead of requiring a membership fee, the patents owned by OIN are available to any company royalty-free so long as the company agrees not to assert its patents against Linux.⁸⁴ The patents may also be used for defensive cross-licensing.

- RPX⁸⁵

Like AST, RPX seeks to reduce its members’ exposure to nuisance patent suits from NPEs by acquiring patents and patent rights and granting licenses to members.⁸⁶ RPX also states that it is not a patent licensing pool and does

78. Allied Security Trust I, <http://www.alliedsecuritytrust.com/> (last visited Sept. 7, 2009).

79. See Rick Merritt, *Patent Pools May Flow in Wake of Latest Alliance*, EE TIMES, July 2, 2008, <http://www.eetimes.com/news/latest/showArticle.jhtml?articleID=208802271>.

80. Allied Security Trust I: Questions and Answers, <http://www.alliedsecuritytrust.com/index-4.html> (last visited Dec. 22, 2009).

81. See Merritt, *supra* note 79.

82. Open Invention Network, <http://www.openinventionnetwork.com/> (last visited Feb. 18, 2010).

83. See *Industry Group Forms to Consolidate Linux Patents*, EE TIMES, Nov. 10, 2005, <http://www.eetimes.com/news/latest/showArticle.jhtml?articleID=173601534>.

84. Open Invention Network: Patent License Agreement, <http://www.openinventionnetwork.com/patents.php> (last visited Feb. 18, 2010).

85. RPX, <http://www.rpxcorp.com> (last visited Mar. 15, 2010).

86. One method that RPX uses to acquire patents is purchasing at auction. See Hansell, *supra* note 59.

not litigate the rights in its portfolio.⁸⁷ RPX claims a dual advantage to its service: (1) it reduces the number of patents available for trolls to acquire; and (2) it reduces the cost of acquiring patents by spreading it across all members of its defensive patent aggregation service. One difference between RPX and AST is that RPX is venture funded rather than backed by a consortium of investor-members.⁸⁸

C. OFFENSIVE AGGREGATORS

Offensive aggregators acquire patents with the goal of licensing to or asserting against companies trying to bring actual products to market.⁸⁹ These entities seemingly contribute nothing in terms of innovation while profiting at the expense of others (often, operating companies and innovators), and have therefore acquired a negative reputation in the press.⁹⁰ In short, they seem to exemplify the classic case of wealth redistribution without any net gain in innovation for the public.⁹¹ A counter-argument is that such entities offer compensation for smaller inventors who may not otherwise “have the resources to assert a patent alone.”⁹² As willing buyers, offensive aggregators may provide a modicum of service to sellers finding their patents difficult to sell,⁹³ though the fact that offensive aggregators

87. RPX: Services: A Superior Solution, http://www.rpxcorp.com/svc_solution.html (last visited Dec. 22, 2009).

88. *Id.*

89. For example, NTP, Inc., an offensive aggregator with no manufacturing capabilities itself, sued the makers of Blackberry communications devices for infringing its patents. *See* NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282 (Fed. Cir. 2005).

90. *See* Daniel P. McCurdy, *Patent Trolls Erode the Foundation of the U.S. Patent System*, SCIENCE PROGRESS, Jan. 12, 2009, <http://www.scienceprogress.org/2009/01/patent-trolls-erode-patent-system/>; *Trolls Demanding Tolls*, *supra* note 2.

91. Intellectual Ventures is a notable exception. Though it does have its own R&D division and has focused on licensing and not litigation, it does own an enormous patent portfolio and could easily turn into the largest patent troll and offensive aggregator the world has ever seen if the management decides to turn to litigation. *See* Glyn Moody, *Don't Feed the Super-Troll*, COMPUTERWORLDUK, June 30, 2009, <http://www.computerworlduk.com/community/blogs/index.cfm?entryid=2317>. Recently, Intellectual Ventures has edged closer to the line with what it terms a “customer-friendly” approach, assigning one of its patents to member company Verizon Communications to serve as “ammunition in a lawsuit.” Zusha Elinson, *Verizon Patent Case Marks a First for Intellectual Ventures*, RECORDER, Feb. 26, 2010, <http://www.law.com/jsp/article.jsp?id=1202444656758>.

92. Galen Moore, *Patent Trolls: Drain on Innovation or Defense of Invention?*, MASS HIGH TECH, Oct 3, 2008, available at <http://www.masshightech.com/stories/2008/09/29/focus5-Patent-trolls-Drain-on-innovation-or-defense-of-invention.html> (citing Boston patent attorney Bruce Sunstein, who proposes the alternative term “patent investor” to describe NPEs otherwise known as “patent trolls”).

93. Nathan Myhrvold, founder of Intellectual Ventures, states that Intellectual Ventures helps small-time inventors by providing them with an aggressive buyer to whom

generally exist to extract license fees by threat of litigation likely outweighs this limited benefit.⁹⁴ Ultimately, the argument that offensive aggregators create a market for unwanted patents may be a smokescreen: these entities instead take advantage of imbalanced bargaining to create an industry populated with inefficient transactions.⁹⁵

Aside from the costs of litigation, industry participants also face the costs of preventative investment to defend against offensive aggregators. Companies are likely to find these precautionary measures inherently difficult to plan, because the lack of transparency in the patent market and the absence of public records for transactions make it impossible to predict when an offensive aggregator may acquire rights to patents that are relevant to the company's business activities. Further exacerbating the situation is the lack of an efficient method for companies to identify which patents they may infringe in the first place.

Without offensive aggregators as buyers, the owners of supposedly unwanted patents might otherwise decide not to monitor and enforce their rights, effectively releasing them into the public domain, or even abandon them outright by failing to pay the maintenance fees. Offensive aggregators may artificially prolong the effective terms of these patents and simply seek rent for rights that should have already dissipated. This is against the patent system's goal of public benefit, and seems to outweigh any incentive that the market-building function of offensive aggregators might provide to innovators.

One effect of offensive aggregators, especially the more litigious ones, is that companies have started to consider their patent portfolios with more care and devote more resources to defending their right to conduct business

they may sell their patents. Amol Sharma & Don Clark, *Tech Gurus Rile the Industry by Seeking Huge Patent Fees*, WALL ST. J., Sept. 17, 2008, available at <http://online.wsj.com/article/SB122161127802345821.html>.

94. See, e.g., Gregory A. Duff et al., *Patent Trolls (and Other Bad News) Lurking in Your Mailbox: Handling Cease-and-Desist Letters in the USA*, 3 J. INTEL. PROP. L. & PRACTICE 442, 443 (2008) (describing companies that are "set up solely for the purpose of owning patents for technology invented by others, asserting infringement of those patents (often without basis), then extracting license fees in settlement of its claims"). One forthcoming study aims to quantify the contribution of NPEs to the increase in patent litigation from 2000–2007. See John Letzing, *Famed Patent Firm Backs Study on Touchy Subject*, MARKETWATCH, Feb. 4, 2009, <http://www.marketwatch.com/story/famed-patent-firm-backs-study-touchy?pagenumber=1>.

95. See generally Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 25 BERKELEY TECH. L.J. 1583 (2010).

activities.⁹⁶ In an effort to prevent offensive aggregators from continuing to assert patents against them, larger companies seek lower litigation costs so that they can consider fighting in court rather than settling primarily out of cost concerns.⁹⁷ Increased efficiency of litigation matters could be beneficial to all members of the intellectual property market: there would be a decrease in the number of frivolous patent infringement lawsuits, an increase in the feasibility of monetization through enforcement, and a corresponding rise in the value of patent portfolios as their expected returns increase.

While law firms work on reasonable methods of making their clients' litigation more efficient, some companies seek to address the matter themselves by trying to limit their damages liability in the event they lose a lawsuit.⁹⁸ Others try to weaken the exclusive rights of patents in an effort to render the offensive aggregators toothless,⁹⁹ though the Supreme Court has largely addressed this concern with its ruling in *eBay, Inc. v. MercExchange, L.L.C.*, which eliminated categorical grants of injunctions where a court finds infringement of a valid patent.¹⁰⁰

Upon further inspection, offensive aggregators appear to play a more complicated role than previously thought. Increasing litigation efficiency seems to be consistent with the goals of the patent system. However, this result seems too far removed to give them credit as a beneficial force. In response to offensive aggregators, operating companies are likely to incur

96. See David Bohrer, *Trolling for Efficiency*, DAILY JOURNAL, June 24, 2009, available at http://www.confluencelaw.com/pdf/DailyJournal_Trolls.pdf (indicating that most companies, under threat from trolls, find that the best defense is to fight back by "becoming the rabid dog that is too expensive and dangerous for the trolls to get near").

97. See *id.*

98. See Grant Gross, *Patent Reform Tops BSA's Legislative Priorities*, INFOWORLD, Mar. 6, 2008, available at <http://www.infoworld.com/d/security-central/patent-reform-tops-bsas-legislative-priorities-023> (stating that the Business Software Alliance, composed of numerous large companies, wants Congress to scale damages back proportionally based on the portion of the product that infringes instead of using the total value of the product).

99. See Brad Stone, *Engineers Fight Patent Reform, Not Patent Trolls*, N.Y. TIMES, Aug. 30, 2007, (Bits Blog), <http://bits.blogs.nytimes.com/2007/08/30/engineers-fight-patent-reform-not-patent-trolls/> (stating that high-technology companies are pushing for weaker patent rights to fend off trolls, whereas pharmaceutical companies are pushing for stronger patent rights that they can enforce).

100. See *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 394 (2006) (stating that "the Court of Appeals erred in its categorical grant of [injunctive] relief"). Prior to the *eBay* ruling, courts rarely denied permanent injunctions after finding infringement. MERGES, MENELL & LEMLEY *supra* note 73, at 355; see also Steve Seidenberg, *Troll Control*, ABA JOURNAL, Sept. 24, 2006, at 50–55, available at http://www.abajournal.com/magazine/article/troll_control/ (describing how the *eBay* decision makes it much harder for patent trolls to get injunctions but also providing the opposite viewpoint that this harms innovation by taking injunctions out of the small inventor's toolbox).

expenditures on legal defense costs or defensive aggregation memberships, countering any positive effect.

Following are some examples of offensive patent aggregators, based on representation in the media:

- Acacia Technologies¹⁰¹

Acacia generates revenue by acquiring patents or exclusive licenses and then aggressively licensing to or asserting against alleged infringers. Its mission statement focuses on the benefits it can provide to patent holders, especially individual inventors or small patent holders with limited resources to bring infringement suits themselves, offering cash up front in addition to revenue shares.¹⁰² Acacia actually has numerous subsidiaries, all with different names.¹⁰³ This allows Acacia to obfuscate and gain the upper hand in its transactions and lawsuits by perpetuating the information imbalance.

- Constellation Group

A classic example of an NPE, this group of shell companies run by Erich Spangenberg acquires patents and targets major companies with lawsuits alleging infringement. Unlike Acacia's statement about benefitting the individual inventor, the Constellation Group's motivation is simply that its actions are "economically right;" its primary method of operation is settling infringement disputes with multi-billion dollar companies.¹⁰⁴ In some cases, the group's actions have gone too far, but it is still rare for Constellation to bear the cost of settlement.¹⁰⁵

101. Acacia Technologies, <http://acaciatechnologies.com/> (last visited Sept. 8, 2009).

102. Acacia Technologies: Why Use Acacia, <http://acaciatechnologies.com/whyuse.htm> (last visited Dec. 22, 2009).

103. The number of subsidiaries was at least fifty according to Acacia's 10-Q report in August 2007, after which Acacia stopped listing subsidiaries in its filings. *See* Acacia Research Corporation, Quarterly Report (10-Q) (Aug. 6, 2007), *available at* <http://www.hoovers.com/freecook/secdoc.xhtml?ID=&ipage=5345342&doc=1>.

104. Heather Skyler, *The Patent Troll*, GOOD.IS/FEATURES, June 29, 2009, <http://www.good.is/post/the-patent-troll/>.

105. In one set of lawsuits, Orion IP reached a settlement with DaimlerChrysler over web site interaction, and Taurus IP sued DaimlerChrysler over the same function using a different patent. A federal judge ruled that the repeat lawsuit violated Orion's settlement agreement and ordered it to pay \$3.8 million in attorney fees. Greg Land, *Federal Judge Rules 'Patent Troll' Must Pay \$3.8 Million in Attorney Fees*, FULTON COUNTY DAILY REPORT, June 19, 2008, *available at* <http://www.law.com/jsp/article.jsp?id=1202422374939>. In another case where Orion IP attempted to sue Mercedes-Benz multiple times, it agreed to pay \$76,500 in legal fees for breaching an earlier settlement agreement. Joe Mullin, *Spangenberg Will Pay Opponent's Legal Fees – Again – While His Patent Faces New Scrutiny*, THE PRIOR ART, July 29, 2008, http://thepriorart.typepad.com/the_prior_art/2008/07/taurus-v-daimlerchrysler-revisited.html.

- Intellectual Ventures¹⁰⁶

Former Microsoft CTO Nathan Myhrvold founded Intellectual Ventures in 2000 as a new type of organization that would focus on building value by accumulating intellectual property, whether developed internally or acquired from outside sources.¹⁰⁷ As of June 2009, Intellectual Ventures possessed about 27,000 patents and has started targeting technology companies for massively profitable licensing agreements.¹⁰⁸ Some of the larger technology companies (including big names like Microsoft, Apple, and Google) have secured safe passage by investing in Intellectual Ventures;¹⁰⁹ in this way, Intellectual Ventures operates like a defensive patent aggregator. However, some fear that the company is none other than a “super troll” that is starting to wake up and may soon start asserting its patents offensively through litigation.¹¹⁰ Intellectual Ventures has also started implementing the catch and release method of licensing, offering licenses on patents for a limited time and then selling the patents to a buyer with a more offensive monetization

106. Intellectual Ventures, <http://www.intellectualventures.com/> (last visited Sept. 5, 2009).

107. *Id.*

108. Zusha Elinson, *Intuit Taxed \$120 Million by Intellectual Ventures*, LAW.COM: IP LAW & BUSINESS, June 24, 2009, <http://www.law.com/jsp/iplawandbusiness/PubArticleIPLB.jsp?id=1202431731346>. To put the 27,000 patents owned by Intellectual Venture in perspective, consider the size of Microsoft’s patent portfolio: “nearly 10,000 issued U.S. patents, with more than 17,000 U.S. patents pending, as well as the growing portfolio of more than 30,000 issued and pending patents filed internationally.” Press Release, Microsoft News Center, Survey: Microsoft Holds Top Patent Portfolio for 2008 (Jan. 2, 2009), *available at* <http://www.microsoft.com/presspass/features/2009/jan09/01-02iecerating.msp>. Since Microsoft is actually an Intellectual Ventures investor, these two entities have a shared interest in directing the strategy of what is likely the largest collection of patents in the world. See Todd Bishop, *Bill Gates, Top Microsoft Executives Do Some of Their Inventing on the Side*, TECHFLASH, Nov. 10, 2008, http://www.techflash.com/seattle/2008/11/Gates_top_Microsoft_executives_do_some_inventing_on_the_side34192179.html.

109. Brad Stone, *Factory of the Future?*, NEWSWEEK, Nov. 22, 2004, at 60–61, *available at* <http://www.newsweek.com/id/55777/page/1>. Note that some of these investor companies may still face assertions due to limited field of use licenses, if they choose to expand into new areas of business. Sharma & Clark, *supra* note 93.

110. See Moody, *supra* note 91; Sharma & Clark, *supra* note 93 (“There is an ‘implicit threat’ that if companies don’t agree to a licensing deal with Intellectual Ventures, they could face costly patent-infringement lawsuits . . .”).

strategy.¹¹¹ This could make Intellectual Ventures a “super troll” that feeds other trolls.¹¹²

D. ROLES PLAYED BY PATENT INTERMEDIARIES IN GENERAL

Based on this brief overview, it appears that the majority of these new market entities share the objective of rewarding inventors, large and small, which satisfies at least one goal of the patent system.¹¹³ There is little evidence, however, that their activities fulfill the other goal of the system by encouraging members of the public to innovate outside of exclusive rights. In fact, offensive aggregators instead may prompt innovators to leave a needlessly wide berth around marginally relevant patents for fear of falling into costly lawsuits.

IV. WHY HAVE INTERMEDIARIES FORMED NOW?

In contrast with the advent of the Internet filtering out certain functions of intermediaries in other markets such as real estate or travel,¹¹⁴ the patent

111. See Elinson, *supra* note 35 (describing a company using catch and release as delivering this threat: “Take a license because we’re going to sell the patent on the open market – and you never know what unscrupulous and lawsuit-prone troll is going to buy it.”).

112. See Posting of Peter Zura to 271 Patent Blog, *Now It Begins? Litigation Rumors Surface over Intellectual Property*, <http://271patent.blogspot.com/2009/09/now-it-begins-litigation-rumors-surface.html> (Sept. 1, 2009 20:36 CST); see also Elinson, *supra* note 91 (describing Intellectual Ventures’ assignment of a patent to a member, though an operating company and not an NPE, that intends to use the patent offensively in a patent fight).

113. This does not indicate that rewarding inventors is a main goal for any of these entities.

114. Real estate agents have not been completely replaced by technology, but the multitude of websites that provide real estate information are allowing consumers to inform themselves, “doing what Realtors used to do” and apply pricing pressure to agent fees. Elizabeth Rhodes, *Web Reveals Once-Secret World of Real-Estate Data*, SEATTLE TIMES, Aug. 12, 2006, available at http://seattletimes.nwsources.com/html/realestate/2003192472_inman13.html. Travel websites have been around long enough that even the transactional travel websites are themselves being pushed out by non-transactional travel websites, at least for consumers’ initial travel research. PhoCusWright FYI: No Reservations: The Rise of The Nontransactional Travel Web Site, [http://www.phocuswright.com/library/fyi/835?utm_campaign=No Reservations%3A The Rise of The Nontransactional Travel Web Site](http://www.phocuswright.com/library/fyi/835?utm_campaign=No%20Reservations%3A%20The%20Rise%20of%20The%20Nontransactional%20Travel%20Web%20Site) (last visited Oct. 28, 2009). Of course, real estate and travel websites are just another type of intermediary, and there are web-based patent intermediaries as well. See Millien & Laurie, *supra* note 3, at 1038 (listing several examples of web-based patent intermediaries like The Dean’s List, Tyhnax, and Yet2.com). However, the market has not matured to the point where these web-based patent intermediaries can simply stand in to take the reins for one step of a standardized transactional process in the way that intermediaries in real estate and travel can.

market has seen an influx of intermediaries.¹¹⁵ Middlemen are now entering the picture despite improved availability of information via the Internet and other technological innovations because they provide valuable functions that other market players are willing to pay for. This current demand for intermediaries has at least three sources: (1) functional requirements of the patent market; (2) need for assistance with valuation; and (3) general industry trends.

A. FUNCTIONAL REQUIREMENTS OF THE PATENT MARKET

The nature of the patent market creates several hurdles for a company engaging in a transaction. The difficulty for sellers to find willing buyers is one obstacle. After finding a buyer, the lack of transparent historical transaction data removes the opportunity for parties to negotiate pricing based on known quantities. These two issues also compound the inherently weak bargaining platform of companies new to a field; such companies may find it difficult to locate appropriate licensors or sellers and may have trouble obtaining fair prices even if they can.

As in other markets, players in the patent market may cluster into disjointed groups that only cluster-spanning entities seeking to bridge the gaps can connect; this represents the existence of “structural holes,” to use network theory terminology.¹¹⁶ Like Hollywood talent agents or professional sports agents, intermediaries in the patent market have an unparalleled view of the players in the marketplace and the experience to connect buyers with sellers and close transactions.¹¹⁷ In addition to the inherent complexity of

115. See Eric Young, *Patent Marketeers*, SAN FRANCISCO BUSINESS TIMES, Mar. 21, 2008 (describing the recent expansion of patent brokers on the market for intellectual property), available at <http://sanfrancisco.bizjournals.com/sanfrancisco/stories/2008/03/24/focus1.html>; Ron Laurie, *Strategic Patent Acquisition* (Jan. 22, 2007) (unpublished presentation, presented at the Best Practices for Buying, Selling, and Licensing Patents Seminar), at 5, available at http://ip-strategy.com/downloads/LSI_Strategic_Patent_Acquisition.pdf (stating that there were about five active brokers in 2000, and around thirty by 2006); Millien & Laurie, *supra* note 3 (stating that the new era of the evolving IP marketplace is “characterized by the rise of ‘market-maker’ intermediaries who seek to make IP a liquid asset class and, of course, profit from it”).

116. See Benassi & Di Minin, *supra* note 26, at 73 (discussing a possible second theory to explain the existence of brokers based on the concept of structural holes).

117. See, e.g., Rosita Wolfe, Tony Meenaghan & Paul O’Sullivan, *The Sports Network: Insights into the Shifting Balance of Power*, 55 J. BUS. RESEARCH 611, 620–21 (2002) (stating that the position of sports agents “in the network is secured through the power, based on expertise, that they hold” which is “being called on increasingly to create and maintain an appropriate and workable balance in the relationships between major actors”); Claire Hoffman, *Talent Agents Get into Film Fundraising*, Los Angeles Times, Nov. 3, 2006, available at <http://articles.latimes.com/2006/nov/03/business/fi-agents30> (describing how talent

structuring an intellectual property transaction, including the transfer of patent rights,¹¹⁸ the limited pool of potential buyers whose needs match a seller's specific offering makes it very difficult for a lone seller to act without a broker's assistance.¹¹⁹

Even if companies can find transaction partners, their lack of access to transactional information for patents creates information gaps that entities may position themselves to exploit.¹²⁰ These asymmetries and the corresponding transaction risks create a demand for transactional guidance.¹²¹ In markets like real estate sales are a matter of public record,¹²² and the travel market sees package deals widely advertised in all forms of media; this kind of transparency and access to information reduces the consumer need for brokerage services. On the other hand, many patent transactions are conducted in private and not recorded in a manner that would allow

agencies have made the necessary connections to work around decreased financing from movie studios and acquire private equity investment in their clients' movies).

118. A patent right carries unique risks including the chance of patent invalidity, the chance that a court will construe claims in a manner that renders an infringement claim invalid, and the chance that a competitor may be able to design around the claims; these risks are not ones that can be quantified using reliable methods. Laurie, *supra* note 47, at xvii.

119. Even in an auction setting, where buyers and sellers gather for the purpose of transacting, it can be difficult for them to connect. See Michael Kanellos, *Few Buyers at Patent Auction*, CNET NEWS, Apr. 6, 2006, available at http://news.cnet.com/Few-buyers-at-patent-auction/2100-1014_3-6058737.html (describing a 2006 Ocean Tomo patent auction with only around twenty-five lots sold out of seventy-four offered). Given that patents generally focus on narrow subject areas, they fail to have general appeal among buyers, who are unlikely to purchase without achieving a delicate intersection between knowledge of the field and a specific need that can be addressed by a particular patent. See Andrew Payne, *Ocean Tomo Patent Auction*, WIKI.PAYNE.ORG, Apr. 6, 2006, http://www.payne.org/index.php/Ocean_Tomo_Patent_Auction.

120. Michael Pierantozzi, COO of Gathering 2.0, a San Francisco Bay Area intellectual property group, states that "[i]t's very difficult for buyers and sellers to get comparative data to make good decisions on whether they are paying the right amount for what they are buying" and that businesses want to "improve transparency and efficiency in the process." Young, *supra* note 115.

121. High search costs, bargaining asymmetries, and difficulty in valuation are some of the market imperfections that make market players look to brokers for assistance. See Benassi & Di Minin, *supra* note 26, at 72–73 (raising a possible theory for the existence of patent brokers using transaction cost economics).

122. For example, a data service called Real Estate Data Incorporated collects transaction-level information on real property from public records, including transaction prices. Thomas J. Miceli et al., *Title Systems and Land Values*, 45 J.L. & ECON. 565, 572 (2002). The largest provider in the U.S. of real estate data, First American Core Logic, provides consolidated access to public records on property valuation, comparable sales, and real property transactions. See Press Release, First American CoreLogic, New First American CoreLogic Study Quantifies Consumer Benefit of Economic Stimulus Tied to Mortgage Rates (Sept. 15, 2009), available at http://www.firstam.com/pressrelease.cfm?pr_id=1816.

interested parties to search for relevant information.¹²³ In a market that suffers from a lack of information, intermediaries that possess the knowledge and experience from conducting their own patent transactions stand to benefit the most.¹²⁴

This knowledge and experience may also assist companies manufacturing complex devices that potentially infringe numerous product and process patents. Although a company may own or license some of the relevant patents, it may still lack rights to others, especially where the area of technology is crowded with patents.¹²⁵ Dense groups of intellectual property rights are difficult to navigate without the help of a knowledgeable party, and the increasing difficulty of ascertaining the boundaries of modern patents further complicates the task.¹²⁶ Especially in recent years, the intricate subject matter of high technology may have led to a substantial increase in the ambiguity of patent claims.¹²⁷ Furthermore, the sustained growth in numbers

123. See Mark Lemley, Remarks at the Federal Trade Commission Hearing on The Evolving IP Marketplace 147–48 (Apr. 17, 2009) (transcript available at <http://www.ftc.gov/bc/workshops/ipmarketplace/apr17/transcript.pdf>) (“Nobody knows the price at which patents are sold or licensed or the terms under which those prices or licenses take place.”); Suzanne Harrison, *Comps Data for Patent Transactions* (Feb. 6, 2009) (unpublished presentation, presented at the Berkeley Center for Law & Technology: Theory and Practice of Patent Valuation), at 2, available at <http://www.law.berkeley.edu/institutes/bclt/patent-valuation/presentations/harrison.pdf> (stating that the “patent transaction market is not transparent” and there is not even a “way to verify annual transaction volume”); Laurie, *supra* note 47, at xvi–xvii (stating that there is a lack of publicly available data regarding sales of comparable patents). Some possible exceptions to the lack of transparency are open auction data and companies that may choose to include some patent acquisition or divestment related data in their SEC filings. Interestingly, the transparent open auctions could really be paving the way for private deals post-auction. See Joe Mullin, *The Buzz Begins at Ocean Tomo Patent Auction; Will Deals Follow?*, THE PRIOR ART, Mar. 27, 2009, available at http://thepriorart.typepad.com/the_prior_art/2009/03/ocean-tomo-auction-march-27.html. The rare litigation proceeding about license deals may occasionally expose bits and pieces of valuation-related information, but this would only give insight into the narrowest slivers of the market. See *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1328–32 (Fed. Cir. 2009) (describing expert testimony about cross-license agreements between Microsoft, Apple, Hewlett-Packard, and other companies).

124. See Ian D. McClure, *The Significance of Intellectual Property Auctions Today*, IP PROSPECTIVE, Sept. 25, 2009, available at <http://www.ipprospective.com/burgeoning-business/the-significance-of-intellectual-property-auctions-today/> (suggesting that intellectual property auctions like those held by Ocean Tomo have “opened eyes to other market players that there is opportunity in this marketplace to lend transparency to potential buyers and sellers”).

125. See *supra* note 60 (describing patent thickets).

126. See JAMES BESSEN & MICHAEL J. MEURER, *PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK* 46 (2008).

127. See *id.* at 56 (stating that “in an earlier time, when technology was simpler, . . . the ambiguity of patent claims was not so great” but that “there are reasons to think that this

of patent applications and grants over the last two decades can only have exacerbated the situation.¹²⁸

Based on the high density of patent rights, it is unsurprising that many large companies operating in the same technological space use each other's patented technology.¹²⁹ In some situations, companies may be able to identify and license the patents most valuable to them. However, because many more patents would otherwise remain undiscovered until the unwelcome notice of alleged infringement, companies also enter into portfolio cross-licensing deals for specific fields of use. Such a deal gives established members of a technological clique increased freedom to operate without incurring the high search costs of individual patent identification. This is not the case for new entrants to the field, who are unable to transact on even grounds and are likely to find it far more difficult to penetrate the thicket without financially overextending themselves through costly licensing and search-related expenditures. However, without such expenditures they risk even more expensive litigation.¹³⁰

These functional issues have varying effects on the different types of intermediaries. Brokers are likely to be the main beneficiaries of the

ambiguity has been increasing substantially in recent years"). Note that this ambiguity (and indeed, the thicket phenomenon) is largely centered on the high technology industry and not on the biotechnology industry. See Debbie Strickland, *Patent Reform Battle Pits Biotech against High-Tech*, GENETIC ENGINEERING & BIOTECHNOLOGY NEWS, Mar. 6, 2009, http://www.genengnews.com/news/bnitem_print.aspx?name=50688785. High technology companies generally use a large number of components in a single product, each of which may be covered by a patent, but biotechnology companies typically develop drugs that have one active ingredient, which may only be covered by one composition patent and one method-of-use patent. *Id.*

128. See *id.* at 68–69 (describing how clearance costs are worsened by a large number of property rights held by different owners, and how patent applications have more than tripled from 1980 to 2004); *infra* Figure 1.

129. For example, participants in the hard disk drive industry cross-licensed each other's entire patent portfolios in order to avoid the cost of suing one another for patent infringement. See Graham & Sichelman, *supra* note 5, at 1066 (citing cross-licensing deals involving Samsung, Hitachi, Seagate, and Western Digital, among others).

130. See, e.g., Andrés Guadamuz González, *The Software Patent Debate*, 1 J. INTELL. PROP. L. & PRACTICE 196, 204 (2006) (stating that "patent thickets . . . encourage inefficiency through the creation of complex cross-licensing relations between companies, and they may even stop newcomers entering the market if they fail to penetrate the thicket"). One example of an entrant facing difficulties "penetrating the thicket" is a story from 1993 involving a young Microsoft. See Graham & Sichelman, *supra* note 5, at 1076–77. Their portfolio at the time consisted of only 24 patents, which placed them at a heavy competitive disadvantage against IBM, which had over 1000 patents; they ended up having to pay licensing fees of \$20–30 million. See *id.* Beyond the plight of entrants, even established players risk displacement from a favorable cross-licensing position if they fail to maintain sufficient numbers of patents to keep pace with other players. See *id.* at 1066.

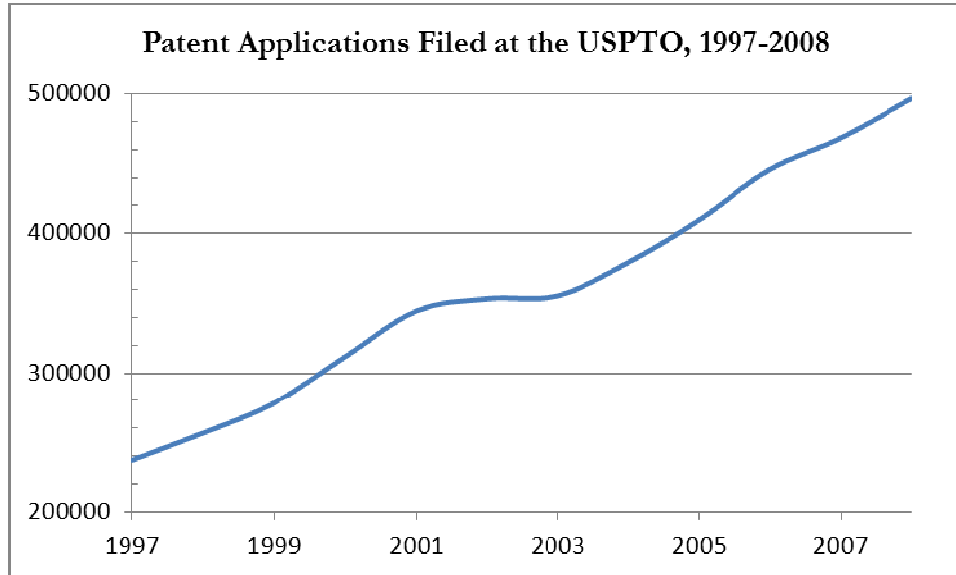
increased demand for network connections and transparency. Most individual companies should be willing to pay for the expertise and superior connections of a broker in a particular field, given that the broker has probably handled a greater volume of transactions than the company has. Brokers may also assist in navigating patent thickets by advising on potential licensing targets, though defensive aggregators provide the most direct service of this nature by supplementing their members' existing cross-licensing practices. As for defensive and offensive aggregators, each can use its wealth of experience to obtain lower purchase prices in the absence of full transparency. Offensive aggregators can further exploit the nature of thickets to find potential licensees.

For these reasons, the patent market's functional imperfections appear to directly catalyze the formation of intermediaries. The current rise in brokers and defensive aggregators could be an entrepreneurial response to the increased number of companies willing to pay for services to address the serious structural barriers to fair pricing and general market fluidity. In addition, both defensive and offensive aggregators may find that the exploitative opportunities in the patent market make their purchasing strategies advantageous.

B. CONCERNS RELATED TO VALUATION

Two types of demand for intermediaries arise from the difficulty in estimating the value of patents, which are more likely to be valueless than not.¹³¹ First, companies need patent valuation guidance to ensure that their estimates are reasonable and that their offer prices are justified. Second, companies may desire larger patent portfolios to increase their overall portfolio value and their chances of owning a valuable patent.

131. Wagner & Parchomovsky, *supra* note 22 ("The vast majority of U.S. patents pass their lives in complete idleness, gathering dust rather than revenues.").

Figure 1¹³²

Narrow subject matter, difficulty of enforcement, or a low chance of surviving a validity challenge leaves most patents with little value.¹³³ Despite the steady increase in the volume of patent applications over the last decade, shown in Figure 1, businesses still face substantial uncertainty about the quality of patents for potential acquisition.¹³⁴ In other words, there is an enormous volume of patents out there that may not be worth very much. Because expected values for these patents are low, potential buyers might not be able to determine which target patents or portfolios are truly worth acquiring without outside assistance.

One mitigating strategy is to build a larger patent portfolio, which dilutes the risk of any individual patent being low-value, improves freedom of operation, and also provides a defensive boost against litigation in a mutually-

132. USPTO Performance and Accountability Report: Fiscal Year 2008 116 tbl.2 (2008), <http://www.uspto.gov/web/offices/com/annual/2008/2008annualreport.pdf>. The temporary plateau around 2001–2003 can possibly be attributed to the economic slump catalyzed by the bursting of the technology bubble.

133. See Lemley & Shapiro, *supra* note 40, at 81.

134. See *id.* at 83 (“Uncertainty . . . [is] endemic in [the] patent system.”); Benassi & Di Minin, *supra* note 26, at 70 (arguing that the rush to increase patent quantity resulted in a “significant amount of overlapping patents of questionable quality” and that most companies across industries are obtaining patents of “little or no commercial relevance” (citing Bronwyn H. Hall, et. al., *Market Value and Patent Citations: A First Look* 101–28 (NBER Working Papers, no. 7741, 2000))).

assured-destruction sense by covering a wider range of technologies.¹³⁵ Accumulating a mass of patents for each particular area of technology in a patent portfolio also has the advantage of redundancy, minimizing the risk of harm to the overall portfolio even if some of its patents are found invalid in patent office or court proceedings.¹³⁶ To achieve these benefits, businesses may grow their patent portfolios by filing for patents on self-made innovations or by acquiring the patents of others. Larger businesses operate at a scale of acquisition far exceeding that of smaller firms, though smaller firms are more critical about the quality of patents that they do acquire.¹³⁷ Larger firms have therefore increased the volume of patent acquisitions, and smaller firms demand advisory services to maximize return on investment.

Patent valuation concerns present an opportunity for brokers with deep knowledge in a field to assist with value assessments. The increased volume of acquisitions triggered by larger firms means more business opportunities for brokers; small firms seek expert advice from knowledgeable brokers to guide their acquisition strategy to establish market positions, protect business activities, and bolster their licensing negotiations. Defensive aggregators sell to a captive audience: large firms are looking for convenience and small firms are looking for value, both of which defensive aggregation services can provide. As with functional issues inherent in the patent market, both defensive and offensive aggregators may also be able to exploit patent valuation difficulties to reduce purchase costs.

As described, the difficulty of patent valuation and the importance of developing patent portfolios create a ripe market for middlemen. Companies are driving the demand for valuation assistance and strategic acquisition guidance. This increased demand continues to cultivate the growth of

135. See Graham & Sichelman, *supra* note 5, at 1065 (describing defensive purposes for patent acquisition, including the stockpiling of patents as a shield that permits accused infringers to file counterclaims against a plaintiff accusing them of infringing patents in a game of “mutually assured destruction”). Along with benefits to freedom of operation and defensive strength, larger patent portfolios grant other scale-related benefits like improved bargaining positions, greater chances of success in cases that are litigated, influence in the patent system, and attractiveness to investors. See Wagner & Parchomovsky, *supra* note 22, at 33–37. The diversity of a larger portfolio also strengthens a company’s ability to deal with uncertainty. See *id.* at 37–39.

136. See Lemley & Shapiro, *supra* note 40, at 81 (explaining how patent owners may hedge against the risk of invalid patents by filing numerous patents on related technologies).

137. See Wagner & Parchomovsky, *supra* note 22, at 53–55 & n.184 (explaining that, when compared to smaller firms, larger firms “get less innovative bang for their patenting buck” because their focus is more on increasing portfolio size rather than seeking specific patent protection).

brokerage services and defensive aggregators, while the uncertainty of patent valuation rewards informed patent purchasers.

C. INDUSTRY TRENDS

Trends in the patent market and intellectual property-intensive industries may also spur the creation of patent intermediaries. The growing belief that intellectual property assets hold significant untapped value, the increasing demand for intermediary services, and the example of one extraordinarily successful intermediary have all served to inspire entrepreneurs to launch their own services.

The increased perception of value in intellectual property is symbiotic with the rise of new businesses working with the market for intellectual property. Without the increased perception of value, no one would have been enticed to create new entities that make it easier to derive value from intellectual property; at the same time, without the existence of these entities to help drive the increased interest and lower transaction costs, the change in perceived value of intellectual property would not have manifested as readily.¹³⁸ Secondary relationships also exist between intermediaries. For example, some brokers and defensive aggregators have formed to combat offensive aggregators.¹³⁹

These feedback loops have increased the number of companies willing to invest in maintaining, acquiring, and licensing patents. Historically, entrepreneurs have always sought to take advantage of the latest demand trends.¹⁴⁰ Intellectual property's meteoric rise to importance in the business world and the accompanying massive profit potential have proven tempting enough for people to make career changes. Professionals in the intellectual property field have left law firms or businesses to start numerous patent

138. Though lower than they might otherwise be without the existence of brokerage services, transaction costs are still high, because the market value of patents is so difficult to ascertain. *See* Martin, *supra* note 39. This foreshadows an increase in the number of entities that will aim to collect and provide better information in order to establish market values for patents.

139. PatentFreedom and RPX specifically mention NPE activity as a reason to use their services. *See supra* note 52; *supra* note 85.

140. *See* Benassi & Di Minin, *supra* note 26, at 75 (explaining the rise of patent brokers in the Silicon Valley by the "high concentration of unexploited IP up for grabs among the ruins of many failed startups"); Mark Frankel, *When the Tulip Bubble Burst: Tulipomania – The Story of the World's Most Coveted Flower*, BUSINESSWEEK, Apr. 24, 2000, available at http://www.businessweek.com/2000/00_17/b3678084.htm (relating 17th century Holland's tulip bulb craze to the growing technology bubble at the time).

intermediaries and capture the market from a new angle.¹⁴¹ With their insider knowledge and industry experience, they are able to perceive and exploit gaps in the patent market. However, as with any other asset bubble, many of the new companies out there might be considered speculators engaging in “irrational exuberance.”¹⁴² It is not clear how many will remain standing after the dust settles.

The well-publicized success of Intellectual Ventures may also have drawn new participants to the field.¹⁴³ Though Intellectual Ventures bills itself as an invention company with its own laboratory and science consultants working on “invention sessions” attended and transcribed by patent lawyers, leading to hundreds of patent applications a year, this is not its only mode of portfolio growth.¹⁴⁴ More relevant to the intermediary market, Intellectual Ventures has also been a voracious purchaser of patents,¹⁴⁵ building its

141. For example, Ron Laurie left Skadden Arps’ Palo Alto office to co-found Inflexion Point Strategy, a brokerage and advisory service. Inflexion Point Strategy: Leadership Team, <http://www.ip-strategy.com/Leadership.html> (last visited Oct. 28, 2009). Ron Epstein, former general counsel at Brocade Communications Systems and former Director of Licensing at Intel Corporation, founded IPotential, a consulting, brokerage, and licensing service. IPotential: Company Overview: Management Team, <http://www.ipotential.com/overview/index.htm#team> (last visited Oct. 28, 2009).

142. Alan Greenspan, Chairman, Fed. Reserve Bd., Address at the American Enterprise Institute (Dec. 5, 1996) (transcript available at <http://www.federalreserve.gov/boardDocs/speeches/1996/19961205.htm>) (proposing the possibility that “irrational exuberance has unduly escalated asset values” in the stock market); see Richard J. Lutton, Jr., Remarks at the Federal Trade Commission Hearing on The Evolving IP Marketplace 91 (May 4, 2009) (transcript available at <http://www.ftc.gov/bc/workshops/ipmarketplace/may4/090504transcript.pdf>) (“A new culture of patent abuse has . . . fueled a bubble of investment that’s far removed from the common sense underpinnings of the patent system.”); Brian Kahin, *The Patent Bubble . . . Still Growing*, HUFFINGTON POST, Sept. 26, 2008, http://www.huffingtonpost.com/brian-kahin/the-patent-bubble-still-g_b_129232.html (describing the possibility that we are in the midst of a patent bubble, using Intellectual Ventures and its practice of “[a]rbitrage in exotic assets” as a barometer).

143. Among others, BusinessWeek’s cover article surely drew attention to the financial success of Myrhvold’s company. See, e.g., Michael Orey, *Inside Nathan Myhrvold’s Mysterious New Idea Machine*, BUSINESSWEEK, July 3, 2006, at 54–60, available at http://www.businessweek.com/magazine/content/06_27/b3991401.htm (describing the “cash-rich firm” and its avant-garde business model).

144. See Malcolm Gladwell, *In the Air: Who Says Big Ideas Are Rare?*, NEW YORKER, May 12, 2008, at 50–60, available at http://www.newyorker.com/reporting/2008/05/12/080512fa_fact_gladwell?currentPage=all (describing Intellectual Ventures’ prolific invention process resulting in five hundred patent applications a year); Stone, *supra* note 109 (describing the original purpose of Intellectual Ventures to think “wilder, crazier thoughts than anyone else,” but also mentioning how “the company is out buying existing patents in droves”).

145. See Stone, *supra* note 109 (stating that Intellectual Ventures had purchased about 1,000 patents by 2004). To get an idea of the high rate at which Intellectual Ventures has

portfolio with seed money from investor companies like Microsoft, Intel, Sony, Nokia, Apple, Google, and eBay. Its volume of patent purchases in the last several years has been so high that as a result brokers may have enjoyed a swell of work. Furthermore, as other players in the market see Intellectual Ventures use its momentum to negotiate profitable licensing deals,¹⁴⁶ they are likely to seek comparable returns using a similar offensive portfolio building strategy.¹⁴⁷

Standout examples like Intellectual Ventures illustrate the returns that can result from capitalizing on industry trends towards a new appreciation and higher valuation of intellectual property assets. These trends have laid the groundwork for and have fostered the development of a new market, with more companies looking for assistance on making intelligent choices about intellectual property acquisitions and divestitures. The new intermediary entities are reacting to this new demand for intermediary services and the new perception of value for this asset class.

V. LEGISLATION, REGULATION, AND PRIVATE ORDERING

The various business models of the intermediaries have similarly various effects on the market that converge to or diverge from the goals of the patent system. Though they all address the same set of market demands, each type of intermediary has a distinctive catalog of services. One question to consider: as these services mature and evolve, is there a need for legal regulation to ensure that they do not exceed the purposes and boundaries of the patent system? Additionally, is legislation the only way to ensure that these intermediaries will not abuse the patent system for their own gain, or is private ordering sufficient to correct aberrant behavior? Companies are dedicating more attention to patent-related matters and investing more capital in patent applications and acquisitions.¹⁴⁸ With so much investment in

been building its patent portfolio, consider that just five years later it was sitting on 27,000 patents. Elinson, *supra* note 108.

146. See Sharma & Clark, *supra* note 93 (reporting on Verizon and Cisco paying in the range of \$200 million to \$400 million for license fees and equity stake in Intellectual Ventures).

147. Ron Laurie, managing director of Inflexion Point Strategy, says of Intellectual Ventures “[i]f they went away, that would not be a good thing.” *Id.* This raises the possibility that other players in the patent market may be relying on Intellectual Ventures to succeed in an effort to validate their business models.

148. See Wagner & Parchomovsky, *supra* note 22, at 76 (stating that “engaging in the patent system is viewed as a worthwhile endeavor by most firms” and “firms are increasingly participants in the patent system”).

the patent system, any policy changes will significantly affect how people run their businesses.¹⁴⁹

That said, ignore for a moment the possibility that patent intermediaries are merely an ephemeral side effect of the patent market's growing pains, and assume that they are here to stay. Legislation or agency regulation could be beneficial to encourage the intermediary behavior that furthers the goals of the patent system and to keep counter-productive activity in check. Along these lines, the following specific proposals include the establishment of a central database of transaction information or the legislative governance of intermediaries. The non-invasive status quo of private ordering appears more moderate, but agency regulation may expedite the maturation of the patent market.

A. CENTRAL DATABASE

Recording transaction information in a central database could benefit the public by increasing the level of transparency in the patent market.¹⁵⁰ Whether established through legislation or a private entity, the service's success would depend primarily on widespread adoption, though a free-to-use publicly mandated recording system would provide far more benefit than a private pay-to-use model.¹⁵¹ Such a system might track patent filings, litigation, licensing agreement, active participants in the field, and most importantly, transaction prices. Legislative action is ideal for building such a complex system, because the high coordination cost and vast number of players make it unlikely that the private sector could develop a standardized centralized repository without legislative assistance.

149. *Id.* (stating that "policy changes to the patent system are likely to have substantial impact" on firms).

150. See Jeff Kuester & Brett Bartel, *Evolution of the IP Market*, INTELLECTUAL ASSET MANAGEMENT, Sept./Oct. 2009, at 34, available at <http://www.awakenip.com/wp-content/uploads/2009/09/IAMarticle.pdf> (quoting commentary by Professor Mark Lemley and Apple Computer Chief Patent Counsel Richard J. Lutton, Jr. on their support for solving the transparency problem, providing better information about selling and license prices of intellectual property).

151. Some private intermediary services at least begin to address parts of this problem. See, e.g., Mullin, *supra* note 4 (describing PatentFreedom's subscription-based service for members to exchange information about NPEs and patent transactions); PatentFreedom: Research Methodology and Value Proposition, <https://www.patentfreedom.com/background-research.html> (last visited Nov. 18, 2009) (briefly describing PatentFreedom's method of gathering information about NPE-related patent activity); The Financial Valuation Group: Intellectual Property Transactions Database, <http://www.weknowvalue.com/ipdatabase/ipdatabase.html> (last visited Nov. 18, 2009) (providing a searchable database about intellectual property transactions, but only containing information gleaned from public records).

A publicly accessible database for patent transaction information would affect each intermediary class in different ways. To begin with, brokers might focus more on providing strategic advice than patent sleuthing, because the improved access to information would let their clients do more background searching and context building for a given transaction.

Brokers contribute overhead to the cost of a transaction, but as long as transacting parties welcome their services, brokers do promote liquidity and value in the patent market. Rational parties looking to transact in patents will use the services of brokers as long as the additional value they provide is greater than the cost of entry. Two main concerns would decrease the likelihood that an entity will enlist a broker on its transaction: (1) brokers could selectively disclose or use information for their own gain; and (2) inefficiencies in each broker's data storage and retrieval system could add to the overhead cost.

Legislation to make patent transactions a matter of public record would address both of these concerns by removing the temptation to hoard information and streamlining brokerage activities. A centralized system would allow transacting parties to achieve information parity, or at least establish a relatively accurate historical context for the transaction. This would be a major improvement over the current situation, where parties have great difficulty locating good information because the majority of patent transactions are private.¹⁵² The collection and publication of transactional information would also represent a migration to a collaborative method of operation, a change that would no doubt find much support among many of the players in the technology market.¹⁵³

Nonetheless, a database would not necessarily remove the need for brokers in the patent market; parties might still seek bridging and advisory services to help make sense of all the data. Furthermore, brokers would benefit from a unification of their patchwork recording systems into a single repository that would have far fewer gaps than any one private database. This would lower their own search expenditures, so they could present more attractively priced deals to clients.

152. See *supra* note 123 (discussing private patent transactions).

153. The Silicon Valley represents a major concentration of technology firms and patent intermediaries alike. Professor Saxenian argues that the cooperative nature and free-flowing information of the early 1970s formed a strong "technological community" which built a foundation for the commercial success that the region has experienced. See ANNALIE SAXENIAN, REGIONAL ADVANTAGE: CULTURE AND COMPETITION IN SILICON VALLEY AND ROUTE 128 30–34 (1994). The patent market could see a huge increase in liquidity by creating a similar sort of collaborative information network.

As for defensive patent aggregators, a centralized database would enable them to ensure that they are acquiring rights at fair prices. Because an entity considering the services of a defensive aggregator would be concerned primarily with how well costs are managed, anything that lowers the cost of patent acquisitions or searches would benefit defensive aggregators by attracting more clients. A central repository of patent transactions would assist defensive aggregators directly by allowing them to conduct efficient searches on licensing and acquisition activity, and indirectly by improving their access to transactional information as they look for additional patents to purchase or license, perhaps with the help of brokers. At the same time, they might find it more difficult to avoid paying premiums for truly top-shelf patents once sellers can educate themselves more readily, though they would also be able to acquire lesser-valued patents at lower prices or avoid them altogether.

Like brokers, defensive aggregators add an overhead fee to transactions. However, distributing these fees across the participants in an aggregation group minimizes the per-transaction overhead cost.¹⁵⁴ Due to the non-rivalrous nature of intellectual property, the object of the transaction does not lose effectiveness on distribution, making the overhead cost more palatable.¹⁵⁵ Also, because some degree of executive control is necessary for any group to make decisions about licenses and acquisitions, the overhead fee is a cost that members would have needed to contribute even if they were to form their own defensive aggregation groups without seeking out a third party.

Offensive aggregators do not add fees in the same sense as defensive aggregators and brokers; they are pure purchasers. Like any other seller, a party planning to sell patents to an offensive aggregator has the primary goal of obtaining at least a fair value in return. A centralized repository would enhance the likelihood of this result for the reasons discussed earlier in this Part regarding improved transactional context. Compared to the other types of intermediaries, offensive aggregators stand to benefit the least from such legislation because they exploit opacity to gain leverage in licensing transactions. Therefore, a central system would do much to elevate the positions of other market players to bargain with offensive aggregators on

154. A defensive aggregator purchases a patent or license using money from the pooled resources of the group, and grants all members (sub)licenses to those acquired rights.

155. The effectiveness may decrease to the extent that competitors are part of the same defensive aggregation group, because this precludes them as potential targets for licensing or assertion; however, greater freedom of action and competition is generally beneficial for the public good and should outweigh this.

more even ground. An offensive aggregator could no longer rely on its superior experience and knowledge of the field to make aggressive purchases and licensing deals.

The largest problem with the centralized approach, however, is the high probability that market players will resist the call for disclosure of sensitive business information. This renders a voluntary private solution almost completely unworkable, although a membership-based approach where participants contribute transactional information in return for access to a database may be feasible, even if the system might face difficulties with enforceability and gaining traction.¹⁵⁶ Therefore, a legislative approach appears to be in order. Unfortunately, it would be very difficult to pass such a law without some way to garner the support of powerful industry groups. Such entities would only lend their support if they could determine that the cost of information disclosure would be outweighed by the benefits of having easy, centralized access to the transactional information of other market players.

B. CONSTRAINTS ON ACTIVITY

For each of the different ways in which an intermediary might abuse the patent market, legislative boundaries could serve the system well. These boundaries might include disclosure requirements and obligations to deal in good faith. One advantage of addressing problems piece by piece instead of all at once in a scheme such as a central database is that policymakers may find it easier to support a bill with a smaller footprint.

First, consider the possibilities for brokers to exploit their status as gatekeepers of transactional information given the deficiencies in the market. Purchasers and sellers that have little access to information outside of their own few transactions could be left without any way to verify what brokers tell them about the market landscape or about patents they may be considering for divestment or acquisition. Legislation imposing transparency on the seller would curb the risk of broker abuses.¹⁵⁷ One possibility is the

156. Gaining traction would be a problem because entities would have little incentive to join early on, when the database is only sparsely populated with information.

157. In other markets with brokerage activity like real estate, there are statutes that require full disclosure of defects on the part of sellers and agents. *See, e.g.*, CAL. CIV. CODE §§ 1102–1102.15 (2009) (describing the requirements of real estate disclosure statements for transfers in California). A broker dealing in patents should be held to standards that require full disclosure of known prior art, possibility of blocking patents, difficulty of workarounds, records of maintenance fees, and other related risks. Though buyers could benefit from brokers providing this information as a matter of law, they should still conduct diligence covering these topics to be thorough. *See* Mike McGurk, *Lack of Patent Due Diligence Can Be a*

creation of a governing agency analogous to the Securities and Exchange Commission (SEC) to oversee and regulate patent transactions.¹⁵⁸ Though the transaction volume of the patent market is unlikely to approach that of the securities market,¹⁵⁹ many of the reasons for which the SEC was created apply to patent transactions as well—market participants would benefit from reporting regulations, restraints on fraudulent or bad faith conduct, and access to mandatory disclosure filings.¹⁶⁰

In contrast to brokerages, defensive and offensive aggregators are generally patent purchasers and share some of the same means for exploitation. They are likely to be the more experienced party in a given patent transaction and can take advantage of that to obtain unfairly low prices. A defensive aggregator has the additional option of charging membership prices high enough to exclude new potential members. The existing members of the group could then choose to assert aggregated patents against those companies unable to pay the requisite fees. Though these actions would probably raise questions about antitrust abuse,¹⁶¹ a law requiring defensive aggregators to register and adhere to rules regulating their patent assertions could further limit this problem and also reduce excess litigation.¹⁶² An agency overseeing patent transactions could require registration of these two other types of intermediaries as well as brokers.

Deal-Killer, MASS HIGH TECH, Mar. 12, 2007, available at <http://www.masshightech.com/stories/2007/03/12/focus4-Lack-of-patent-due-diligence-can-be-a-deal-killer.html>.

158. Created by the Securities Exchange Act of 1934, the SEC has authority to “register, regulate, and oversee brokerage firms, transfer agents, and clearing agencies as well as the nation’s securities self-regulatory organizations” U.S. Securities and Exchange Commission: The Laws that Govern the Securities Industry, <http://www.sec.gov/about/laws.shtml> (last visited Nov. 18, 2009). As an alternative to a government agency, a private member-based regulatory agency (akin to the National Association of Realtors) is a possibility as well. *See infra* Part V.C.

159. This is due to a much smaller group of interested parties and a far lower volume of transactable material in the market. The related topic of intellectual property securitization is about a separate layer of transactions based on future patent income streams, which would not directly contribute to an increase in the volume of patent transactions. *See generally* Glasner, *supra* note 28.

160. *See* U.S. Securities and Exchange Commission: The Laws that Govern the Securities Industry, *supra* note 158.

161. However, an offensive aggregator is likely considered a single entity, which would alleviate the antitrust problem. *See American Needle v. Nat’l Football League*, 538 F.3d 736, 744 (7th Cir. 2008) (holding that NFL teams act as a single entity in licensing intellectual property for the purposes of antitrust).

162. The defensive aggregators all claim that they do not intend to assert patents; even Nathan Myhrvold of Intellectual Ventures explains that litigation would prove too costly and he hopes he will never have to sue anyone. *See* Sharma & Clark, *supra* note 93. However, this type of statement is no contract with the public. There is nothing stopping defensive

C. PRIVATE ORDERING

Is it possible that the market, through private ordering, will solve the problems that legislators might target? If so, it may not be worth the costs of establishing new laws or regulatory agencies to corral errant intermediaries acting towards their own advancement. For example, direct-to-purchaser transactional services could supplant patent intermediaries as they exist today.¹⁶³ Even if they are not replaced, intermediaries could still adopt a set of norms that might achieve results similar to that of legislation or regulation.

One method of private ordering is natural market selection. Sellers shopping for representation in the market will go back to brokers who have helped them put together successful transactions in the past. Sellers without a history of transactions to rely on will seek out brokers that have a proven track record of candor and service quality. Brokers making the type of bad faith decisions that legislation would have addressed will probably be unable to attract enough business to keep pace with their competitors.¹⁶⁴

Another type of private ordering is self-governance through private membership-based agencies, such as the National Association of Realtors in the real estate market. These agencies can provide registration services, quality of service guarantees, and even ethics requirements to ensure moral conduct and prohibit fraudulent activities.¹⁶⁵ Currently, the patent market is missing an organization that has enough membership and influence to catalyze a true change in the way that patent intermediaries do business.¹⁶⁶

aggregators from weaponizing their portfolios, and Myhrvold is well aware of this option, stating “[i]f I appear to be a total milquetoast and I say I’ll never do it, then people will rip me off totally.” *Id.*

163. Services like Tynax, an online patent brokerage and exchange, are actually building their business at another level of abstraction on top of brokers, buyers, and sellers. *See* Tynax: About Tynax, <http://www.tynax.com/about.php> (last visited Nov. 18, 2009). Given enough adoption by buyers and sellers, this type of super-bridging service may result in lower demand for standard brokerage services.

164. *See supra* note 37 (describing the fate of opportunistic brokers).

165. *See* National Association of Realtors: 2009 Code of Ethics and Standards of Practice, <http://www.realtor.org/mempolweb.nsf/pages/code> (last visited Nov. 19, 2009).

166. It may be worth keeping an eye on the Patent & Intellectual Property Intermediary Association, which currently appears to be in the infancy of organizational development. *See* Patent & Intellectual Property Intermediary Association, <http://www.pipia.org/> (last visited Nov. 19, 2009).

D. LEGISLATION, REGULATION, AND PRIVATE ORDERING IN COMBINATION

Whether norms of business conduct are instantiated through regulation or private ordering methods, any new norms would force existing intermediaries to adapt or face market obsolescence. Regardless of any evolutionary step market participants may take, they could still benefit from a centralized repository of transactional information, to the extent they do not simply capitalize on informational opacity. A direct access website, for example, could tap into a national database and allow users to retrieve data relevant to their field of business. Even for parties that do not make use of this thin middle layer, those seeking to complete a transaction could use a centralized repository for due diligence processes and historical context for negotiations. A private agency regulating norms of business conduct could require forms of disclosure updating a central repository. Realistically, any complete solution is likely to involve components of legislation, regulation, and private ordering.

VI. CONCLUSION

Though stakeholders in the patent market believe intermediaries are here to stay,¹⁶⁷ it is also possible that some of them may fade away as the patent market matures and the demands they satisfy cease to exist.¹⁶⁸ The three primary types of entities in this discussion can be placed on a continuum of projected longevity. Of the three types, offensive aggregators operate under the most controversial business models, appear to deviate most from the goals of the patent system, and have attracted sufficient ire, which almost guarantees they will be the first to fall under any sort of directed legislation. Even without government intervention, the market has already seen entities that have risen to combat them directly. Defensive patent aggregators may have a longer life if they are widely joined, and could eventually evolve into standards-setting licensing bodies. Finally, brokers will probably be the longest lasting. The complex valuation nature of intellectual property is something that will remain no matter how transparent the market becomes; parties that wish to deal in this market will always be looking for those that

167. See Millien & Laurie, *supra* note 3, at 1054 (stating that the “newly-established and emerging IP business models . . . are not going away” based on an economic justification argument).

168. Erich Spangenberg, of the Constellation Group offensive aggregator, predicts that the NPE patent litigation business may dwindle to nothing within five or six years, at which point patents may trade as commodities, and patent quality assessments may become easier. See Skyler, *supra* note 104.

can take over the reins or, at the very least, provide a second set of eyes to assist in the relevant transactional analysis.

Any legislation regulating the intermediary patent market would greatly accelerate its maturation and close any gaps that intermediaries may be exploiting. Such a culling of businesses would catalyze a further mutation in the patent market, bringing about new services and entities of a previously unseen nature. In a field built on innovation, it is fitting that the most creative and innovative intermediaries will be the ones that manage to capitalize on the immense economic value imbued in the patent market.