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Elizabeth D. Ferrill

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**Patent Investment Trusts:
Let's Build a PIT to Catch the Patent Trolls**

*Elizabeth D. Ferrill*¹

troll (trōl) *n.* In Norse Mythology, repulsive dwarfs who lived in caves or other hidden places. They would steal children and property but hated noise.²

I. Introduction

Peter Detkin, the assistant general counsel for Intel, coined the term “patent trolls” in the late 1990s, to describe his own impression of this new legal dwarf.³ According to Detkin, a patent troll is “somebody who tries to make a lot of money off a patent that they are not practicing and have no intention of practicing and in most cases never practiced.”⁴ In a business that collects more than \$100 billion annually in licensing fees,⁵ these patent trolls are taking an ever increasing piece of the licensing pie for themselves,⁶ much to the chagrin of their prey.

¹ J.D. Candidate, University of North Carolina School of Law, 2006. Special thanks to Frank DeCosta, of Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P. for his assistance.

² E.D. HIRSCH, JR. ET AL., *THE NEW DICTIONARY OF CULTURAL LITERACY* 45 (2002). “The troll in the children’s story ‘The Three Billy Goats Gruff,’ for example, lives under a bridge and is enraged when he hears the goats crossing the bridge.” *Id.*

³ Brenda Sandburg, *Inventor’s Lawyer Makes a Pile from Patents*, *THE RECORDER*, July 30, 2001, LEXIS, Nexis Library, RECRDR File.

⁴ *Id.*

⁵ Andrew Carter & Fayth A. Bloomer, *Generating Cash from a Patent Portfolio: An Overview*, *PAT. STRATEGY & MGMT.*, Aug. 6, 2004 at 5.

⁶ Alexandra Dell, *Just Can’t Get Enough*, *INTELL. PROP. L. & BUS.*, July 2004, available at <http://www.ipww.com/texts/0704/acadiz0704.html> (citing that Acacia Research Corporation’s 2004 earnings are projected to be \$2.5 million, up from \$599,000 in 2003).

In the past fifty years, the range of patentable subject matter has expanded exponentially.⁷ Today, patents are issued for software, genetic information, and even business methods.⁸ The number of patents issued annually has more than tripled in the past two decades⁹ to 169,296 in 2004.¹⁰ Additionally, intellectual property portfolios (of which patents are a major part) have become valuable assets for businesses and important tools in attracting investment and venture capital.¹¹ Modern patents have an intrinsic value beyond merely the right to exclude competitors—they serve as powerful marketing tools¹² and can have the same influence on a corporation's bottom line as tangible property assets.¹³ In fact, today's intellectual property is a key corporate asset precisely because it may be the *primary* driver of revenue.¹⁴

⁷ Ben Depoorter, *The Several Lives of Mickey Mouse: The Expanding Boundaries of Intellectual Property Law*, 9 VA. J.L. & TECH. 4, 11 (2004).

⁸ *Id.* at 11–12.

⁹ Timothy Aepfel, *Patent Dispute Embroils Host of Industries*, WALL ST. J., Oct. 21, 2004, at B1.

¹⁰ Press Release, United States Patent and Trademark Office, USPTO Releases FY 2004 Performance and Accountability Report (Jan. 25, 2005), available at <http://www.uspto.gov/web/offices/com/speeches/05-06.htm> (citing the number of utility patents issued in fiscal year 2004). In total, the USPTO issued 187,170 patents, including 169,296 utility patents, 16,533 design patents, and 998 plant patents. *Id.* It is interesting to note that current patenting “stampede” is actually quite *unremarkable* when measured against previous patent cycles in U.S. history. KEVIN RIVETTE & DAVID KLINE, REMBRANDTS IN THE ATTIC: UNLOCKING THE HIDDEN VALUE OF PATENTS 14 (2000). There have been previous upsurges in patenting during the time of Alexander Graham Bell and Thomas Edison in the 1880s, when there were rapid advances in steam, railroad, telegraph, and electrical power; between 1902 and 1916, when automobile and aircraft industries were in rapid early-stage growth; and finally in the 1960s, when there was a boom in aerospace and plastics. *Id.*

¹¹ Depoorter, *supra* note 7, at 28–29.

¹² *Id.* at 29.

¹³ Daniel R. Cahoy, *Changing the Rules in the Middle of the Game: How the Prospective Application of Judicial Decisions Related to Intellectual Property Can Promote Economic Efficiency*, 41 AM. BUS. L.J. 1, 22 (2003). In fact, some industry experts argue that the best assets, such as Microsoft's know-how and Dell's exclusive marketing set-up, are in fact intangible. Bernard Condon, *Management, Strategies, Trends: Numbers Games*, FORBES (January 25, 1999).

¹⁴ See Cahoy, *supra* note 13, at 22 n.78.

The rising speculation in intangible assets by patent trolls may indicate that patents are ready to evolve to the next level. Just as air space rights and carbon emissions before them, patents could be traded on stock exchanges. This evolution could take the form of a Patent Investment Trust, modeled on the popular Real Estate Investment Trust ("REIT"). By authorizing a Patent Investment Trust ("PIT"), the United States Congress could help create a public market based on patents and patent licensing, harnessing market power to provide capital for inventors and stabilizing speculation through more accurate patent prices and licensing fees.

II. Background

A. Patent Law

The Constitution of the United States authorizes the federal government to issue patents.¹⁵ According to Article I, Congress may "promote the Progress of Science and useful Arts by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."¹⁶ To that end, Congress passed a series of Patent Acts, beginning with the Patent Act of 1790 and most recently with the Patent Act of 1952.¹⁷ For an invention to be patentable, the Patent Act states that the invention must "(1) constitute 'patentable subject matter,' (2) meet the technical requirements for patentability, which require that the invention be 'new,' 'useful,' and 'non-obvious,' and (3) disclose a written description of an invention including the best mode of carrying it forth."¹⁸

In exchange for disclosing such an invention, the United States government grants the inventor the right to exclusive use of the invention for a period of twenty years from the patent

¹⁵ See U.S. CONST. art. I, § 8, cl. 8.

¹⁶ *Id.*

¹⁷ See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146, 150 (1989).

¹⁸ Cynthia M. Ho, *Who Deserves the Patent Pot of Gold?: An Inquiry into the Proper Inventorship of Patient-Based Discoveries*, 7 DEPAUL J. HEALTH CARE L. 185, 189 (2004) (citations omitted).

application filing date.¹⁹ Thus, the United States Supreme Court stated that the patent system “embodies a carefully crafted bargain” between the inventor and society by encouraging the disclosure of patentable inventions in return for the “exclusive right to practice” for a period of years.²⁰ Further, the Court has stated that Congress intended patentable subject matter to “include anything under the sun that is made by man.”²¹ However, the Court has limited patentability by excluding laws of nature, natural phenomena, abstract ideas, and mathematical formulas from patentable subject matter.²²

The explicit goal for patents in the Constitution is to promote the arts and sciences.²³ However, legal theorists argue that in reality the goal of the patent is three-fold: (1) an incentive for inventors to invent; (2) an incentive for inventors to disclose their inventions; and (3) to induce firms to invest in innovation of patentable inventions.²⁴ While the first two goals reasonably follow from the constitutional language and the statutory requirements for patenting an invention, the third goal recognizes that even after an invention has been patented, “further investment is often necessary before [the invention] is ready for commercial exploitation.”²⁵ For example, many inventions will require the building of new plants or equipment before the commercial potential of the invention can be realized.²⁶ Therefore in addition

¹⁹ 35 U.S.C. § 154(a)(2) (2000).

²⁰ *Bonito Boats*, 489 U.S. at 150–51; *see also* Ho, *supra* note 18, at 189 (describing a patent as a social contract between the inventor and society, where the public benefits from knowledge in the patent since it is immediately available and may be instructional for other innovations even though the public is barred from practicing the patent until the patent term has expired).

²¹ *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (quoting a Committee Report accompanying the 1952 Patent Act).

²² *Diamond v. Diehr*, 450 U.S. 175, 185–86 (1981).

²³ U.S. CONST. art. I, § 8, cl. 8.

²⁴ *See* Rebecca Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1024, 1028, 1036 (1989).

²⁵ *Id.* at 1037.

²⁶ *Id.* (noting that in many cases the additional investments required for successful commercialization may “dwarf the initial research expenditures in making the invention”).

to the incentive to invent and disclose, the initial protection of a patent may enhance²⁷ the likelihood that a patented invention can be successfully commercialized.²⁸

B. Modern Patent Enforcement

The increasing importance of patents has resulted in more vigorous enforcement.²⁹ In fact, enforcement has become a multi-billion dollar industry.³⁰ Licensing agreements and settlements or remedies related to infringement litigation are crucial tools of modern patent enforcement.

While there are multiple types of patent licensing,³¹ a licensing agreement is essentially a contract between the patent owner and another party that wishes to have permission to practice

²⁷ Some commentators have argued that in a world without a patent protection, society would actually get the benefit of more new inventions "because successive innovators will freely be able to build upon earlier advances." Saul Levmore, *Centennial Tribute Essay: Property's Uneasy Path and Expanding Future*, 70 U. CHI. L. REV. 181, 185 (2003). However, it is also possible that open access environments could cause stagnation as "innovators try to maintain their secrets in the absence of a system with registration and protection." *Id.* Under our current system the theory seems to be that those who do not own the patent will still be able to learn from the patent even though they can not practice it. See Ho, *supra* note 18.

²⁸ Eisenberg, *supra* note 24, at 1037.

²⁹ Sandburg, *supra* note 3.

³⁰ Brenda Sandburg, *Pioneers Change Their Business as Corporations Fight Back*, THE RECORDER, July 30, 2001, LEXIS, Nexis Library, RECRDR File.

³¹ See RICHARD RAZGAITIS, VALUATION AND PRICING OF TECHNOLOGY-BASED INTELLECTUAL PROPERTY 7-8 (2003). In his book, Razgaitis describes six major types of technology licensing including: enforcement licensing (usually in the pre-litigation or settlement context, as a patent owner is trying to enforce his patent rights on an infringer); opportunity licensing (when the seller has technology that will be of value to a buyer who is seeking to expand into a market); opportunistic licensing (buyer seeks out a seller to ask to license previously unavailable or under-valued technology patents); divestiture licensing (a seller who is exiting a business market and seeks to license the technology it owns that is part of the exited market); partner licensing (usually part of joint venture and may be part of a cross-license); and start-up licensing (buyers maybe traditional venture capitalists who are looking to fund a new business based on the technology patents). *Id.*

the patent.³² In addition to actually practicing the patent, licensing allows patent owners to “extract hidden, additional value”³³ from their intellectual property, much as a land owner may gain additional revenue by separately selling surface, mineral, and royalty rights all from a single plot of land.³⁴

Patent licensing has evolved in the past century. Historically, the patent owners, corporations such as IBM who actually manufactured the patented inventions, were the major licensors of patents rights.³⁵ For example, in the early 1990s Microsoft agreed to pay \$30 million to license certain Big Blue patents. As part of the settlement, IBM required Microsoft to turn over the Windows 3.1 *source code* to ensure compatibility with IBM’s OS/2 operating system.³⁶ One can appreciate the economic importance of licensing by noting that all together, the IBM Corporation alone takes in about \$1 billion a year in licensing revenue.³⁷

Eventually, other companies that developed but did not practice the patented technologies started licensing their patents.³⁸

³² See *Zenith Radio Corp. v. Hazeltine Research Inc.*, 395 U.S. 100, 135 (1969) (“The law also recognizes that [the patentee] may assign to another his patent, in whole or in part, and may license others to practice his invention.”).

³³ RAZGAITIS, *supra* note 31, at 6.

³⁴ Susan Warren, *As Energy Booms, ‘Landmen’ of Texas Enjoy a Gusher*, WALL ST. J., Mar. 7, 2005, at A1.

³⁵ Dell, *supra* note 6.

³⁶ See RIVETTE & KLINE, *supra* note 10, at 45–46 (noting that having to license its Windows code was especially “onerous” to Microsoft); see also *id.* at 93–96 (discussing Kodak’s infringement of seven patents owned by Polaroid, when it produced an instant photography camera in the 1970s). Polaroid sued, and Kodak was deemed an infringer and ordered to pay \$925 million in damages, shut down a \$1.5 billion plant, and spend nearly \$500 million to buy back 16 million instant cameras it had sold to customers between 1976 and 1985. *Id.*

³⁷ Danny Fortson, *The Big Squeeze*, INTELL. PROP. LAW & BUS., Nov. 29, 2004, at 19.

³⁸ See Steven M. Cherry, *Company Profile: The Patent Profiteers*, IEEE SPECTRUM, June 2004 at 38, 41. Of course, the patent confers a right to exclude and the Patent Act does not require the patent owner to actually practice the patent to get these exclusionary rights. See 35 U.S.C. § 154 (2000).

For example, Qualcomm Inc., founded in 1985,³⁹ develops patented cellular technologies and licenses this technology to cell phone makers, all without actually manufacturing cell phones.⁴⁰ Qualcomm designs and manufactures digital wireless telecommunications products based on CDMA technology. Sales of integrated circuits, license fees, and royalties for the use of its patents provide the company's primary sources of revenue.⁴¹

With businesses increasingly drawing their revenue from licensing agreements, patent enforcement companies entered the market. These enforcement companies do not seek to develop or outright acquire patents; rather, the companies merely provide the patent owner with the *service* of patent enforcement. One enforcement company, Mahr-Leonard Management, has represented everyone from National Semiconductor Corp. to Gilbert Hyatt, the inventor of the microprocessor.⁴² The average license fee negotiated by Mahr-Leonard is \$10 million, of which it receives a twenty to twenty-five percent commission.⁴³ Since

³⁹ QUALCOMM INC., ABOUT QUALCOMM, at <http://www.qualcomm.com/about/history.html> (last visited Mar. 10, 2005) (on file with the North Carolina Journal of Law & Technology).

⁴⁰ Cherry, *supra* note 38, at 38, 41. Although the "Qualcomm" name is on many cell phones, this logo only indicates that the phone contains a Qualcomm integrated circuit, not that the cell phone was manufactured by Qualcomm. See QUALCOMM INC., 2004 ANNUAL REPORT 37 (2005), at http://ww3.ics.adp.com/streetlink_data/dirQCOM/annual/images/Qualcomm_2004AR.pdf (on file with the North Carolina Journal of Law & Technology); see also RIVETTE & KLINE, *supra* note 10, at 119–22 (recounting the story of Eugene Emmerich whose ultimately unsuccessful research company yielded a *single* computer-aided design patent that has since made nearly \$50 million in licensing fees alone). One computer maker, Commodore, even went bankrupt after it refused to take a license from Emmerich and a court issued a permanent injunction against Commodore barring sales of their computers in the United States. *Id.*

⁴¹ See QUALCOMM, INC., *supra* note 39.

⁴² Sandburg, *supra* note 30, at 1. Another successful patent enforcement firm is General Patent Corp. Founded approximately fifteen years ago, the company is a "full-service intellectual property management company" which negotiates licenses and, if necessary, initiate lawsuits on behalf of their patent-owner clients. See Cherry, *supra* note 38, at 38, 41.

⁴³ Cherry, *supra* note 38, at 38, 41.

1988, the company has negotiated more than \$700 million worth of licenses.⁴⁴

Recently, a new breed of company has emerged—the companies that Detkin described as “patent trolls.” One of the leaders in this new breed is Acacia Technologies.⁴⁵ Acacia employs more lawyers and accountants than engineers.⁴⁶ Moreover, the engineers’ job is not to create technology, but just to evaluate patents.⁴⁷ In fact, Acacia’s sole business is the acquisition and license of patents, followed by aggressive patent enforcement.⁴⁸ Unlike the three previously mentioned types of companies, “for Acacia Technologies . . . speculation is the heart of the game.”⁴⁹ So far, Acacia has made millions from licenses and settlements involving streaming media technology, the V-chip, and video on demand.⁵⁰ As of 2005, Acacia has generated \$25 million from the licensing of the V-chip alone.⁵¹

III. The Rise of the Patent Trolls

Unlike copyright owners,⁵² patent owners do not have a robust market in which to license patents, nor do patent owners

⁴⁴ *Id.*

⁴⁵ *Id.* at 38, 40.

⁴⁶ *Id.* at 40.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.* at 41.

⁵⁰ *Id.* at 38. Streaming media is “the basic technology by which sound and video is delivered to personal computers or digital television via the Internet or a cable box.” *Id.* The “V-chip” is a system designed to let parents block certain types of television programs from their children. *Id.* In 2001, Congress ordered that content-filtering technology, like the “V-chip”, be installed in all new television sets. *Id.*

⁵¹ ACACIA TECHNOLOGIES GROUP, ACACIA TECHNOLOGIES GROUP FACT SHEET, at <http://www.acaciaresearch.com/pr/AcaciaFactSheet.pdf> (last visited Mar. 8, 2005) (on file with the North Carolina Journal of Law & Technology).

⁵² See Doug LaLone, *What To Do When The Copyright Policeman Knocks On Your Door: ASCAP Takes a Stand Against Music Copyright Violators*, 83-AUG MICH. B. J. 28 (2004) (explaining the process that BMI and the American Society of Composers, Authors and Publishers (“ASCAP”) use to enforce performance licenses for music and return the licensing fees to the copyright holders).

have a compulsory licensing scheme mandated by law. Although the value of patents in general is higher than ever,⁵³ often the individual patents are sold significantly mispriced because inventors undervalue their patents without objective information about how much the patent could be worth.⁵⁴ Further, the pricing for patents is complicated by the unpredictable nature of technology and its future financial success. One famous example of the difficulty of estimating the expected value of present inventions is IBM's underestimation of the future market for home computers.⁵⁵

The lack of a robust patent market combined with other economic conditions has given rise to patent speculators, the aforementioned "patent trolls." These patent trolls engage in what is more accurately termed *opportunistic licensing*.⁵⁶ One non-

⁵³ Depoorter, *supra* note 7, at 25–26 (stating that "because 'our society is predominantly and increasingly a service society' and because 'the service portion is increasingly based on information,' the value of intellectual goods is now higher than ever") (internal citations omitted).

⁵⁴ ACACIA TECHNOLOGIES GROUP, Acacia Technologies Slide Presentation, at http://www.acaciatechnologies.com/presentation_main.htm (last visited Mar. 8, 2005) (on file with the North Carolina Journal of Law & Technology) (showing that the search for significantly "mispriced" patents is stated business objectives for the company).

⁵⁵ Depoorter, *supra* note 7, at 47; see also Senator Joseph Lieberman, *Statement of Senator Joe Lieberman on Developing a National Broadband Strategy*, Address at Wind River System, Alameda, California (May 28, 2002), at <http://lieberman.senate.gov/press/02/05/2002528828.html> (on file with the North Carolina Journal of Law & Technology) (recounting a 1943 comment by the chairman of IBM, Thomas Watson, Sr. who said "I think there is a world market for maybe five computers.").

⁵⁶ Andrea Lynn Evensen, "*Don't Let the Sun Go Down on Me*": *An In-depth Look at Opportunistic Business Method Patent Licensing and a Proposed Solution to Allow Small-Defendant Business Method Users to Sing a Happier Tune*, 37 J. MARSHALL L. REV. 1359, 1361 (2004). Some commentators (including the author of this reference) limit the term opportunistic licensing to "the use of *invalid* patents to secure licensing fees." *Id.* (emphasis added). The reference points out that the actual validity of the patents will likely never be decided due to the high cost of litigating. Rather many small defendants are forced to settle by paying a licensing fee. This Comment will use a slightly broader definition of opportunistic licensing. By definition, a patent issued by the Patent & Trademark Office is deemed to be *prima facie* valid. See 35

technical example of opportunistic licensing is speculators who buy drilling rights for oil.⁵⁷ Opportunistic licensors of patents are normally defined by two main characteristics. First, patent trolls tend to buy older patents, which may have been forgotten or overlooked (and thus cost less to acquire) but still play a roll in modern technology.⁵⁸ Then they aggressively enforce these older patents against makers of relatively new technologies.⁵⁹ Second, most patent trolls have no plans to practice the patent—they make all their money from licensing, often under threat of litigation.⁶⁰

Patent trolling can be very lucrative for both patent owners and their lawyers. Suits can settle for as much as \$50 million and most lawyers routinely charge a forty-five percent contingency fee.⁶¹ One of the best-known attorneys in the patent trolling business had earned at least \$400 million in contingency fees through 2001 alone.⁶²

A. Criticism of Speculators

The actions of the patent trolls have not gone without substantial criticism. Some argue that patent trolls, much like their mythical fabled counterparts, “want glittering pots of gold in exchange for doing absolutely nothing.”⁶³ Others argue that the patent trolls clog up the legal system with baseless litigation and bankrupt the manufacturers of technology by demanding unfairly high licensing fees.⁶⁴ One attorney, at a major intellectual property

U.S.C. § 282 (2000). Therefore, in this Comment, opportunistic licensing will mean the use of patents of *questionable* validity to secure licensing fees.

⁵⁷ Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1600 (2003).

⁵⁸ Sandburg, *supra* note 3.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.* “By the most conservative estimates, the best-known lawyer in the patent-enforcement industry, Gerald Hosier, has pulled in a least \$400 million in fees Lawyers in the field routinely charge contingency fees as high as 45 percent, and suits can settle for as much as \$50 million.” *Id.*

⁶³ *Id.*

⁶⁴ Aeppel, *supra* note 9, at B1. One could argue that a licensing fee should not be “unfair” if it was the result of an arms-length negotiation between the parties.

law firm, termed this “the personal injury game comes to patents,” noting that, as in personal injury cases, companies often settle rather than fight out a costly litigation.⁶⁵

A few critics even predict that inappropriate use of patent laws could ruin the patent system for everyone else by providing incentives for “pinstriped lawyers instead of white-smocked inventors”⁶⁶ as the Constitution had intended.⁶⁷ Thomas Woolston, a Virginia business owner, recently claimed that the online auctioneer, eBay, was infringing his business method patent for selling auctioned items at a fixed price.⁶⁸ He sued eBay and eventually won a jury verdict of \$35 million in May 2003, but the case is awaiting a decision on appeal to the U.S. Court of Appeals for the Federal Circuit.⁶⁹ For eBay, dealing with the patent troll incidents like this is “an unfortunate cost of doing business” and has driven up its costs, while diverting time and resources from business development.⁷⁰

One expert concluded that the patent troll problem amounted to a hidden tax on technology products, hampering innovation and preventing a large number of products from entering the market because the manufacturer could not afford the risk of patent litigation.⁷¹ One chief executive of an investment bank worries that there may be “an IP Armageddon coming” as

But it is important to remember that many of the “patent trolls” only approach established businesses for license fees. The only choice these businesses have is to settle and pay the licensing fee or fight a costly legal battle. *Id.*

⁶⁵ *Id.*

⁶⁶ Brad Stone, *Patent Problems*, NEWSWEEK, Oct. 13, 2004, at <http://www.msnbc.msn.com/id/6241971/site/newsweek/> (on file with the North Carolina Journal of Law & Technology).

⁶⁷ See *supra* text accompanying note 20.

⁶⁸ Maggie Shiels, *Technology Industry Hits Out at ‘Patent Trolls,’* BBC News, June 2, 2004, at

<http://newsvote.bbc.co.uk/mpapps/pagetools/print/news.bbc.co.uk/1/hi/business/3722509.stm> (on file with the North Carolina Journal of Law & Technology).

⁶⁹ Ellen McCarthy, *Waiting Out a Patent Fight with eBay*, WASH. POST, Jan. 6, 2005, at E01.

⁷⁰ Shiels, *supra* note 68.

⁷¹ Stone, *supra* note 66, at 3.

more and more firms indiscriminately accumulate patents for the sole purpose of asserting their rights against others.⁷²

B. Benefits of Speculators

Given all this criticism of patent trolls, it may seem hard to find any benefit to their activities. Nevertheless, there are at least three significant benefits from the patent speculators: They provide capital to inventors, level the licensing playing field for small inventors, and redefine the nature of patents as property.

A key point that the critics fail to mention is that the patent trolls, like Acacia Technologies, buy many of these underutilized patents directly from the inventors.⁷³ This sale of patents presumably gives the inventors additional capital with which they may chose to create new inventions. Once it has acquired the patent, the patent troll simply uses its much larger resources to enforce the patent as a property right, thereby recovering its initial investment along with a substantial profit.

Many of the companies complaining about being “extorted” by patent trolls⁷⁴ are in fact quite aggressive in enforcing their own patent rights. Perhaps the patent speculators are merely giving the big guys a little taste of their own medicine.⁷⁵ For example, Pitney Bowes, best known for making postage meters, owns a variety of patents ranging from enhanced

⁷² Fortson, *supra* note 37, at 19.

⁷³ See, e.g., Cherry, *supra* note 38, at 38 (discussing how Acacia Technologies bought the V-chip patent, which allows parents to control what children can watch on the home TV, from two U.S. Air Force officers who invented the device).

⁷⁴ Sandburg, *supra* note 3 (discussing Intel’s decision to use the term “patent trolls” instead of “patent extortionists” after being sued for libel).

⁷⁵ This issue of big companies fighting over patent rights is not a new one. In fact, even nineteenth-century businesses used the power of patents to help them dominate markets and competitors, including the “Great Telegraph Wars” of the 1870s between Cornelius Vanderbilt and Jay Gould who hurled legal, financial, and competitive assaults at each other to control Thomas Edison’s telegraph patents. RIVETTE & KLINE, *supra* note 10, at 37.

network connections for cellular phones⁷⁶ to improvements in print resolution for inkjet printers.⁷⁷ Although the company does not make printers, it sued Hewlett-Packard ("HP") for infringement, leading HP to agree to pay \$400 million to settle the suit in mid-2001.⁷⁸ Perhaps patent speculators signal the end of the "free ride"⁷⁹ that the large companies were taking on the backs of less affluent patent owners.

Patent speculators are emblematic of the trend in the intellectual property world to recast patents as a form of investment property. One company, Forgent Networks, claims it only turned to enforcing its patents when it became clear that the company could not survive in the video hardware business.⁸⁰ Forgent has since enforced its patents for a digital video compression system⁸¹ (purportedly used to make JPEG images), signing multi-million dollar licensing deals with Sony and recently filing suit against thirty-one others for infringement, including Adobe Systems, Dell, and Xerox.⁸²

⁷⁶ See U.S. Patent No. 5,974,307 (issued Oct. 26, 1999) (disclosing a method and system communicating with a voice response unit over a cellular telephone network).

⁷⁷ Sandburg, *supra* note 3; see, e.g., U.S. Patent No. 6,827,769 (issued Dec. 7, 2004) (disclosing photosensitive optically variable ink heterogeneous compositions for ink jet printing).

⁷⁸ Sandburg, *supra* note 3.

⁷⁹ *Id.*

⁸⁰ Mark Hachman, *Update: Forgent Claims Rights to JPEG Patent*, EXTREME TECH, July 18, 2002, at <http://www.extremetech.com/article2/0,3973,389261,00.asp> (on file with the North Carolina Journal of Law & Technology); see also RIVETTE & KLINE, *supra* note 10, at 125–26 (stating that both Texas Instruments and National Semiconductor were also reportedly saved from bankruptcy by "all-out patent licensing and litigation efforts").

⁸¹ Hachman, *supra* note 80, at 3.

⁸² Kirk Kroeker, *Forgent Sues 31 Companies*, TECHNEWSWORLD, Apr. 23, 2004, at <http://www.technewsworld.com/story/33518.html> (on file with the North Carolina Journal of Law & Technology). The list of defendants included: Adobe Systems, Agfa, Apple Computer, Axis Communications, Canon USA, Concord Camera, Creative Labs, Dell, Eastman Kodak, Fuji Photo Film, Fujitsu Computer, Gateway, Hewlett-Packard, IBM, JASC Software, JVC, Kyocera, Macromedia, Matsushita, PalmOne, Panasonic, Ricoh, Broderbund, Savin, Thomson S.A., Toshiba, and Xerox. *Id.*

IV. Proposed Solution

The rise of the patent trolls may signal that it is time for society to take the next step in the evolution of patents from only an investment property to a tradable instrument. Just as air space rights were redefined in the 1970s,⁸³ the time has come for the government and investors to reconsider patents. Instead of mere *intellectual* property, patents should be viewed as a tradable commodity that could be bought and sold on a stock exchange just like other tangible property. Shares of interest in patents could be traded on an exchange and the share price would be determined by market forces.

A. The Market Economy

The United States economy is a market economy that operates, in part, through a market mechanism.⁸⁴ That market mechanism is an informal network of signals that influences consumer demand for goods and the use of resources to supply those goods.⁸⁵ Adam Smith, the founder of modern economics, called the market mechanism the “invisible hand.”⁸⁶ Price is the most important signal of the market mechanism since prices coordinate decisions between buyers (seeking lower prices) and sellers (seeking to earn profits).⁸⁷

⁸³ Levmore, *supra* note 27, at 188; see also Gregory M. Parkhurst & Jason F. Shogren, *Evaluating Incentive Mechanisms for Conserving Habitat*, 43 NAT. RESOURCES J. 1093, 1111 (2003) (discussing the New York City's Landmark Preservation Law of the 1970s that allowed owners of historic landmarks who were restricted from developing the air space above their historical buildings to sell their air space rights to surrounding building owners who in turn could build above the zoned height limits). For a more recent example, consider the carbon-emissions credit market that has rapidly developed in Europe since the Kyoto Protocol went into effect in January 2005. See Mark Landler, *Mixed Feelings as Kyoto Pact Takes Effect*, N.Y. TIMES, Feb. 16, 2005, at C1.

⁸⁴ DAVID O'CONNOR & CHRISTOPHER FAILLE, BASIC ECONOMIC PRINCIPLES: A GUIDE FOR STUDENTS 26 (2000).

⁸⁵ *Id.* at 27.

⁸⁶ DAVID O'CONNOR, THE BASICS OF ECONOMICS 9, 16 (2004).

⁸⁷ O'CONNOR & FAILLE, *supra* note 84, at 27.

Various industries are categorized by their market structure.⁸⁸ One major characteristic of market structure is the amount of information available to buyers and sellers about the market and the product.⁸⁹ In a perfectly competitive industry all the buyers have identical information about the product and its availability and price, and as a result, sellers are “price takers.”⁹⁰ In contrast, in a monopolistic market, the seller has all the information about the market, and buyers could be subject to abusive pricing if not for government regulation.⁹¹ Further, either type of market is considered “efficient” when finite resources are used without undue waste, cost, or effort.⁹²

A stock market is a mechanism by which stocks are traded.⁹³ Stock markets provide a way to link buyers and sellers of shares and serve as a means to negotiate a price that is agreeable to both parties.⁹⁴ They are an integral component of the U.S. financial market economy for three main reasons. First, stock markets provide a vehicle for raising investment capital, since the proceeds from sales of newly issued stock generates the funds needed for building plants and purchasing real estate.⁹⁵ Second, stock markets allow investors to earn profits, termed capital gains, from the purchase and sale of previously issued stock.⁹⁶ Finally, stock markets send market signals throughout the economy.⁹⁷ These market signals indicate investors’ confidence in specific corporations, different industries, economic sectors, and the overall direction of the U.S. economy.⁹⁸ Buyers and sellers also make investment decisions based in part on these signals.⁹⁹ Market-oriented institutions, like stock markets, are crucial to the economy

⁸⁸ See *id.* at 92.

⁸⁹ See *id.*

⁹⁰ See *id.* at 92–93.

⁹¹ See *id.* at 99–100.

⁹² See SUSAN LEE, *ABZS OF ECONOMICS* 70 (1987).

⁹³ O’CONNOR, *supra* note 86, at 206.

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.* at 207.

⁹⁸ *Id.* at 206.

⁹⁹ *Id.*

as they provide a workable blueprint for sustained economic growth.¹⁰⁰

B. A Market for Trading Patents?

Like other assets in our economy, patents would benefit from a market-oriented valuation rather than being valued as a threat or spoils of litigation. Today, companies must rely on a sometimes inefficient court system to remedy patent disputes.¹⁰¹ However, a market for patents would give inventors and licensees a more rational valuation for their dealings in intellectual property. Currently, companies, like Acacia, can make individual deals to acquire patents, which unbeknownst to the patent holder may be “significantly mispriced” in the absence of a market mechanism.¹⁰² Under a market-based system, inventors would have the option of approaching many investors in an open marketplace before selling their patents. In addition, inventors would have the option of retaining some equity in their patent, allowing them to share in the proceeds if the invention proves to be a commercial success. While some patents would be considered useful and probably fetch a high price, other patents would be deemed less useful and thus sell for a much lower price. Nonetheless, this is the nature of a market-based system, and hopefully those patents with intrinsic value will be recognized and not “significantly mispriced” or undervalued.

Certain patents, of course, will lend themselves to trading better than others since their value may be more readily identifiable. For example, patents which are central to many different products—so-called “foundational” patents—have reliable streams of income and will by their very nature be more appealing to traders than more obscure product-specific patents. Foundational patents include gatekeeper patents to the human

¹⁰⁰ *Id.* at 237.

¹⁰¹ Wendy J. Gordon, *Asymmetric Market Failure and Prisoner's Dilemma in Intellectual Property*, 17 DAYTON L. REV. 853, 868 (1992).

¹⁰² See ACACIA TECHNOLOGIES GROUP, *supra* note 54.

genome¹⁰³ and the original patents for the airplane, both of which are essentially required to practice in those fields.¹⁰⁴ For example, Glenn Curtiss and the Wright Brothers earned more than two million dollars in 1933 by licensing their foundational airplane patents.¹⁰⁵

Further, an efficient market that trades patents should result in lower transaction costs over individual assignment and licensing deals.¹⁰⁶ A market for licenses could allow “persons bargaining [to] arrive at prices through a less expensive mechanism than do litigants suing in courts.”¹⁰⁷ One consequence of the change may be that certain middlemen, such as patent trolls, who profit from the current system will be squeezed out by a market driven system. Encouraging a publicly traded market for patents and patent licensing could be accomplished in a number of ways, but the best model is a tax-advantaged one based on the existing Real Estate Investment Trust model. A short introduction to the Real Estate Investment Trust is necessary to understand how the Patent Investment Trust could be organized.

C. Real Estate Investment Trusts

Real Estate Investment Trusts (“REITs”) allow investors to pool real estate holdings with beneficial tax consequences.¹⁰⁸ Congress created the beneficial tax status for REITs in 1960 to

¹⁰³ See Jonathan C. Lipson, *Remote Control: Revised Article 9 and the Negotiability of Information*, 63 OHIO ST. L.J. 1327, 1410–11 (2002).

¹⁰⁴ See Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293, 1344 (1996) (discussing the aircraft patents issued to Glenn Curtiss and the Wright Brothers).

¹⁰⁵ *Id.* at 1343–44 n.174. In the original pooling agreements, Curtiss and the Wrights were entitled to one hundred dollars per airplane produced to a maximum of one million dollars each. *Id.* Later the agreement was changed to a maximum of two million dollars each and then only twenty dollars per airplane manufactured there after. *Id.*

¹⁰⁶ See Depoorter, *supra* note 7, at 28 (discussing the savings in transaction costs for online automated patents rights management systems over previous one-on-one licensing systems); see also discussion *infra* notes 125–127.

¹⁰⁷ Gordon, *supra* note 101, at 868.

¹⁰⁸ Chadwick M. Cornell, *Comment: REITS and UPREITS: Pushing the Corporate Law Envelope*, 145 U. PA. L. REV. 1565, 1568 (1997).

encourage small investors to participate in the type of real estate investments that were traditionally available only to more wealthy investors.¹⁰⁹ Strictly speaking, REITs are organized as corporations with shareholders and investors.¹¹⁰ However, from a tax perspective, a REIT is a unique combination of a corporation (with limited liability and transferability of shares) and a partnership (without double taxation on income).¹¹¹ Today, there are 180 REITs with assets exceeding \$400 billion that trade on major stock exchanges, primarily the New York Stock Exchange.¹¹² In addition, there are over 800 REITs that are either not listed on a major exchange or are privately traded.¹¹³

Ownership in a REIT is divided into two types. The first type, called sponsors, contribute real estate in exchange for equity in the REIT, but do not pay for their shares.¹¹⁴ A second group, called investors, purchases shares of the REIT outright.¹¹⁵ Both types of owners qualify for dividends.¹¹⁶

To qualify for the special REIT tax status, Congress has prescribed a four-part test: organizational requirements, income tests, an asset test, and distribution requirements.¹¹⁷ Section 856 of the Internal Revenue Code contains six organizational requirements that a REIT must satisfy, including transferable shares, professional management by trustees, and a minimum of 100 different shareholders.¹¹⁸ The income tests are three-fold and complex, but generally are designed to ensure that the REIT's earnings are limited to transactions closely connected to real estate.¹¹⁹ The asset test ensures that the REIT's holdings are

¹⁰⁹ *Id.* at 1569.

¹¹⁰ *Id.* at 1570 n.13.

¹¹¹ *Id.* at 1569.

¹¹² NAT'L ASS'N OF REAL ESTATE INV. TRUSTS, *Frequently Asked Questions*, Question #4, at <http://www.investinreits.com/learn/faq.cfm> (last visited on Mar. 8, 2005) (on file with the North Carolina Journal of Law and Technology).

¹¹³ *Id.*

¹¹⁴ Cornell, *supra* note 108, at 1569.

¹¹⁵ *Id.*

¹¹⁶ *See id.* at 1572 (showing that the distribution requirements do not distinguish between the types of shareholders).

¹¹⁷ *Id.* at 1570-73.

¹¹⁸ *Id.* at 1570-71.

¹¹⁹ *Id.* at 1571-72.

primarily comprised of real property or assets related to real property ownership (such as cash from rental payments).¹²⁰ Finally, the distribution requirements state that the REIT must distribute at least ninety-five percent of its annual income to shareholders as dividends.¹²¹ If a REIT meets all the IRS requirements, then the REIT may deduct the amount of its dividends from its taxable income, thereby avoiding the corporate tax on that income.¹²²

D. Patent Investment Trusts

Patterned after the existing REIT legislation, a Patent Investment Trust, ("PIT"), would be a corporation that trades and licenses patents rather than real estate. As opposed to encouraging small investors to invest in real estate, the goal of the PIT would be to encourage an active market in trading shares related to patents. Therefore, the PIT model would not necessarily follow all of the constraints of the REIT model. Under the PIT model, inventors could sell all or some of their interest in their patents to the PIT. In turn, the inventor could use the money as capital to develop the patented invention into a commercially viable product or invent something totally new. In doing so, the PIT model would promote scientific progress, serving the original intent of the patent clause in the Constitution.¹²³ Shares of a PIT traded on a major stock exchange would be priced by the market mechanism, encouraging more accurately priced patents and license fees.

As with the REIT model, inventors who contribute their patents in exchange for equity would be called sponsors. Sponsorship would allow inventors to benefit from any future appreciation in the value of their invention. However, instead of receiving monetary compensation, the sponsors of the PIT would receive shares of the PIT. Alternatively, inventors could choose to assign their patents outright to the PIT and take the proceeds

¹²⁰ *Id.*

¹²¹ *Id.* at 1572-73.

¹²² *Id.* at 1573.

¹²³ Eisenberg, *supra* note 24, at 1037.

upfront.¹²⁴ Others who purchase PIT shares would be called investors.

To benefit from the special tax status, Congress should require the PITs to meet the same four tests as the REITs, but modified to meet the particular goals of the PIT. The requirements to gain the special tax status would include the organizational, income, asset, and distribution tests.

The PIT's organizational requirements should include a separation of management and beneficial ownership as well as professional trustees.¹²⁵ However, unlike the REIT, the PIT need not be held by more than 100 persons, since the PIT does not have the explicit goal of encouraging small investors.¹²⁶ The income tests would also be required, but the calculations should be designed to ensure that the PIT's earnings are limited to transactions related to patents and patent licensing. Likewise, the asset tests should require that the PIT's holdings are limited to patents or assets related to patent ownership such as cash (from licensing fees) and government securities (held for future patent acquisitions). The purpose of both the income and asset tests is to ensure that the special tax status of the PIT is used to further the trading and licensing of patents instead of other forms of property. Finally, the distribution requirements should state that the PITs must distribute at least ninety-five percent of their annual income to their shareholders as dividends. The purpose of the distribution requirement should be to ensure that as much income as possible is distributed to the shareholders. If a PIT meets all the IRS requirements, it would be able to deduct the amount of its dividends from its taxable income, avoiding double taxation, and thereby encouraging investment in patents.¹²⁷

¹²⁴ Assignees (patent owners who are not the original inventor) could also serve as sponsors or assign their patent rights to the PIT outright.

¹²⁵ Cornell, *supra* note 108, at 1589.

¹²⁶ Further, the PIT need not meet the requirement that not more than fifty percent of the outstanding stock be held by five or fewer persons. *Id.* These requirements for the REIT are to ensure that REITs stay accessible to small investors. *Id.* Ultimately, however, Congress would make this policy decision when drafting the PIT legislation. Congress would also need to determine if it would allow for the possibility of a single-owner PIT.

¹²⁷ Cornell, *supra* note 108, at 1573.

In terms of content, PITs could be organized by subject area, end-user technology, or even cross-technology. PITs that are organized by subject area could include only electrical or only mechanical patents.¹²⁸ Alternatively, PITs organized by end-user technology might include many patents needed to manufacture a particular device, such as a personal digital assistant ("PDA"). The most popular PIT might be a cross-technology PIT, because (similar to mutual funds) a cross section of patents from a variety of technologies offers diversification to manage risk.¹²⁹ A single cross-technology PIT, for instance, could contain patents for isolated, purified DNA, Internet business methods, and even household consumer products such as bottle openers or disposable razors.

V. Advantages of the PITs

To effectively build and sustain a market based on the PIT, the PIT model must be more attractive to investors than investing with the patent trolls, like Acacia Technologies, or other forms of investment. The PIT model embodies a number of benefits that may lure investors away from patent trolls including tax savings, protection of the corporate structure, and the availability of patents for sale.

A. Tax Savings

The major advantage of the PIT model is that the tax savings will allow the PITs to operate more efficiently and with

¹²⁸ This would be similar to how REITs are organized.

REITs invest in a variety of property types: shopping centers, apartments, warehouses, office buildings, hotels, and others. Most REITs specialize in one property type only, such as shopping malls, self-storage facilities, or factory outlet stores. Health care REITs specialize in health care facilities, including acute care, rehabilitation and psychiatric hospitals, medical office buildings, nursing homes, and assisted living centers.

NAT'L ASS'N OF REAL ESTATE INV. TRUSTS, *supra* note 112, at Question #8.

¹²⁹ See O'CONNOR & FAILLE, *supra* note 84, at 140.

lower costs than other publicly traded corporations. In addition, the higher rates of return for this type of investment should encourage investors,¹³⁰ and the tax savings should help ameliorate the significant market barriers¹³¹ to entering the intellectual property market. Admittedly, valuation of patents is a hard problem since the patented technology is by definition unique¹³² and it is difficult to accurately estimate "the cost of a license on the value of the right licensed."¹³³ The PIT would not solve this problem completely, but rather would allow the pricing process to have greater transparency (as the trust managers and investors perform due diligence).

Since the PIT would be regulated by the Tax Code, this model should add a degree of uniformity in business practices of patent licensing. On a market, the "invisible hand" should guide prices to reflect problems with patents, such as poor prosecution histories or invalidity. Therefore, the PITs should encourage more patent investment and help build a public market that embodies more accurate valuation of patents and license fees.

A further benefit of the PIT's tax savings may be to encourage intellectual property owners to do business in the United States. By developing a tax-advantaged method for patent owners to value and exploit their intellectual property, the U.S. may be able to retain patent owners who would otherwise go elsewhere. Anecdotal evidence suggests that such relocation of intellectual property is indeed a problem. An acquisition specialist with PriceWaterhouseCoopers pointed out that a prominent semiconductor manufacturer moved its intellectual property into a Hong Kong holding company because of a lower effective tax rate overseas.¹³⁴ For a company with \$70 million in annual licensing royalties, the lower tax rate could mean a savings of over \$10

¹³⁰ Eisenberg, *supra* note 24, at 1033 (suggesting that studies have tentatively shown that private rates of return from investments in research and development of patented technology is significantly higher than returns available on other investments).

¹³¹ Gordon, *supra* note 101, at 859.

¹³² See 35 U.S.C. § 102 (2000) (reciting the novelty requirement for all patents).

¹³³ Depoorter, *supra* note 7, at 48.

¹³⁴ RIVETTE & KLINE, *supra* note 10, at 170-71.

million in taxes.¹³⁵ While this example concerns corporate income tax rather than proper valuation of patents and licensing fees, it shows that companies are willing to move their licensing programs internationally if necessary to save money. By creating a PIT structure with tax benefits, the government may lose tax revenue from some of the double taxation, but the alternative risks the loss of all tax revenue from intellectual property sent overseas.

B. Corporate Structure

The PIT's corporate structure allows both limited liability and transferability of shares. This will offer an advantage over ownership of an individual patent since investing in shares of PITs will allow investors to diversify their intellectual property investments and trade more easily. Furthermore, PITs possess an advantage over traditional corporations in patent enforcement. When a traditional corporation sues for infringement, often the defendant files a countersuit.¹³⁶ However, since the PIT is not in the business of making or selling any products, there is no way that it could infringe the defendant's patents. Consequently, PITs, compared to traditional corporations, have limited exposure to countersuit.¹³⁷

C. Many Willing Patent Holders

In a landscape ripe with patent holders¹³⁸ who may be willing to sell their patents, a PIT could be the perfect vehicle. Patents for the PIT would come primarily from two sources:

¹³⁵ *Id.* at 171.

¹³⁶ *Id.* at 135 (discussing the advantage of limited exposure for a corporation that is merely a holding company for patents).

¹³⁷ *Id.*

¹³⁸ The proportion of patent recipients who are first-time patentees (small start-up firms or independent inventors) has been rising dramatically for more than two decades. *Id.* at 18. In 1972, barely five percent of patents went to first-time patentees, but by 1992 the number had jumped to twenty-three percent. *Id.* In addition, small firms produce fifteen percent of all patented innovations, even though they only spend three percent of the amount that large corporations devote to research and development. *Id.* at 19.

inventors and current patent owners. The PIT could purchase patents directly from the inventor or offer the inventor equity in the PIT for his patent. Alternatively, industry experts suggest that many companies may be willing to sell patents they do not plan to use—operating on the principle that one man's junk is another man's treasure.¹³⁹ Selling such patents allows companies to “relieve themselves of poorly performing or nonstrategic businesses in the most profitable way possible.”¹⁴⁰

Additionally, a PIT model would still allow the co-existence of a completely private market for some patent owners. Larger drug companies are unlikely to be interested in trading patents, since most of their revenue is derived from the exclusive sales of brand-name drugs, and thus their patents are valued differently than in other industries.¹⁴¹ Nevertheless, smaller pharmaceutical research companies may be interested in selling their patents due to the high costs of innovation and testing for FDA approval. The PIT model could serve both types of industries by allowing privately-held trusts to receive the tax benefit, even without being publicly traded.

VI. Potential Pitfalls of PITs

The PIT model is not perfect, as many issues arise due to patent expiration, difficulty of valuing patents, and concerns common to any corporation, such as the need for good trust managers.

First, the property owned by the PIT will eventually expire, in most cases 20 years from the date of the patent application.¹⁴² As patent owners are not allowed to collect license fees from expired patents,¹⁴³ expiration of the patent means that the value of PIT's principle asset (the patent) and the income (patent license fees) would end at the same time. The PIT should be able to

¹³⁹ *Id.* at 81.

¹⁴⁰ *Id.* at 133. For example, Kodak received \$100 million in cash when it decided to sell its copier business and the associated intellectual property. *Id.*

¹⁴¹ Burk & Lemley, *supra* note 57, at 1589.

¹⁴² See 35 U.S.C. § 154(a)(2) (2000).

¹⁴³ See *Brulotte v. Thys Co.*, 379 U.S. 29, 33 (1964).

account for this expiration when determining the price it will pay for a patent. For instance, the PIT could choose to pay less for a patent with less income-generating time left before expiration.

Second, patents have traditionally been difficult to value. To stay in business, a PIT should not pay more for a patent than it can recover through license fees over the patent's remaining lifetime. Consequently, the PIT managers will need to make a careful analysis of many market factors before deciding on the price they will offer the patent holder.¹⁴⁴ For example, some business sectors have been actively valuing their patents for the last decade—so those sectors will have more realistic historical data about pricing.¹⁴⁵

In addition, when the PIT is considering buying a patent, the sale price should reflect the uncertainty of claim language¹⁴⁶ as well as possibility that the patent could be invalidated or deemed unenforceable by a court.¹⁴⁷ This determination would require that someone knowledgeable in the patent's field, such as an engineer or a scientist, examine the patent's claims and the patent's prosecution history.¹⁴⁸ Also, a patent lawyer should review recent judicial decisions that may affect the patent's value.¹⁴⁹ This examination process is somewhat analogous to the appraisal and title search process that real estate agents perform in determining the value of real property.¹⁵⁰ In the "ideal" PIT world, those patents with doubtful enforceability would trade at a lower price

¹⁴⁴ RIVETTE & KLINE, *supra* note 10, at 169. Some of these factors in a "rigorous and informed" due diligence process include: expirations, claims and prior art errors, payment of patent maintenance fees, international validity, pending infringement actions, other surrounding patents (like blocking patents), encumbering licenses, and innovation speed and strength. *Id.* at 169–70.

¹⁴⁵ Cahoy, *supra* note 13, at 22–23.

¹⁴⁶ RAZGAITIS, *supra* note 31, at 3.

¹⁴⁷ Cahoy, *supra* note 13, at 27.

¹⁴⁸ *Id.* ("[A] patent with a proverbial skeleton in its prosecution history closet has much less value than one which is relatively solid and not open to attack on any reasonably foreseeable grounds.").

¹⁴⁹ *See id.* at 25–27.

¹⁵⁰ *Id.* at 23 (pointing out that "although cases that redraw or clarify the lines of enforceability of real property rights of exclusion do occur, they are quite rare in comparison to the number of cases concerning validity and enforceability of intellectual property rights").

since they are less likely to produce a predictable return on the investment.¹⁵¹ In addition, the model investor would scrutinize the PIT manager's patent valuation process before she bought shares of the PIT.

Finally, in addition to these PIT model-specific problems, the PIT will engender all the risks of a more traditional corporation or trust. To be successful, PITs will require professional trust managers¹⁵² who are not only adept at managing multiple assets and collecting income, but also appreciate the intricacies of structuring and pricing of specialized technology licensing agreements.¹⁵³ The PIT, as a corporation, will also need to concern itself with common corporate problems including takeovers and Security and Exchange Commission disclosure and stock exchange requirements.¹⁵⁴

VII. PIT Advantages Over the Other Solutions

Other possible vehicles could solve the problems presented by patent speculation, but not as well as the PIT model. Some of these solutions have been implemented to a greater or lesser degree already. For example, Acacia Technology is organized as a corporation, whose two classes of stock are traded on the NASDAQ stock exchange.¹⁵⁵ The first disadvantage of the corporate model is that Acacia's dividends are subject to double taxation like all corporations.¹⁵⁶ In addition, Acacia's business model is to acquire patents (usually "undervalued" ones) and then

¹⁵¹ *Id.* at 23–24.

¹⁵² Jack McCall, *A Primer on Real Estate Trusts: The Legal Basics of Reits*, 2 TRANSACTIONS 1, 3 (2001) (stating that publicly traded REITs are "professionally managed by officers generally skilled in real estate acquisition").

¹⁵³ RAZGAITIS, *supra* note 31, at 26, 28.

¹⁵⁴ McCall, *supra* note 152, at 3 (noting that similar SEC disclosures and stock exchange requirements apply for REITs that are publicly traded).

¹⁵⁵ ACACIA RESEARCH CORPORATION, Investors-Financial Information, at http://www.acaciaresearch.com/investors_main.htm (last visited Mar. 8, 2005) (on file with the North Carolina Journal of Law & Technology). The corporation's two classes of stock are traded under the stock symbols ACTG and CBMX. *Id.*

¹⁵⁶ See *supra* text accompanying note 111.

license them to potential users or those infringing the patents. While this business model has undoubtedly been successful,¹⁵⁷ an inventor or potential licensee cannot take advantage of the market mechanism that may result in more accurate prices of the patents or licenses. Finally, the PIT model's tax advantages present a lower barrier to entry for new investors than the corporate model.

Another company, PLX Systems, launched the Patent and Licensing Exchange in late 2002.¹⁵⁸ While the name sounds deceptively like a PIT, in fact the Patent and Licensing Exchange was developed as an intellectual property rights management system for major patent holders.¹⁵⁹ According to the company, its system allows patent holders to automatically inventory, classify, and value assets for online licensing or selling and assists patent owners with royalty collection.¹⁶⁰ While systems like this one are important for existing owners to collect licensing revenue from patents, they are little more than an automated method of doing the same type of licensing which has been done for some time. Like the corporate model, this system lacks the ability to leverage the market mechanism to value patents.

VIII. Conclusion

Changing the tax laws to authorize a Patent Investment Trust could eventually lead to a stable market for patent sales and licensing. The beauty of a PIT marketplace is that a patent owner could shop around to various PITs to find the best sale price for his intellectual property. An efficient market would stabilize prices eliminating much of the impetus for the opportunistic licensing of the patent troll. Less patent trolling should reduce the overall transaction costs of technology licensing.

If PITs are ultimately successful, then the trusts could be expanded to include other forms of intellectual property including

¹⁵⁷ See *supra* text accompanying notes 5 and 51.

¹⁵⁸ Press Release, PLX Systems, About PLX Systems (2004), at http://www.pl-x.com/About_PLX.pdf (on file with the North Carolina Journal of Law & Technology).

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

copyrights and trademarks. A bundle of rights related to a specific technology, such as cell phone patents and trademarks or business method patents and software copyrights, could be combined to create a hybrid PIT.¹⁶¹ Perhaps a patent market would evolve even further—could a “futures” market for pending patent applications not be far behind?¹⁶²

¹⁶¹ See McCall, *supra* note 152, at 7 (discussing the hybrid REITs, which are a combination of both equity and mortgage interests in real properties).

¹⁶² But this type of licensing would not be easy. See Ana C. Ward, *Smart Pills: Early Adopters; Licensing a Patent Application Can be Tricky*, INTELL. PROP. L. & BUS., Apr. 14, 2004, at 28. While the inventor has some bargaining leverage before the patent is issued, this is a limited power. See *Meehan v. PPG Indus.*, 802 F.2d 881, 885 (7th Cir. 1986) (discussing that abuse of this type of leverage is a concern because the leverage is only afforded by the anticipation of a patent).