University Involvement In Patent Infringement Litigation

By Jacob H. Rooksby*

Abstract

Patent infringement litigation can be complex, controversial, and costly. University technology managers may avoid serious consideration or discussion of the activity for these reasons. This article explores the nuances presented by this important, yet often overlooked, aspect of university patent ownership and provides a balanced resource for those wishing to better understand the activity.¹

1.Introduction

t the 2011 annual meeting of the Association of University Technology Managers (AUTM), incoming president Robin Rasor began her remarks by describing the role of university technology managers as follows: "We handle technologies from inception through research; we handle conflict of interest issues; we close the deals with our commercial partners and then (God forbid) we participate in litigation on our own or with our licensees to protect our, and our inventors', technology rights."²

Despite the prevalent recognition within the technology transfer community that patent infringement litigation is one method of protecting intellectual property (IP), the landscape of university activities in this realm is often underappreciated or even misunderstood. How prevalent is university litigation over patents, and why does it arise? What are the strategic opportunities and potential challenges for universities that engage in patent infringement litigation? And how do universities structure, manage, and finance their litigation involvements?

This article answers these questions by surveying relevant literature in the fields of business, law, economics, technology transfer, and higher education. Findings inform the practice of technology transfer in a number of beneficial ways. First, by providing historical insight into the context and incidence of the activity, this article introduces technology transfer professionals to an important yet often overlooked aspect of IP protection. Second, this article assists technology transfer professionals in understanding the factors that could counsel for or against participating in a particular infringement lawsuit. Finally, this article introduces technology transfer professionals to the variety of possibilities that exist for structuring, managing, and financing university litigation involvements, and assesses the strengths and limitations of the various approaches.

2. Understanding University Involvement in Patent Infringement Litigation

2.1. Patents as Instruments

To understand why universities litigate patents requires appreciation of the philosophy behind the American patent system. Patents are blunt instruments that have been likened to toll booths.³ They create a 20-year limited monopoly for their owners to exclusively manufacture, import, use, sell, or offer for sale the product or process covered by the claims of the patent.⁴ As opposed to academic publications that act as funnels connecting knowledge sources, patents are more like "fences in the sense that they offer limited monopoly rights to the 'plot' of knowledge their claims demarcate."⁵ For most patent holders, patents are a means for producing a product that others may not produce without their permission. Universities are different, however, because they are not in the

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^{1.} While universities occasionally are named as defendants in patent infringement lawsuits, this article specifically concerns university involvement as a co-plaintiff or sole plaintiff in patent infringement litigation.

^{2.} Robin Rasor, *Incoming AUTM President's Speech*, Las Vegas, Nev. (Mar. 2, 2011).

^{3.} Adam B. Jaffe & Josh Lerner, Innovation and Its Discontents: How Our Broken Patent System Is Endangering Innovation and Progress, and What to Do About It (2004); Walter W. Powell, Jason Owen-Smith & Jeannette A. Colyvas, Innovation and Emulation: Lessons from American Universities in Selling Private Rights to Public Knowledge, 45 Minerva 121(2007).

^{4.} See 35 U.S.C. §§ 154 & 271.

^{5.} Jason Owen-Smith, *Trends and Transitions in the Institutional Environment for Public and Private Science*, 49 Higher Educ. 91, 94 (2005).

Patent Infringement

business of producing products. For universities, "patents are the product."⁶

2.2. Patent Infringement Litigation as Enforcement Mechanism

Patents are not self-enforcing. Accordingly, companies and individuals are free to infringe patents unless and until a court orders the infringers to stop, or the infringers agree to cease infringing as part of a settlement agreement. To achieve either outcome—court order or out-of-court settlement-requires the patent owner to initiate patent infringement litigation, which is expensive for all involved.⁷ One party's legal bills are typically on the order of the hundreds of thousands of dollars, if not millions, depending on the potential monetary recovery sought by the plaintiff in the lawsuit.⁸ "Even the threat of being forced to defend against patent infringement will, in many cases, compel companies to pay royalties or abandon particular products,"9 which helps explain why most patent infringement cases never go to trial.¹⁰

Scholars argue that the value derived from a patent "flows from patent litigation or, more typically, the threat of litigation."¹¹ "The threat of damages and, typically, injunctive relief, is a proverbial club useful in securing license fees and other payments from actual and potential infringers."¹² Failure to enforce could mean the loss of the premium conferred to a university from seeking and obtaining a patent, as "the efficacy of a patent depends on its owners' ability to police their property."¹³ The felt need to protect one's investment leads to the inescapable conclusion that

6. Roger L. Geiger, *Knowledge and money: Research universities and the paradox of the marketplace*, 216 (2004).

8. *See generally* American Intellectual Property Law Association, *Report of The Economic Survey* (2011) [hereinafter Report Econ. Survey].

9. Jaffe and Lerner, *supra* note __, at 76.

10. James Bessen & Michael J. Meurer, *Lessons for Patent Policy from Empirical Research on Patent Litigation, in Intellectual Property and Information Wealth: Issues and Practices in the Digital Age* 199-226 (Peter K. Yu ed., 2007).

11. Id. at 205.

universities must enforce their patent rights if they want to generate more net revenue from research.¹⁴

2.3. Data on Incidence

Although commentators have noted that universi-

ties have aggressively enforced their patents in court,¹⁵ little is known about the number of institutions that engage in patent infringement litigation each year. However, the emerging body of empirical data suggests that many uni-

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versities have litigated their patents, despite the risks in doing so. For example, in a presentation from 2009, Holman looked at all patent infringement lawsuits filed between January 1, 2000 and January 24, 2009 and located 139 cases where a university joined with an exclusive licensee in bringing suit.¹⁶ He located another 51 cases where a university brought a patent infringement lawsuit without the involvement of a co-plaintiff. More recently, in a study of lawsuits filed between January 1, 2009 and December 31, 2010, Rooksby found that 33 universities (16 public, 17 private) filed 57 different patent infringement lawsuits during the studied timeframe, often in conjunction with a licensee co-plaintiff.¹⁷ Although 33 may seem like a low number in the abstract, it represents nearly a quarter of the roughly 160 universities that actively engage in patenting and technology transfer.

While empirical data on the incidence of university involvement in patent infringement litigation are growing, many have argued anecdotally that the

16. See Christopher C. Holman, University Patent Litigation [slide presentation] (2009), *http://www.chtlj.org/sites/default/files/media/symposiums/v025/slides/holman.ppt* (last visited Jan. 22, 2012).

17. Jacob H. Rooksby, "University Initiation of Patent Infringement Litigation," 10(4) *J. Marshall. Rev. Intell. Prop.L.* 623, 660 (2011).

^{7.} Jaffe and Lerner, *supra* note ____. Of course, seeking a patent is also an expensive activity, and universities often spend significant sums on legal fees to obtain patents. See J. K. Wall, "A Drain on Tech Transfer: Purdue Case Points Up Costs of Defending Intellectual Property," *Indpls. Bus. J.*, Mar. 14, 2011, at 1, 39A.

^{12.} Ted Sichelman & Stuart J.H. Graham, "Patenting by Entrepreneurs: An Empirical Study," 17 *Mich. Telecomm. & Tech. L. Rev.* 111, 118-119 (2010).

^{13.} Owen-Smith, *supra* note ___, at 94.

^{14.} Burton Allen Weisbrod, Jeffrey P. Ballou & Evelyn Diane Asch, *Mission and Money: Understanding the University*, 285 (2008).

^{15.} See, e.g., Christopher C. Holman, "Learning from Litigation: What Can Lawsuits Teach Us About the Role of Human Gene Patents in Research and Innovation?," 18 Kan. J.L. & Pub. Pol'y 215, 260 (2009) (noting that universities "have shown no hesitancy to enforce their patents in court against commercial infringers"); Elizabeth A. Rowe, "The Experimental Use Exception to Patent Infringement: Do Universities Deserve Special Treatment?," 57 Hastings L.J. 921, 936 (2006) (noting that "universities have aggressively enforced their patents in court").

activity is not infrequent. For example, Washburn argues that significant litigation outcomes for some universities—she cites a \$200 million settlement in the University of California's case against Genentech and a \$300+ million settlement in the University of Minnesota's case against GlaxoSmithKline—have emboldened others to litigate,¹⁸ while Bagley notes "the growth in patent-related litigation involving universities."¹⁹ Others have commented that universities and their licensees often assert their basic research patents.²⁰ One high-profile example of successful university outcomes in this realm is the \$184 million in damages a jury awarded Cornell University in 2008 in a patent infringement lawsuit it brought against Hewlett-Packard.²¹ The trial judge later reduced the damages award to \$71.3 million, and the parties subsequently settled the case on confidential terms while appeals were pending.²²

Despite the mounting attention to the activity, it is not clear to what extent universities' past experiences with patent infringement litigation influence their likelihood to litigate again in the future, particularly given that some patent infringement lawsuits do not end favorably for the university involved. For example, in a patent infringement lawsuit brought by the University of Rochester in 2000, the Court of Appeals for the Federal Circuit (CAFC)²³ upheld a district court decision that a patent the university claimed covered a blockbuster arthritis drug was invalid.²⁴ The university allegedly had established an eight-figure legal fund to support its lawsuit against the company it believed was infringing.²⁵ More recently, the CAFC in 2011

18. Jennifer Washburn, University, Inc.: *The Corporate Corruption of American Higher Education*, 116 (2005).

19. Margo A. Bagley, "Academic Discourse and Proprietary Rights: Putting Patents in Their Proper Place," 47 *B.C. L. Rev.* 217, 218-19 (2006).

20. See, e.g., Arti K. Rai, *The Increasingly Proprietary Nature of Publicly Funded Biomedical Research: Benefits and Threats, in Buying In or Selling Out?* The Commercialization of the American Research University 117-126 (Ronald G. Stein ed., 2004).

21. Bill Steele, Cornell Wins \$184 Million Award from Hewlett-Packard for Patent Infringement, Cornell Chron. Online (June 6, 2008), http://www.news.cornell.edu/stories/June08/HP-patent.ws.html.

22. Susan Kelley, *Hewlett-Packard, Cornell Reach Settlement in Patent Case*, Cornell Chron. Online (June 9, 2010), *http://www.news.cornell.edu/stories/June10/HPCaseClosed.html.*

23. The CAFC is the federal appellate court with exclusive jurisdiction over patent appeals.

24. Univ. of Rochester v. G.D. Searle & Co., Inc., 358 F.3d 916 (Fed. Cir. 2004).

25. Goldie Blumenstyk, "Taking on Goliath: U. of Rochester Risks Millions in Patent Fight with Pharmaceutical Giants," *Chron. of Higher Educ.*, Sept. 20, 2002, at A27. overturned a \$1.67 billion jury award—the largest damages award ever in a patent infringement case in an initial appeal of a patent infringement lawsuit brought by New York University and its licensee over patents owned by the university.²⁶ While big litigation wins and losses commonly make news headlines, the details of university patent infringement lawsuits that result in confidential out-of-court settlements obviously are harder to track.

3. Challenges and Opportunities Presented by University Involvement in Patent Infringement Litigation

3.1. Risks to University Engagement in Patent Infringement Litigation

Universities that decide to participate as plaintiffs in patent infringement lawsuits face legal, financial, and reputational risks, as further discussed below.

3.1.1. Legal Risks

Defendants of patent infringement lawsuits typically file counterclaims alleging that the patents asserted by the plaintiff(s) in the action are invalid. They do this because a finding that a patent is invalid and should not have been issued necessarily entails that the defendant cannot be found liable for infringing that patent. Accordingly, an affirmative decision to accuse an entity of patent infringement nearly always means that the court also will be asked to evaluate the validity of the asserted patent. Universities considering asserting patent infringement must be sensitive to this potential consequence, as a "significant percentage of litigated patents are held invalid, and a finding of invalidity is the death knell for a patent."²⁷ Even if the asserted patent is not found invalid, there is the risk that the judge or jury could decide that the defendant has not infringed the patent.

Some defendants also respond to infringement lawsuits by requesting that the United States Patent and Trademark Office (USPTO) undertake what is called an *inter partes* reexamination of the asserted patent. Under the Leahy-Smith America Invents Act of 2011—which substantially altered the nation's patent laws—the USPTO must grant such a request if there is a "reasonable likelihood that the requester will prevail" in establishing the invalidity of at least one claim in the challenged patent.²⁸ Upon commencement of

28. 35 U.S.C. § 312(a).

^{26.} Centocor Ortho Biotech, Inc. v. Abbott Labs., 636 F.3d 1341 (Fed. Cir. 2011).

^{27.} John R. Allison, Mark A. Lemley & Joshua Walker, "Patent Quality and Settlement Among Repeat Patent Litigants," 99 *Geo. L.J.* 677, 678 (2011).

inter partes reexamination, both the patent owner and the petitioner present arguments to the USPTO as to why one or more claims of the patent is invalid and should be canceled. Given the significance of this inquiry, the patent's owner has the option of placing any pending infringement litigation on hold until the reexamination process is completed.²⁹ Defendants also may request a litigation stay, and many courts grant them so as not to misallocate judicial resources or potentially render a conflicting opinion.³⁰

3.1.2. Financial Risks

Patent infringement litigation has been called the "sport of kings" because it is more complex, uncertain, and expensive than routine litigation.³¹ Though rare—only 1 percent of subsisting patents will ever be litigated³²—the expense of patent infringement litigation is enough to deter all but the most solvent and committed of litigants. Of those cases that are filed, few go to trial, as most settle during the pre-trial period.³³ With respect to actual dollar values, survey data collected in 2010 revealed that for patent infringement lawsuits with less than \$1 million at risk, the mean cost *for one party* to take a case through the end of the pre-trial period was \$490,000; total mean cost for one party to take its case through trial and any appeal was \$916,000.³⁴ For lawsuits with \$1 million to \$25 million at risk, the mean costs rose to \$1,633,000 and \$2,769,000, respectively.³⁵

In addition to the staggering out-of-pocket costs typically faced by plaintiffs that initiate patent infringement litigation, the activity also brings with it important indirect costs, particularly to university

31. Douglas J. Kline, "Patent Litigation: The Sport of Kings," *Tech. Rev.*, Apr. 28, 2004, *http://www.technologyreview.com/business/13562/*.

32. Jean O. Lanjouw & Mark Schankerman, "Characteristics of Patent Litigation: A Window on Competition," 31 *RAND J. Econ.* 129, 131 (2001).

patent owners. Litigation requires faculty inventors and technology transfer professionals to spend time strategizing with attorneys, collecting and producing documents, testifying in depositions, and preparing for court appearances. Shane and Somaya provide additional insight into the consequences of these types of indirect costs in the only focused study to date on the effects of patent litigation on universities' patenting and licensing efforts.³⁶ Their work is a mixed-methods examination of the impact of university patent litigation at U.S. research universities from 1987 to 2000. From the lawsuits they identified in the relevant time period, the authors calculated the number of "litigation days," or days that universities were involved in patent lawsuits. Using licensing data collected from universities by AUTM, the authors compared litigation days to the number of new patent licenses, the number of new exclusive licenses, the number of new patent applications filed, and the number of new invention disclosures filed in the subsequent year. The results showed that litigation days correlated negatively with the number of new patent licenses and new exclusive licenses in subsequent years. There was no significant relationship between litigation involvement and new patent filings and invention disclosures. Qualitative follow-up interviews supported these findings. The authors concluded that university involvement in patent litigation reduces the amount of technology licensed by universities to the private sector.

3.1.3. Reputational Risks

Perhaps even more than legal and financial considerations, reputational concerns tend to predominate the literature on the risks to university engagement in patent infringement litigation. A common refrain is that the activity undermines universities' fundamental public-serving values and can alienate universities' alumni, donors, and industry partners.³⁷ For example,

^{29. 35} U.S.C. §318.

^{30.} See Colleen V. Chien, "From Arms Race to Marketplace: The New Complex Patent Ecosystem and Its Implications for the Patent System," 62 Hastings L.J. 297 (2010). Beginning September 16, 2012, inter partes reexaminations will be replaced by a new procedure known as inter partes review. The new procedure—which will have the same heightened "reasonable likelihood" standard for granting—is substantially similar in substance and process to inter partes reexaminations.

^{33.} Bessen & Meurer, *supra* note ___.

^{34.} Report Econ. Survey, *supra* note ___, at I-153, I-154.

^{35.} Contingency fee billing arrangements—which can drastically reduce or even eliminate universities' out-of-pocket legal expenditures—are discussed in Section 4.3, *infra*.

^{36.} See Scott Shane & Deepak Somaya, "The Effects of Patent Litigation on University Licensing Efforts," 63 *J. Econ. Behav.* & Org. 739 (2007). While their study fails to precisely define "patent litigation," context suggests the study's focus was patent infringement lawsuits, although their search methodology may have captured other types of lawsuits involving patents in which universities were involved (*e.g.*, inventorship disputes).

^{37.} See, e.g., James J. Duderstadt, *Delicate Balance: Market Forces Versus the Public Interest, in Buying In or Selling Out? The Commercialization of the American Research University,* 56-74 (Ronald G. Stein ed., 2004); Sheila Slaughter & Gary Rhoades, *Academic Capitalism and the New Economy: Markets, State, and Higher Education* (2004); Joseph F. DePumpo, *IP Enforcement and Infringement Issues for Universities* [speech and slide presentation], 2011 AUTM Annual Meeting, Las Vegas, Nev. (Mar. 2, 2011).

in a controversial law review article, Lemley explored the uncomfortable proposition—apparently harbored by some companies—that universities that participate as plaintiffs in patent infringement litigation should be labeled "patent trolls" (*i.e.*, a pejorative term for entities that do not practice the patents they own but instead sue alleged infringers as their primary method of achieving returns on investment).³⁸ He ultimately concluded that universities are not patent trolls because they support university inventors and engage in socially beneficial technology transfer, unlike trolls who seek only money in exchange for forbearance from litigation.

Lemley's article addresses the reality, however, that university involvement in patent infringement litigation can influence negatively the public's perception of universities' research and commercialization activities. Others are in agreement. For example, Washburn argues that universities quick to initiate patent infringement lawsuits may find such efforts undercut—in the court of public opinion, anyway their defense to separate infringement lawsuits waged against their own researchers.³⁰ She contends that forprofit companies that otherwise would be hesitant to bring an infringement lawsuit against a university may not be deterred if they view the university in question as a frequent plaintiff in infringement litigation.

Lemley also contends that because the university is a non-manufacturing entity, its "incentives in dealing with the patent system align in many ways with those of private-sector patent licensing shops."40 He notes that in patent-intensive industries, symmetry of position exists that deters much litigation: if a company sues for infringement, the defendant/competitor can countersue for infringement. Such symmetry does not exist for patent-holding universities, Lemley argues, and that reality may lessen market disincentives for universities to litigate.⁴¹ He contends that because universities do not manufacture any product, "universities aren't going to trade their patents away in exchange for a cross-license, because they don't need a license to other people's patent rights. Instead, they want money."42

38. Mark A. Lemley, "Are Universities Patent Trolls?," 18 Fordham Intell. Prop. Media & Ent. L.J. 611 (2008).

42. Lemley, *supra* note ___, at 616.

Yet leading universities have cautioned against initiation of patent infringement litigation for the purpose of extracting licensing revenues. In a white paper released by Stanford University and 10 other top-tier research universities in the summer of 2006 (and subsequently endorsed by AUTM), the authors urged that university participation in patent infringement litigation "should be carefully considered."43 The authors stressed that universities should be mindful of their primary mission to use patents to promote technology development for the benefit of society. To that end, the authors argued that litigation is "seldom the preferred option for resolving disputes" and should be initiated by the university only if there is a "mission-oriented rationale for doing so" that can be clearly articulated to the university and the public.⁴⁴ The authors maintained that "nuisance litigation" should be avoided in all circumstances.⁴⁵ In a separate point, they discouraged university involvement with patent aggregators (a.k.a., patent trolls), stating that licensing patents to companies that "rely primarily on threats of infringement litigation to generate revenue" does not serve the public interest.⁴⁶

The Committee on Management of University Intellectual Property of the National Academy of Sciences endorsed the Stanford white paper in a report it released in late 2010. The committee advised that "enforcement of IP rights against suspected infringers should be approached carefully to protect the institution's resources and reputation."⁴⁷ In furtherance of this suggestion, the committee made the following recommendation:

Recommendation 7: A university's decision to initiate legal action against an infringer should reflect its reasons for obtaining and licensing patents in the first instance. Examples include

• contractual or ethical obligations to protect the rights of existing licensees to enjoy the benefits conferred by the licenses;

^{39.} Washburn, *supra* note __, at 161 (noting that a university's aggressive patent enforcement may compromise "the university's legitimacy when one of its own academic investigators needs access to a particular patented technology").

^{40.} Lemley, *supra* note ___, at 615.

^{41.} See John R. Allison, Mark A. Lemley, Kimberly A. Moore, & R. Derek Trunkey, "Valuable Patents," 92 *Geo. L.J.* 435, 468 (2004).

^{43.} Leland Stanford Junior University, *In the Public Interest: Nine Points to Consider in Licensing University Technology* [white paper] (2006), available at *www.leland.stanford. edu/group/OTL/documents/whitepaper-10.pdf* (last visited Jan. 22, 2012).

^{44.} Id. at 6.

^{45.} Id.

^{46.} Id. at 8.

^{47.} National Research Council, Committee on Management of University Intellectual Property, *Managing University Intellectual Property in the Public Interest*, 8 (Stephen A. Merrill & Anne-Marie Mazza, eds., 2010).

- disregard by infringer of scientific or professional norms and standards, such as use of medical technologies outside standards of care or professional guidelines;
- disregard by an infringer of the institution's legitimate rights, for example, as evidenced by a refusal to negotiate a license on reasonable terms.⁴⁸

The committee concluded that while initiating infringement litigation is rarely the preferred method for resolving patent disputes, "it is an option important for universities to retain."⁴⁹

3.2. Opportunities for Universities That Engage in Patent Infringement Litigation

Perhaps as a result of the legal, financial, and reputational risks discussed above, many universities choose not to pursue infringers, leading some commentators to opine that "universities are widely considered meek when it comes to enforcing their patents."⁵⁰ Yet as elaborated below, patent infringement litigation can present strategic opportunities for universities, as well as legal or contractual obligations to act.

3.2.1. Protecting the Patent Premium

Given that many view patents' value as flowing from the threat of litigation, ⁵¹ failure to pursue patent infringement litigation when appropriate could mean losing the premium patents confer on their owners, as "the efficacy of a patent depends on its owners' ability to police their property." ⁵² Simply put, infringed yet unenforced patents quickly lose their value, as the owner's decision not to pursue the infringer will signal to the would-be defendant and other potential licensees that they are free to infringe the patent without consequence. A university's failure to enforce one patent may lead some companies to conclude that they need not take a license to any patent owned by that university, there being no perceived consequence for infringing.

3.2.2. Revenue Generation

It is no secret that patent infringement litigation can be lucrative. Some have called it an untapped revenue source for universities,⁵³ even arguing that universities are likely to be viewed as sympathetic litigants should they decide to sue an infringer in a venue geographically close to their campus.⁵⁴ This view of the potential benefit of university engagement in patent infringement litigation has ample anecdotal support. For example, the University of Minnesota has received more than \$350 million in royalties from the drug manufacturer GlaxoSmithKline from its license to university-owned patents that cover an HIV drug. These royalties have accounted for more than 90 percent of the university's revenue from technology transfer since 1999.⁵⁵ They would not have been possible, however, without litigation, which the university initiated against GlaxoSmithKline's predecessor in a federal district court in Minnesota in 1998. After a year of intense litigation, the parties settled the case on terms clearly very favorable to the university.

3.2.3. Obligation to Act

Often overlooked or misunderstood is the fact that universities may be obliged to participate in patent infringement lawsuits in many instances. If a university licenses as opposed to assigns its patent rights to an industry partner, prevailing CAFC case law requires university participation in any infringement lawsuit over the patent.⁵⁶ While universities may draft their licenses to attempt to avoid any contractual obligation to participate as co-plaintiffs in infringement lawsuits with their licensees, the law does not allow them this luxury, and an infringement lawsuit brought solely by an exclusive licensee risks being thrown out of court if the university patent owner is not made a plaintiff in the action.⁵⁷ Even attempts to "dress up" license agreements as patent assignments will not preclude the legal necessity for university involvement in assertive infringement actions over the patent. If "all substantial rights" to the patent are not assigned, the university will be deemed to maintain an ownership interest in the patent, and its participation in any infringement action ultimately will be required, as further discussed in Section 4.1.

4. Structuring, Managing, and Financing University Patent Infringement Litigation

4.1. Structuring University Involvement in Patent Infringement Litigation

University approaches to structuring their ad-

^{48.} Id.

^{49.} Id. at 84.

^{50.} *See, e.g.*, Marie Powers, "Patent Litigation: Sometimes It's A Risk Worth Taking," *Tech. Transfer Tactics*, para. 1, Mar. 30, 2011.

^{51.} *See generally* Bessen & Meurer, *supra* note __; Sichelman & Graham, *supra* note __.

^{52.} Owen-Smith, *supra* note __, at 94.

^{53.} Alexander Poltorak, "Thar's Gold in Them Thar Patents: Why It Pays to Protect Patent Portfolios," 12 *Univ. Bus.* 18, 23 (2009).

^{54.} DePumpo, *supra* note ___.

^{55.} Katherine Lymn, *U Heads for* "Patent Cliff," *The Minn. Daily* (Oct. 6, 2011), *http://www.mndaily.com/2011/10/06/u-heads-'patent-cliff'.*

^{56.} Rooksby, *supra* note ___.

^{57.} Jeffrey L. Newton, "Assuring All Substantial Rights in Exclusive Patent Licenses," 44 *les Nouvelles* 235 (2009).

ministration of patents vary, and these differing approaches impact university involvement in patent infringement litigation. Setting aside smaller universities that utilize third-party firms for managing their patents (such as Research Corporation Technologies or Competitive Technologies, Inc.), most universities either administer their patents directly (through a university-operated technology transfer office) or outsource the management of their patenting and licensing activities to a separately incorporated yet effectively affiliated entity (often called a "research" or "patent" foundation). Matkin calls these affiliated foundations "buffer organizations" in that they have the benefit of creating space between universities and "technology transfer activities that are less consistent with the traditional missions of the university," such as facilitating business incubation and taking equity ownership in start-up companies.⁵⁸ Two examples of these types of organizations include the Wisconsin Alumni Research Foundation and the University of Virginia Patent Foundation. Separately incorporated organizations such as these can serve as corporate shields for universities, insulating them from liability resulting from the actions of the separately incorporated entity. They also offer certain tax advantages.⁵⁹

However, depending on how the legal relationship is structured between these entities and the universities they serve, strictures of patent law may require that both the university proper and its affiliated patent foundation participate as plaintiffs in any patent infringement lawsuit the university wishes to bring.⁶⁰ In determining who must be named as a plaintiff in any infringement action, CAFC case law requires courts to determine who owns "all substantial rights" to the patent allegedly infringed.⁶¹ The party or parties that own all such rights—deemed a "patentee" in the parlance of patent law⁶²—must be named as plaintiff(s), otherwise an infringer would be unfairly susceptible to having to defend multiple lawsuits involving the same alleged act of infringement.

Determining who is a patentee requires close examination of all documents purporting to concern ownership of the patent.⁶³ Under university IP poli-

63. Newton, *supra* note ___.

cies, faculty inventors typically are obligated to assign their inventions to the university proper or to the university's designee, such as a separately incorporated patent foundation affiliated with the university.⁶⁴ While individual inventors may fail to do this, or enter into a conflicting assignment with a company, a recent decision by the U.S. Supreme Court confirms that one of the purposes of the Bayh-Dole Act is to facilitate university ownership of faculty discoveries that are funded with federal research dollars.⁶⁵ Thus, under normal and envisioned circumstances, a university's acquisition of patent ownership and patent licensing/assignment structure may follow one of at least eight different general models, each graphically represented below:

- (1) faculty inventor [assigns to] \rightarrow university [licenses to] \rightarrow industry
- (2) faculty inventor [assigns to] → university [assigns to] → industry
- (3) faculty inventor [assigns to] → affiliated patent foundation [licenses to] → industry
- (4) faculty inventor [assigns to] → affiliated patent foundation [assigns to] → industry
- (5) faculty inventor [assigns to] → university [licenses to] → affiliated patent foundation [sublicenses to] → industry
- (6) faculty inventor [assigns to] → university [assigns to] → affiliated patent foundation [licenses to] → industry
- (7) faculty inventor [assigns to] → university
 AND affiliated patent foundation [license to]
 → industry
- (8) faculty inventor [assigns to] → university
 AND affiliated patent foundation [assign to]
 → industry

Which model a university chooses to follow in the handling of any given patent effectively dictates whether the university proper could be compelled, under prevailing CAFC case law, to participate as a plaintiff in any infringement lawsuit involving the patent.⁶⁰ For example, in model (1), the university proper maintains an ownership interest in the patent

^{58.} Gary W. Matkin, "Technology transfer and the university," 307 (1990).

^{59.} *See generally* Milton Cerny & Kelly L. Hellmuth, "Economic Crisis? Technology Transfer to the Rescue," 21 *Taxation Exempts* 6 (2010).

^{60.} Rooksby, supra note ___.

^{61.} AsymmetRx, Inc. v. Biocare Med., LLC, 582 F.3d 1314 (Fed. Cir. 2009).

^{62. 35} U.S.C. § 100.

^{64.} Jerry Thursby & Marie Thursby, *Knowledge Creation and Diffusion of Public Science with Intellectual Property Rights,* in *Frontiers of Economics and Globalization,* 199-232 (Keith E. Maskus, ed., 2008); Margaret T. Stopp & G. Harry Stopp, Jr., "The Enforcement of University Patent Policies: A Legal Perspective," 24 SRA JOURNAL OF RESEARCH ADMINISTRA-TION 5-11 (1992).

^{65.} Bd. of Trs. of Leland Stanford Jr. Univ. v. Roche Molecular Sys., Inc., 131 S.Ct. 2188 (2011).

^{66.} Rooksby, *supra* note ____.

by virtue of having licensed the patent, as opposed to assigning all substantial rights to it to a third-party, as seen in model (2).⁶⁷ Thus, the university in model (1) is a patentee as defined by patent law, and CAFC case law requires its involvement as a plaintiff in any infringement lawsuit involving the patent, unlike in model (2).

In model (3), the university proper never owns the patent, but rather has dictated (by contract with the faculty inventor) that the faculty inventor assign ownership of the patent to the university's affiliated patent foundation. Under this model and in model (4) (where the affiliated patent foundation subsequently assigns the patent to industry), the university proper need not participate as a named plaintiff in any infringement lawsuit involving the patent, as it technically is not a patentee.

Models (5) and (6) involve faculty assignments of inventions to universities that in turn license or assign them to their affiliated patent foundation. Under model (6), a university proper would have no ownership interest in the patent after it assigns it to its affiliated patent foundation, and thus would not be obligated to participate as a named plaintiff in any infringement action involving the patent. It could be compelled to participate, however, in model (5), as well as in model (7), where it co-owns the patent with its affiliated research foundation.

Of these eight models, each comes with its own advantages and disadvantages. If an institution would prefer not to draw unnecessary or potentially negative attention to enforcement activity, then models (3) and (4) offer the advantage of not requiring that the university proper participate as a named plaintiff in any infringement lawsuit involving the patent. While the same also can be achieved through models (2), (6), and (8), each of those models entails university ownership of the patent at some point in the process, thereby risking university litigation involvement should the need for quickly levying an infringement action arise before the university's ownership of the patent can be transferred. Each of those models also involves an assignment as opposed to a license of the patent. While assignments can be beneficial tools for universities depending on the situation, in some instances (such as with models (2) and (8)) they may be impractical given the difficulty of determining a fair market value for an invention in the early stages of development.

Adding to the structural nuance described above is the fact that companies intending to practice the product or process covered by a patent are not the only types of companies to receive assignments of patent rights. In the past decade, a secondary market has emerged in which IP management companies acquire patents for the purpose of licensing them and, for many such companies, enforcing them through litigation.⁶⁸ These companies have no intention of using the patents in relation to their own commercial activities. Indeed, their only commercial activity is seeking to license or enforce the patents they own, which ownership is often confusingly spread through a variety of indistinctly-named corporate entities.⁶⁹ Commentators call these companies "non-practicing entities" (NPEs), "patent assertion entities," or, less tolerantly, patent trolls.⁷⁰ Interestingly, several of the above models that involve assignment of a patent owned by a university and/or its affiliated patent foundation—notably, models (2), (4), and (8)—are attractive to IP management companies that specialize in monetizing university-owned patents through litigation. These companies operate under a business model whereby they create a NPE to receive an assignment of a non-licensed, university-owned patent that is being infringed. The NPE then sues the infringer as the sole plaintiff in a lawsuit. This arrangement has the benefit of "reduc[ing] the involvement of the university and any negative publicity that could result from the lawsuit."71 Through an agreement with the IP management company, the university contracts to receive a portion of any recovery the NPE receives as a result of the enforcement action. NPE litigation in these relationships is funded entirely on a contingency fee basis (further discussed in Section 4.3, infra), allowing universities effectively to cloak their beneficial interest in these activities.

71. Poltorak, *supra* note ___, at 23.

^{67.} Newton, supra note ___.

^{68.} See generally Gwendolyn G. Ball & Jay P. Kesan, Transaction Costs and Trolls: Strategic Behavior by Individual Inventors, Small Firms and Entrepreneurs in Patent Litigation (III. Pub. L. and Legal Theory Papers Series, Res. Papers Series No. 08-21, Feb. 1, 2009), available at http://ssrn.com/abstract=1337166 (last visited Jan. 22, 2012); Chien, supra note __.

^{69.} Ira Glass & Chicago Public Media, When Patents Attack! [audio podcast, episode 441] (Jul. 22, 2011), available at *http://www.thisamericanlife.org/radio-archives/episode/441/when-patents-attack.*

^{70.} James Bessen, Jennifer Ford & Michael J. Meurer, *The Private and Social Costs of Patent Trolls,* 11 B. U. Sch. of L. Working Paper 1-32 (2011); Michael Risch, *Patent Troll Myths,* 42 Seton Hall L. Rev. (forthcoming), available at *http://ssrn. com/abstract=1792442* (last visited Jan. 22, 2012).

The intricacies and varieties of relationships between university patent owners and industry may lead one to question the precise definition of the words license and assign, as well as the phrase "all substantial rights." While the CAFC has declined to define these terms for all situations, the court's case law does allow for the compilation of the following non-exclusive guideposts with respect to contract terms:⁷²

Terms consistent with a license:

- University's retention of the right to initiate litigation on its own
- University's retention of the right to sue infringers if licensee declines to do so
- University's requirement that licensee consider its views and the public interest before filing an infringement action
- University's retention of the right to approve any settlement of a lawsuit involving the licensed patent
- University's retention of the right to join as a co-plaintiff in any infringement lawsuit brought by the licensee concerning the licensed patent
- University's requirement that licensee grant any sublicenses university suggests
- University's right to prevent licensee from assigning rights under license to any party other than a successor in business

Terms consistent with an assignment:

- University's insistence on being informed of any lawsuit brought by assignee
- University's contractual right to receive portions of any damages recovered by assignee in any infringement lawsuit involving the assigned patent
- University's right to veto any sublicensing of the assigned patent
- University's right to seek patent protection in other countries for the invention covered by the assigned patent
- A reversionary ownership right in the patent in favor of the university in the event of the assignee's bankruptcy

While parties may choose to include one or more contract terms consistent with a license in an agreement they deem an assignment (or vice versa), courts look at the actual substance of the rights conveyed in order to determine if an agreement is an assignment or a license. Undergoing such an analysis is the "critical determination" regarding a party's ability to sue in its own name.⁷³ Thus, university technology managers are wise to proactively consider the potential litigation impacts of these structural arrangements with their licensees, well before a prospective lawsuit unexpectedly requires or precludes university involvement.

4.2. Managing University Involvement in Patent Infringement Litigation

Management of university involvement in patent infringement litigation is to a large degree determined by how a university has structured its technology transfer operations. Universities without affiliated patent foundations are left to manage litigation involvements on their own, and typically turn to attorneys to help them do so.74 While established research universities generally have a staff of in-house counsel, these individuals are unlikely to have vast practice experience with IP litigation. Accordingly, it is guite common for universities to retain outside counsel with IP litigation expertise to represent them in patent infringement lawsuits. Indeed, in Rooksby's study of patent infringement lawsuits brought by universities, findings showed that universities engaged outside counsel to handle their litigation in all but one of 57 cases filed by universities in 2009 and 2010.75 In most instances, the litigating university's outside counsel was the same law firm that represented its licensee in the action.

Universities that have established separate entities to handle their patenting and licensing activities are not necessarily unburdened from involvement as plaintiffs in patent infringement litigation, as discussed in Section 4.1, *supra*. The duty of loyalty that legal ethics imposes on attorneys is often relevant to their involvement from the standpoint of litigation management. This duty effectively limits the advice a university's counsel can give to entities other than the university proper. Despite a university's effective control of an affiliated patent foundation, concerns for maintaining appropriate corporate, managerial, and legal boundaries (particularly for tax reasons) might mean that a university's involvement in a patent in-

^{72.} See generally Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.P.A. (Fed. Cir. 1991); Abbott Labs. v. Diamedix Corp. (Fed. Cir. 1995); Speedplay, Inc. v. Bebop, Inc. (Fed. Cir. 2000); AsymmetRx, Inc., 582 F.3d 1314 (Fed. Cir. 2009); see also Newton, supra note .

^{73.} AsymmetRx, Inc., 582 F.3d at 1319.

^{74.} Matkin, *supra* note .

^{75.} Rooksby, supra note ____.

fringement lawsuit is managed by two sets of in-house and/or outside counsel: one retained/employed by the university proper, the other retained/employed by the university's affiliated foundation.⁷⁶ These issues are further complicated for some public universities based in states where the attorney general is required to sign off on any significant litigation decision made by a state entity (*e.g.*, the decision to initiate or settle a lawsuit).

4.3. Financing University Involvement in Patent Infringement Litigation

Participating as a plaintiff in patent infringement litigation is an expensive activity. In addition to attorneys' fees, parties typically encounter the following fees and costs (commonly called "disbursements") in the course of a patent infringement lawsuit: filing fees; expert witness fees; jury consultant fees; electronic discovery and document production costs; deposition-related costs; court reporter costs; photocopying and courier costs; and travel costs.⁷⁷ Payment of legal fees and disbursements is often shared between the university and its industry partner. However, licensees typically take on more of the financial burden than universities. Universities without excess cash on hand may find it preferable to forego some or all of their royalty payments from their licensee during the course of the litigation, as opposed to paying out-of-pocket. While many license agreements spell out which party will pay for which litigation-related costs, some fail to address all necessary expenditures, requiring the university and its licensee to agree on a payment schedule prior to embarking on an enforcement action.

As mentioned in Section 3.1.2, legal fees in patent infringement cases can be significant, and typically account for the majority of expenditures a party incurs as a result of litigation. Most law firms are fee-forservice providers and bill their clients on a monthly basis, thereby requiring periodic out-of-pocket expenditures by litigants as cases unfold. While law firms commonly provide fee estimates for various phases of the litigation (*e.g.*, filing of the complaint; discovery; motions for summary judgment; trial; appeal), these estimates are seldom promises, and ultimately clients are responsible for paying whatever fees accrue as a result of the time the attorneys spend on a case. Hourly fees vary widely by firm and by practice area within firms, but typical rates for attorneys handling patent infringement litigation range from \$150 per hour to over \$1,000 per hour, depending on the experience of the attorney, the size and geographic location of the firm, and the attorney's reputation.⁷⁸ Universities that use as litigation counsel the same firm they use for patent prosecution or other legal work may be able to receive a volume discount for using the firm in patent infringement litigation. However, any discount is unlikely to be more than a 10%–15% reduction off of standard rates.

Out-of-pocket expenditures on legal fees required to initiate and pursue a patent infringement lawsuit can be partially or entirely eliminated by engaging a law firm to handle the case on a contingency fee basis.⁷⁹ In a "pure" contingency fee arrangement, the law firm does not bill by the hour for its services, but instead receives a percentage (typically 15%-50%) of any damages award or settlement the plaintiff may receive as a result of bringing the case. The agreements memorializing these arrangements often provide that the law firm's portion of any recovery escalates the deeper into the lawsuit a positive outcome occurs (e.g., a law firm's contingency fee percentage of a settlement consummated shortly after filing the complaint is likely to be less than its percentage of a damages award received at trial). In a partial contingency fee arrangement, a law firm collects a portion of its hourly rates plus a smaller percentage of any recoveries generated by the lawsuit.

Unfortunately, reliable data on universities' use of contingency fee billing arrangements in patent infringement lawsuits are not available. However, some technology transfer professionals who indicate their university has engaged law firms on a contingency fee basis in the past have stated they view these risk-sharing arrangements as perilous or even inappropriate for universities to accept. Their concern is that contingency fee attorneys may feel incentivized to under-prepare for trial in hopes of achieving an early and easy payment through settlement.⁸⁰

^{76.} For universities that assign a given patent to an entity with which they are not affiliated (such as a faculty spinoff company, or a NPE), the receiving entity is solely responsible for managing any litigation that it brings.

^{77.} Poltorak, *supra* note ___.

^{78.} See generally Report Econ. Survey, supra note .

^{79.} See generally Herbert M. Kritzer, *Risks, Reputations, and Rewards: Contingency Fee Legal Practice in the United States* (2004). Contingency fee arrangements do not necessarily absolve clients from the responsibility of paying disbursements. However, some law firms offer risk-sharing approaches to financing those costs as well. Poltorak, *supra* note

^{80.} Jacob H. Rooksby, *When Tigers Have Teeth: A Qualitative Study of University Patent Infringement Litigation* [article containing interviews of technology transfer professionals, publication forthcoming], 2012.

5. Conclusion

Patent infringement litigation is a complex activity that requires careful attention by universities that patent. The nature of a patent as a commercial tool supports universities' measured and occasional involvement as plaintiffs in such lawsuits. While the activity brings with it serious risks—including legal, financial, and reputational risks of particular concern to universities—patent infringement lawsuits also can represent fruitful opportunities for universities to generate revenue from patents and protect the research premium into which they have invested. How a university chooses to structure its technology transfer activities and licensing arrangements will dictate to a large extent the nature of its involvement in any assertive infringement litigation, including its options for managing and financing the litigation. While few enjoy planning for litigation, thoughtful university technology managers will want to be mindful of the activity's intricacies, so that the undesired does not leave them unprepared.