

Allocating Patent Litigation Risk across the Supply Chain

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INTRODUCTION

The paradigmatic defendant in a patent lawsuit is a vertically integrated manufacturer. But much economic activity is conducted collaboratively by a *supply chain* of vertically disintegrated firms, and sometimes multiple firms are implicated in infringing activities, by making, selling, or using patented technology, or by contributing to or inducing another firm's infringement. Often patent owners have the option of suing some or all of the members of a supply chain who contribute to the design, creation and marketing of a new technology.

To illustrate, a firm named NorthPeak launched a patent enforcement campaign against supply chains active in the market for office building security technology. In 2008, the patent owner "alleged infringement by computers, routers and adapters made by 3Com Corp., Dell Inc. and 25 other manufacturers. Intel intervened in 2009 on behalf of the nine defendants that used its chips."¹ Intel challenged the validity of claims in two patents asserted by NorthPeak in reexamination proceedings at the USPTO. The agency invalidated the relevant claims in one patent but not the other.² Following a five year stay of the district court proceedings,³ litigation resumed and the trial judge used NorthPeak testimony in the reexaminations to construe the remaining claims narrowly which lead

¹ Reexamination: Intel Successfully Defends Chip Users in Patent, BNA Patent, Trademark, and Copyright Law Journal, December, 29, 2016, available at: http://iplaw.bna.com.ezproxy.bu.edu/iprc/5007/split_display.adp?fedfid=102653162&vname=ptdbulallissues&jd=a0k6n6n0b4&split=0

² See NorthPeak Wireless v. 3Com, Fed. Cir. 2016-1477, 2016-1481, p. 4, December 28, 2016, <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/16-1477.Opinion.12-22-2016.1.PDF>

³ See BNA Patent, Trademark, and Copyright Law Journal, *supra* note 1.

NorthPeak to stipulate non-infringement.⁴ NorthPeak appealed to the Federal Circuit, which affirmed the claim construction, presumably ending the lawsuit in late 2016.⁵

Because of patent assertions like this, businesses increasingly contemplate the risk of patent infringement when they negotiate contractual relations to form a supply chain. Upstream and downstream firms recognize they may be jointly liable for patent infringement because of their relationship to each other and their connection to the new product. An interesting and difficult question is: how should they manage infringement risk to maximize their joint profit? Which firm should control litigation? Or should they plan for joint control? Should they share responsibility for damages and litigation expenses? If yes, what determines each party's share?

The traditional and simple answer to these questions is that the upstream firm should bear the risk of infringement because it is best able to avoid infringement.⁶ Imposing the risk of infringement on the vendor penalizes a vendor guilty of piracy. More importantly, imposing the risk on the vendor induces non-piratical vendors to make careful design and manufacturing choices, and obtain patent licenses when the risk of infringement is substantial.⁷

⁴ See *NorthPeak Wireless v. 3Com*, at 9-10.

⁵ *Id.* at 11.

⁶ For example, an Intel policy statement provides: "IP Indemnity policy. When Intel sells products, it provides indemnity against third party intellectual property claims. Conversely, when Intel is the customer, it requires supplier infringement indemnification against intellectual property rights claimed by third parties." See Intel Supplier Guide, https://supplier.intel.com/static/russia/english/supplier_01.htm For commentary suggesting this is generally true *see*, Robert Rudnick, Intellectual Property Defense and Indemnification Provisions, *iPFrontline*, July 13, 2010 ("boilerplate IP defense and indemnification provisions are typically overly broad in favor of protecting the buyer or licensee.") <http://blog.ip.com/2010/07/intellectual-property-defense-and-indemnification-provisions/>

⁷ See generally Melvin Simensky & Eric C. Osterberg, Insurance and Management of Intellectual Property Risks, 17 *CARDOZO ARTS & ENT. L.J.* 321, 322-24 (1999) (describing steps a firm can take to implement an IP compliance program); Jay Dratler, Jr., LICENSING OF INTELLECTUAL PROPERTY §4-17, 35 (2007)

This approach parallels the infringement risk allocation chosen when copyright or trade secret lawsuits create concern within a supply chain. Typically, a movie producer assumes the risk of a copyright infringement claim against a movie distributor or exhibitor.⁸ Similarly, a software vendor assumes the risks that one of its coders copied code and violated another party's copyright or trade secret rights.⁹

The traditional approach to patent defense risk allocation has been complicated by deterioration of the notice function of the patent system.¹⁰ In certain settings no firm in the supply chain is well positioned to clear patent rights in advance.¹¹ Instead of *risk management*, the key consideration becomes which firm in the supply chain is likely to be the most *effective bargainer* in settlement negotiations that follow the assertion of patent rights against a member of the supply chain. Bargaining power may vary across the supply chain to the extent that some firm in the supply chain has more litigation and

⁸ See Kelly Crabb, *The Movie Business: The Definitive Guide to the Legal and Financial Secrets of Getting Your Movie Made*, 392-93 (2005); Oren Bitan, *Five Tips for Film Distributors and Other Licensees*, *Intellectual Property Magazine*, 32 (April 2014), www.intellectualpropertymagazine.com (“A film distributor must also ensure that its distribution agreement includes an indemnification provision protecting it from liability arising from copyright infringement suits relating to its distribution.”);

⁹ When a licensor can monitor and avoid copying, licensors typically offer a warranty against infringement and misappropriation of third party copyrights and trade secrets. See Jay Dratler, *LICENSING OF INTELLECTUAL PROPERTY* §4-17, 10 (2007) (“Indeed, full warranties are common in copyright licenses, where they often cover, or are accompanied by, warranties against defamation. The same reasoning also justifies full warranties in licenses of mask works and trade secrets as well.”)

¹⁰ The patent system provides good notice when a technology user or developer can determine what patent rights exist that might be asserted against it, and also the scope and ownership of those rights. These conditions make patent clearance more likely and inadvertent patent infringement less likely. Deterioration of patent notice is discussed in JAMES BESSEN & MICHAEL J. MEURER, *PATENT FAILURE: HOW JUDGES, BUREAUCRATS AND LAWYER PUT INNOVATORS AT RISK* 46-72 (2008).

¹¹ See Robert E. Rudnick & Andrew M. Grodin, *United States: Drafting and Negotiating Intellectual Property Defense and Indemnification Provisions – What You Don't Know Could Cost Your Client Millions*, MONDAQ, (June 15, 2010), http://www.mondaq.com/article.asp?article_id=102916&signup=true (“While liability for copyright infringement and trade secret misappropriation actions are often successfully avoided or managed by corporate policies prohibiting intentional malicious acts, patent infringement actions often arise without the intentional act of copying or the like by the Seller and therefore require greater attention in the drafting of IP defense and indemnification provisions.”) See also, Dratler, *supra* note 7 at 4-5.

bargaining experience, better information relevant to the lawsuit, or stronger incentives to litigate.

In this Article, I explore the factors that determine the efficient allocation of patent damages liability within the supply chain. In particular, I explain why deterioration of patent notice and the related rise of inadvertent patent infringement and patent assertions by non-practicing entities¹² may push firms to focus more on ex post patent litigation and settlement bargaining rather than ex ante licensing and avoidance of infringement suits when they allocate patent infringement risk across the supply chain.¹³

If bargaining effectiveness concerns drive the allocation of patent defense risk, this suggests there is an interesting parallel to concerns held by patent owners who transfer patent rights to patent assertion entities (PAEs). Many commentators have noted that patent rights are often traded so that patents are controlled and asserted by the party in the strongest bargaining position as a patent plaintiff.¹⁴ Indemnification and insurance agreements allow parties to shift control of settlement and defense in patent litigation to achieve the same kind of result – the party in the strongest bargaining position acts as the patent infringement defendant.¹⁵

¹² Bessen and Meurer contend that patent notice failure created an environment that allowed patent trolls to flourish. See James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 *Cornell L. Rev.* 387 (2014).

¹³ See Rudnick, *supra* note 6 (“recently we have seen Buyers more aggressively seeking contract language creating Seller’s IP defense and indemnity obligation upon an allegation of infringement, particularly in market segments with patent troll activity.”)

¹⁴ See, Federal Trade Commission, *Patent Assertion Entity Activity: An FTC Study*, (Oct. 2016) https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf ; Chien, Colleen V. 2009. Of Trolls, Davids, Goliaths, and Kings: Narratives and evidence in the litigation of high-tech patents. *North Carolina Law Review*, 87, 1571–1615; Bessen, James E., and Meurer, Michael J. 2014. The Direct Costs from NPE Disputes. *Cornell Law Review*, 99(2), 387–424.

¹⁵ This Article analyzes the structure of indemnification agreements that maximize profit within the supply chain. I will explain how parties allocate damages and litigation control in response to the activity of patent assertion entities and other factors, but I will not address and I am not aware of any empirical evidence

I. PATENT INFRINGEMENT RISK ACROSS THE SUPPLY CHAIN

A. *The Wide Net of Liability Cast by Section 271*

The term supply chain refers to the network of organizations relied on by a producer to obtain inputs and distribute outputs within a market.¹⁶ Thus, members of a supply chain may include a manufacturer, its upstream suppliers of physical inputs, software, and services, and downstream parties that distribute and sell the manufactured product. Patent law often gives discretion to a patent owner to sue different members of a supply chain for patent infringement arising out of a particular set of facts.¹⁷

Section 271 of the Patent Act designates a variety of actions that may constitute direct or indirect patent infringement. Making, selling, and using a patented invention without permission constitute infringement under Section 271(a).¹⁸ Section 271(b) and Section 271(c) cover two forms of indirect infringement, the first covers inducement and the second covers contributory infringement.¹⁹ The other subsections of Section 271

indicating how significant any particular factor might be in shaping the choice of indemnification agreements actually agreed to in the market.

¹⁶ See John T. Mentzer, et al., *Defining Supply Chain Management*, 22 J. BUSINESS LOGISTICS 1, 4 (2001).

¹⁷ Why does patent law give potential plaintiffs an array of choices about whom to sue for infringement? To some extent, patent law (and copyright law and trademark law as well) defines the scope of liability by reference to principles familiar from tort law. Probably the most intuitive justification for expanding the set of potential defendants is to make sure the plaintiff can be made whole when the “natural” defendant is either judgment proof or hard to find or sue. Efficient enforcement is a second important benefit to the plaintiff arising from expanding the set of actors who may be liable. The owner of a patent on a method of applying a herbicide to rice fields could sue each farmer that infringes the method claim. But it would be more cost-effective to sue a “bottleneck defendant” such as the chemical company that makes and sells the unpatented chemical used by the infringing farmers. If the chemical is not a staple and the chemical company has sufficient knowledge, then it can be held liable as a contributory infringer. In addition, to litigation efficiency, the opportunity to sue an upstream party provides the added benefit to the patent owner of avoiding suit against its actual and potential customers.

¹⁸ See Patent Act of 1952, 35 U.S.C. § 271(a) (2015).

¹⁹ See Patent Act of 1952, 35 U.S.C. §§ 271(b) (c) (2015).

cover other acts that also may expose supply chain members to liability for patent infringement.²⁰

It is easy to understand how a patent owner can assert its patent against different firms in a supply chain. Downstream from the manufacturer, distributors and retailers may be liable for selling a product, and consumers may be liable for using the product. Upstream from the manufacturer, a firm may directly infringe by making and selling a patented component that is used by the manufacturer, or using a patented method to provide a service to the manufacturer. An upstream firm may also indirectly infringe by aiding or contributing to infringement by the manufacturer. Finally, the manufacturer potentially faces the same range of liability theories as an upstream supplier.

To simplify, consider a supply chain that is limited to two parties: a buyer and a seller. Table One illustrates some of the common fact patterns that expose a buyer and seller to simultaneous patent infringement liability arising from activities related to their transaction. The rows in the table display cases in which the product is a component or device used as part of a patented technology, and other cases in which the seller offers the final good or service. The columns compare infringement of product claims to process claims. When a firm sells a final product that reads on a product claim then that firm may be held liable for making and selling the invention. If the buyer is a distributor, then it may be held liable for selling, otherwise, a buyer may be held liable for use.

TABLE ONE

²⁰ See Patent Act of 1952, 35 U.S.C. § 271(e) covers certain activities by firms seeking FDA approval of their marketing of a patented pharmaceutical. Sections 271(f) and 271(g) cover certain trans-national

	Product Claim		Process Claim	
	Seller	Buyer	Seller	Buyer
Component	Contribute, Induce	Make, Sell, Use	Contribute, Induce	Use
	<i>Aro,</i> ²¹ <i>Crystal Semiconductor</i> ²²		<i>Dawson Chemical</i> ²³	
Final Product	Make, sell	Sell, use	Use, induce	Use, joint use
	<i>Innovative Wireless</i> ²⁴		<i>Limelight</i> ²⁵	

When a firm delivers a service to an end user the nature of liability for infringing a process claim depends on whether the buyer or seller performs the steps of the service, or whether they jointly perform the steps. If the seller performs all the steps and the buyer merely enjoys the benefit of the service, then the buyer is not liable at all, and the seller is liable for use. If the buyer performs the steps, the seller may be indirectly liable for inducement when, for example, the seller provides software that performs infringing steps when loaded onto the buyer's computing platform. There also may be cases in which the seller performs some of the claims steps and the buyer performs the other steps, and the buyer and seller are jointly liable for the infringing use.

activities. *See* Patent Act of 1952, 35 U.S.C. §§ 271(f) (g) (2015).

²¹ *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476 (1964).

²² *Crystal Semiconductor Corp. v. TriTech Microelectronics Intern., Inc.*, 246 F.3d 1336 (Fed. Cir. 2001). TriTech made audio chips in Singapore and sold the chips worldwide. OPTi obtained a supply of chips from TriTech and sold them in the U.S. OPTi was directly liable for its sales, but TriTech did not practice Crystal Semiconductor's patented method in the U.S., and thus it could not be directly liable for infringement, but TriTech was held indirectly liable for inducing the infringement by OPTi.

²³ *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176 (1980).

²⁴ *Innovative Wireless Solutions LLC accuses hotels (and others) of infringing WiFi/Ethernet patents formerly owned by Nortel*, Essential Patent Blog, April 24, 2013 <http://www.essentialpatentblog.com/2013/04/innovative-wireless-solutions-llc-accuses-hotels-of-infringing-wifiethernet-patents-formerly-owned-by-nortel/> (an NPE filed suits against many different hotel chains for use of wireless routers based on patents originally assigned to Nortel); Brian J. Love & James C. Yoon, *Expanding Patent Law's Customer Suit Exception*, 93 B.U.L.Rev. 1606, 1610-11 (2013).

When the seller provides a component or device that may be used by the buyer to make an infringing product or practice of patented method, then the seller may be indirectly liable for contributory infringement or inducement. Buyers infringe product claims when they combine the component with other components to make the claimed invention, or when they use the device provided by the seller to practice the claimed process.

Given that buyers may expose themselves to claims of patent infringement as users or re-sellers, or because they are more thoroughly involved in developing infringing technology, it is natural for buyers to contemplate patent infringement when they negotiate a contract with a seller.²⁶ More generally, members of the supply chain often address patent infringement risk with contract terms that establish obligations of the parties in the event that the buyer or seller is sued for patent infringement in connection with their joint activities. This Article focuses on contract language relating to indemnification and the control of patent litigation.²⁷ For the sake of brevity I will use the phrase indemnification clause to cover these issues.

²⁵ *Limelight Networks, Inc. v. Akamai Techs., Inc.*, 134 S. Ct. 2111 (2014)

²⁶ *Dratler, supra* note 7 at 16 (“licensees normally request – and licensors often grant – indemnities with respect to, and/or covenants to defend, actions for infringement or misappropriation brought against licensees by third parties.”)

²⁷ Sellers also may offer warranties and representations of non-infringement. For example, the seller of a good may include a warranty of non-infringement in a sales contract. Further, the UCC contains a default warranty of non-infringement, if the contract is silent regarding patent infringement. *See* UCC Section 2-312. In this Article, I limit my attention to sophisticated parties that waive the UCC warranty and actively negotiate an indemnification clause. *See* Chad A. Rutkowski, PATENT INFRINGEMENT INDEMNIFICATION VENDOR INDEMNIFICATION OF PATENT INFRINGEMENT CLAIMS Maximizing the Indemnitee’s Right to Enforcement, *Bloomberg Corporate Law Journal* 282 (2008) <https://www.bakerlaw.com/files/uploads/Documents/News/Articles/INTELLECTUAL%20PROPERTY/2015/Rutkowski-WW-Vendor-Indemnification-of-Patent-Infringement-Claims.pdf> P. 282 (“To recover on a breach of warranty claim, it would first have to be proven that the vendor’s goods or services infringed the patent at issue. Then, in a subsequent suit between the buyer and vendor, the buyer would have to prove that the infringement fell within the scope of the warranty... to be free from such claims buyers often supplement their warranty requirements in a supply contract with indemnification provisions.”)

B. Who Pays Damages in the Absence of Contractual Allocation?

The outcome of negotiations about an indemnification clause depends on what would happen to the parties in the absence of an agreement. If buyers were never targeted with patent lawsuits, even though they might be infringers, then the parties might not exert much effort to negotiate these clauses. Given patent litigation realities, buyers face positive expected patent litigation costs from many transactions, and sellers often agree to provide indemnification. In well-functioning markets, the expected cost of such a clause, will be reflected in the sales price. Higher indemnification costs for a seller mean a higher sales price to a buyer.

Anecdote and limited empirical evidence suggests that buyers are increasingly targeted as defendants in patent lawsuits.²⁸ More generally, patent litigation increasingly involves activities spread across a value chain, and not limited solely to the actions of a single vertically integrated manufacturer. Likely, these changes can be attributed in part to changes in the nature of inventions, changes in strategies pursued by patent plaintiffs, and changes in the content of patent law. Consider three possible explanations:

- The growth of complex and modular technology is associated with more decentralized innovation and more collaboration between parties who might participate in an infringing activity.²⁹ In the classic story of patent infringement, an integrated pharmaceutical firm asserts a drug patent against an integrated competitor that makes and sells the drug. But research suggests that the number of

²⁸ Brian J. Love & James C. Yoon, *Expanding Patent Law's Customer Suit Exception*, 93 B.U. L. REV. 1605, x (2013).

²⁹ See generally Carliss Y. Baldwin & Kim B. Clark, *Managing in an Age of Modularity*, 75 HARV. BUS. REV. 84 (1997). "The entire driver's cockpit [of a Mercedes-Benz SUV], ... —including air bags, heating and air-conditioning systems, the instrument cluster, the steering column, and the wiring harness—is a

complex inventions and related patents has grown relative to discrete inventions like traditional, small-molecule, pharmaceutical inventions.³⁰ Often today patent litigation concerns a technology that is implemented on the internet, by multiple parties providing different resources or performing different steps of a patented process.³¹

- The frequency of customer suits has grown in tandem with the growth of patent litigation by PAEs. Certain PAEs profit from asserting weak claims that appear to have negative expected value. They may profit from such frivolous litigation by exploiting asymmetries in the patent litigation process. Apparently, a particularly profitable strategy guides the opportunists to assert their patents against customers. Allegedly, patent plaintiffs get higher damages at the end of the value chain than they would get if they sued a manufacturer. Also, customers may have less information, expertise, and interest in fighting an opportunistic patent assertion in court.
- The impact of changes in patent law on the number of defendants in patent lawsuits, and in particular on buyers as defendants is not as clear. The expansion of direct liability for the joint practice of patented processes after *Akamai IV* may add to the incentive to sue customers. Also, more rigorous knowledge

separate module produced at a ... plant owned by Delphi Automotive Systems, a unit of General Motors Corporation.” Id.

³⁰ See generally Elisabetta Ottoz, & Franco Cugno, *Patent–secret mix in complex product firms*, 10 AMER. LAW & ECON. REV. 142 (2008).

³¹ *BMC Resources v. Paymentech* (“four different parties perform different acts within one claim” customer, merchant, debit network, customer’s financial institution); *McKesson v. Epic* (defendant did not perform any of steps related to method of communication between health care providers and patients; defendant provided platform); *Akamai v. Limelight* (Method for efficient delivery of web content, defendant did not perform last step; defendants customers performed last step)

requirements to prove indirect infringement may force patent owners to target customers more often. But these intuitions are difficult to evaluate empirically.

Regardless of the cause or causes, the evidence points to more defendants per patent lawsuit, and more targeting of customers. Blair and Cotter found customers were targeted in only 5 out 1340 patent cases with reported opinions from late January 1995- through late January 1998. In contrast, Chien and Reines analyze Patent Freedom/RPX data on the top ten patent litigation campaigns from 2010-2013 and find these campaigns targeted about 2200 customers. (These observations are not directly comparable, but they line-up with commentary from practitioners stating customers suits are up sharply.)

Remember that I have only an indirect interest in the frequency of customer suits. My real interest is in finding evidence that indemnification clauses have become more important, or more contentious, or more litigated.³² I am not aware of any data indicating that indemnification clauses have greater business significance than in the past, or even data showing that businesses care very much at all about these clauses.³³ I conjecture that

³² I find few reported opinions addressing disputes about patent litigation indemnification clauses. This could mean that these clauses are simply not very important. I think, instead, there are few reported opinions because these disputes are normally arbitrated. *See* Dratler, *supra* note 7 at 22 (“Although enforcement of indemnities is common, it does not necessarily require litigation. An arbitration clause in an agreement covering disputes “relating to” the agreement may be applied to infringement warranties and indemnities, just as to other contractual provisions.”); Charles Davies, *Arbitration clauses and third-party IP claims*, AIPLA Newsstand, April 4, 2013, (describing global practice in software licenses of requiring indemnity disputes to go to arbitration). <http://www.lexology.com/library/detail.aspx?g=93e5de66-8165-4769-ba21-c1e3f67329f2>

³³ IP licensing attorneys contend that indemnification clauses are important: “In IP license negotiations, especially those between a supplier and a customer in a manufacturing chain, the scope of the indemnity clause will be a subject of much debate. The customer will seek to broaden the indemnity clause to cover all possible assertions of intellectual property against the licensed technology and related losses, regardless of whether the licensed technology forms only one component or one portion of an overall product. The supplier will often push in the opposite direction to limit the indemnity clause to cover only third party claims that are directed at the licensed component and nothing more. To clarify this limitation, suppliers may ask for an indemnity clause that explicitly carves out indemnity coverage when the licensed component is combined with other non-licensed components to create a larger system or device.” *See* Eugene Y. Mar, Erik C. Olson & Marc Tarlock, *Drafting Intellectual Property Agreements: Best Practices From a Litigator’s Perspective*, September 9, 2015, http://www.fbm.com/Drafting_Intellectual_Property_Agreements_Best_Practices_From_a_Litigators_Pers

they *are* increasingly significant because of the growth in patent suits targeting buyers, especially end-users. To illustrate, consider the patent assertion campaign by Innovative Wireless Solutions (IWS) which aroused the ire of several router manufacturers who agreed to indemnify their customers.³⁴ IWS sued dozens of hotels and coffee shops for patent infringement because they offered Wi-Fi access to their customers.³⁵ Ruckus Wireless brought a declaratory judgment action against Innovative Wireless and in its complaint stated that it had: “received several demands from one or more of the parties sued by IWS, based on agreements and/or the UCC and related to IWS’ patent infringement claims, that IWS, as the manufacturer of wireless access points used by those parties, defend and indemnify those parties against IWS’ infringement claims.”³⁶ Similarly, in its declaratory judgment action HP stated: “Several of the defendants in the Original IWS actions use wireless access points manufactured by HP and sought indemnification from HP.”³⁷

Absent an indemnification clause the hotels and coffee shops would have been liable for the damages caused by their use of the Wi-Fi if they were shown to be liable. In

[pective_09-25-2015/](#); Rudnick, *supra* note 6 (“Sellers are now facing large potential damages including the Buyer’s lost profits, business interruption expenses and other consequential damages.”)

³⁴ See Bill Donahue, *Cisco, HP Sue Patent Holder Over Wi-Fi Litigation Blitz*, Law360, June 14, 2013, <http://www.law360.com/articles/450300/cisco-hp-sue-patent-holder-over-wi-fi-litigation-blitz> Innovative Wireless Solutions LLC accuses hotels (and others) of infringing WiFi/Ethernet patents formerly owned by Nortel, Essential Patent Blog, April 24, 2013 <http://www.essentialpatentblog.com/2013/04/innovative-wireless-solutions-llc-accuses-hotels-of-infringing-wifiethernet-patents-formerly-owned-by-nortel/> (an NPE filed suits against many different hotel chains for use of wireless routers based on patents originally assigned to Nortel)

³⁵ Cisco received indemnification demands from some of its customers in this case. See, *Cisco, Inc. v. Innovative Wireless Solutions, LLC*, (declaratory judgment complaint) Civil Action No. 1:13-cv-00492 <http://www.essentialpatentblog.com/wp-content/uploads/sites/64/2013/06/Cisco-Systems-Inc-v-Innovative-Wireless-Solutions-LLC-Complaint.pdf> I will discuss Cisco’s experience in this case in note 77.

³⁶ *Ruckus Wireless, Inc. v. Innovative Wireless Solutions, LLC*, (declaratory judgment complaint) Civil Action No.1:13-cv-00504 https://search.rpxcorp.com/litigation_documents/10109858.

³⁷ *Hewlett-Packard Co. v. Innovative Wireless Solutions, LLC*, (declaratory judgment complaint) Case No. 1:13-cv-491 <http://www.essentialpatentblog.com/wp-content/uploads/sites/64/2013/06/Hewlett-Packard-Company-v.-Innovative-Wireless-Solutions-LLC-Complaint.pdf>

theory, the magnitude of damages from the use of Wi-Fi by a particular coffee shop is invariant to whether the coffee shop or the equipment vendor is sued. Furthermore, if the patent owner successfully sues one defendant, it cannot gain more damages from that instance of infringement by suing another defendant in the supply chain. This doctrine is known as the single recovery rule or the “one satisfaction rule.” Judges have applied the doctrine zealously.³⁸ Indemnification agreements are used to allocate this single recovery (that is, the damage award) among potential defendants who have a contractual relationship prior to the patent assertion.

Indemnification agreements are negotiated in the shadow of the “default” damage apportionment decisions that would emerge from the choices of the plaintiff about whom to sue, and the decision of the court about who is liable and the magnitude of damages. A key consideration is the imposition of joint and several liability on a losing defendant.³⁹ Apart from enhancement of damages and fee-shifting that results from willfulness,⁴⁰ any losing defendant can be held liable for the full damages arising from joint liability.⁴¹

³⁸ Cites. Despite the single recovery rule, a plaintiff may get larger expected profits from a suit against multiple defendants. This might be true if there is an opportunity to enforce injunctive relief that has differing effects against different defendants, and because of bargaining gains to the plaintiff caused by a less effectively managed defense and higher total litigation costs spread across multiple defendants.

³⁹ See *Aro* (“It is true that a contributory infringer is a species of joint-tortfeasor, who is held liable because he has contributed with another to the causing of a single harm to the plaintiff.”) See also, *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed.Cir.1990); *Conopco, Inc. v. May Dept. Stores Co.* 797 F.Supp. 740 (E.D. MO, 1992) (holding the rule of joint and several liability applies to a retailer and manufacturer); *Randles Films, LLC v. Quantum Releasing, LLC, et al.*, 2014 U.S. App. LEXIS 30 (9th Cir. 2014) (holding rule of joint and several liability applies in copyright suit against movie distributor).

⁴⁰ *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1574, 38 USPQ2d 1551, 1557 (Fed.Cir.1996); *Crystal Semiconductor Corp. v. TriTech Microelectronics Intern., Inc.* (“Parties not found to willfully infringe, therefore, cannot be held jointly and severally liable for willfulness damages.”)

⁴¹ The one satisfaction rule reduces the liability of one defendant to the extent that a damages judgment has been satisfied by another party. *Saf-Gard Products, Inc. v. Service Parts, Inc.* Eyeglasses, United States District Court, D. Arizona. May 6, 1980 491 F.Supp. 996 (“Two of the former defendants in this action, Balkamp, Inc. and Genuine Parts Company, sold infringing devices which were manufactured by Service Parts. On February 13, 1980, this court entered a stipulated judgment against these two defendants, assessing damages in the amount of \$200,000 in conjunction with their infringing sales. In situations of this type where one defendant has manufactured and another has sold infringing devices, they both have

A defendant that fears it will be compelled to satisfy the entire judgment won by a successful patent plaintiff might be able to use certain tactics to spread its losses. A buyer-defendant may be able to turn to a seller and seek indemnification under a warranty of non-infringement.⁴²

If the defendant cannot claim the benefit of a warranty of non-infringement,⁴³ then it may try to implead another potentially liable party and seek contribution. Defendants have argued for contribution based on state laws and also federal common law.⁴⁴ A small number of district courts have considered and rejected this possibility, but Bernard Chao argues persuasively that contribution is desirable⁴⁵ in patent cases and is permitted under his reading of the law.⁴⁶

C. Indemnification and Insurance

contributed toward the infringement and are treated as joint tortfeasors: the release of one does not release the other unless the plaintiff has been fully compensated for the infringement contributed to by both.”)

⁴² A seller may offer an explicit warranty, or an implied warranty of non-infringement may be found for sales subject to the UCC.

⁴³ No warranty would be available if the seller disclaims a warranty of non-infringement. See e.g., INTEL SOFTWARE LICENSE AGREEMENT, Revision 06042013, Intel® True Scale Fabric Switch Firmware (Internal Use and Object Code Distribution) 7 available at: http://www.intel.com/content/dam/support/us/en/documents/network-and-i-o/fabric-products/True_Scale_Switch_FW_License_Agreement_H13244_002.pdf

⁴⁴ Phillip M. Adams & Associates, L.L.C. v. Dell Inc., (D. Utah, October 9, 2008) Not Reported in F.Supp.2d 2008 WL 4569895 (Sony was sued for patent infringement and filed a third-party complaint against a semiconductor manufacturer for indemnification and contribution. Sony and Winbond did not have a contract. Sony argued that the Patent Act created an implied right to contribution and draws an analogy to a federal securities law case in which the Supreme Court did find an implied right to contribution. See, Musick, Peeler & Garrett v. Employers Ins. of Wausau, cite, though there are other cases in which the Court has refused to find an implied right of contribution. The court rejected Sony’s argument, and it also rejected Sony’s attempt to claim contribution under Utah law.)

⁴⁵ Chao argues that the presence of component supplier and not merely an end-product manufacturer at trial corrects biases that lead courts to over-reward patent owners that prove a component contained in a complex product infringes a claim in the owner’s patent.

⁴⁶ Chao cite.

In addition to or instead of indemnification, parties in a supply chain might turn to insurance to address the risk of patent litigation.⁴⁷ A party that agrees to indemnify other parties might shift its risk to a liability insurer.⁴⁸ Alternatively, every party in the supply chain worried about patent litigation risk might individually or jointly purchase insurance from a third party.

Insurance is available for patent infringement defense, but this sort of insurance is not often purchased.⁴⁹ It is not clear why this insurance has not gained greater acceptance in the market.⁵⁰ It is interesting to observe that insurance against copyright and trade

⁴⁷ Melvin Simensky & Eric C. Osterberg, Insurance and Management of Intellectual Property Risks, 17 CARDOZO ARTS & ENT. L.J. 321, 327 (1999) (noting insurers may require insured parties to implement a clearance practice and insist that outside attorneys supervise clearance).

⁴⁸ In *RFR Industr., Inc. v. Rex-Hide Indust., Inc.*, 2007 U.S. App. LEXIS 7015 (Fed. Cir. 2007) (unpublished) there was a circular indemnity that wiped out a patent owner's infringement claims. MARTA BELCHER AND JOHN CASEY, *Hacking the Patent System: A Guide to Alternative Patent Licensing for Innovators* 25 (Jan. 2016). https://www.eff.org/files/2016/01/26/hacking_the_patent_system_belcher_and_casey_updated_january_2016.pdf

"RPX offers optional indemnification insurance to protect a company's customers from patent troll lawsuits for using the company's products." P.25

⁴⁹ Joshua M. Dalton & Sarah K. Paige, Finding the Right Way to Deal with Patent Demand Letters, Law360, September 8, 2016, <http://www.law360.com/ip/articles/836518/finding-the-right-way-to-deal-with-patent-demand-letters> (expressing skepticism about insurance and use of defensive aggregators because of the "often prohibitive cost"); Maureen Veterano, Intellectual Property Insurance: What Attorneys Need to Know, Mar. 27, 2011, <http://www.ipwatchdog.com/2011/03/27/intellectual-property-insurance-what-attorneys-need-to-know/id=15904/> ("most IP attorneys do not know that IP insurance is available to help fund their client's IP litigation risks.") J. Rodrigo Fuentes, *Patent Insurance: Towards a More Affordable, Mandatory Scheme?* 10 COL. SCI. & TECH. L. REV. 267, 284-88 (2009).

Recently, RPX has introduced a patent litigation defense insurance policy. MARTA BELCHER AND JOHN CASEY, *Hacking the Patent System: A Guide to Alternative Patent Licensing for Innovators* 24 (Jan. 2016)

https://www.eff.org/files/2016/01/26/hacking_the_patent_system_belcher_and_casey_updated_january_2016.pdf ("RPX has used its store of litigation cost data as well as confidential and anonymized cost information from each policyholder to build an actuarial model for patent troll risk. Based on its estimation of the frequency and cost of NPE attacks against an individual company, RPX works with companies to deliver the appropriate amount of coverage for each company with varying annual premiums, starting at \$5,000. To determine the policy price for small companies, RPX takes into account, among other things, the company's previous experiences with NPEs and the company's visibility. RPX says that it prices and issues insurance policies within 10 days.")

⁵⁰ See Amy O' Connor, *CEOs, Insurers Finally Ready to Embrace Intellectual Property Insurance?* INSURANCE JOURNAL, September 9, 2013, <http://www.insurancejournal.com/magazines/features/2013/09/09/303859.htm>

secret lawsuits is widely available.⁵¹ Possibly the limited availability of patent defense insurance is explained by greater uncertainty associated with patent litigation as compared to copyright and trade secret litigation.⁵² That uncertainty may be explained by poor notice in patent law and the frequency of inadvertent patent infringement.⁵³

Poor notice in patent law implies that neither the insurer nor the insured has a good idea of the risk of a patent lawsuit against the insured. In copyright and trade secret law a defendant may benefit from an independent creation defense – if the defendant knows and can prove that it created the disputed intellectual property, then it will prevail.⁵⁴ Such a defense is simply not available in patent law and helps explain why most losing defendants in patent lawsuits were unaware that their actions were infringing.⁵⁵ In the copyright and trade secret settings it is easier for an insurer and an insured to monitor for and avoid infringement, which makes the price of the insurance policy appealing, and explains the commercial success of insurance for copyright and trade secret violations.

Another impediment to broader reliance on patent insurance might be the perception that patent litigation risks are correlated. Insurers manage risk by writing policies for a large number of insureds that face uncorrelated risk. For example, a property insurer has good reason to believe that the risk of damage from a lightning strike

⁵¹ See Crabb, *supra* note 8, at 394 (discussing copyright defense insurance in the context of movie distribution); Recently, insurers have also introduced “tech E&O” liability insurance which covers software and tech companies against claims of negligence relating to “data hosting, data processing, computer systems analysis, network management services and software programming.” Darren Teshima, *5 Insurance Issues To Consider In Tech Transactions*, Law360, August 25, 2016, <http://www.law360.com/ip/articles/832623/5-insurance-issues-to-consider-in-tech-transactions>

⁵² See Fuentes, *supra* note x at 288-89; Dratler, *supra* note 7 at 9-10.

⁵³ Peter S. Menell & Michael J. Meurer, *Notice Failure and Notice Externalities*, 5 J. LEGAL ANALYSIS 1, x (2013)

⁵⁴ See Dratler, *supra* note 7 at 9-10.

is virtually uncorrelated for homes in different neighborhoods, certainly in different cities. If the insurer covers many homes across the country, it can be confident that its total costs of coverage will fall into a narrow range, and aggregation of these independent hazards virtually eliminates the risk faced by the insurer.

The hazard of defending a patent litigation suit might be correlated across firms for at least two reasons. The rise of PAEs has meant that the average number of defendants per patent lawsuit has grown. In the past, most patent lawsuits were filed against a single defendant. Today, there are many suits with multiple defendants, in some cases dozens of defendants. Further, patent assertion campaigns that sometimes involve multiple suits and sometimes no suits at all, have sometimes targeted hundreds of defendants. Thus, patent suits may cluster by industry or technology, which may create correlated risk for an insurer.

The second source of correlated risk comes from changes in patent law that affect the probabilities of patent assertion or litigation success by the patent owner, or the expected damages given patent owner success. When patent law changes in a way that is generous to one side or the other, that means that expected claims from the insured defendants rise or fall together. Some commentators have suggested that patent law has changed often in recent years, making the field more uncertain than other areas of the law,⁵⁵ thus contributing to correlated risks and a sluggish market for patent litigation defense insurance.

⁵⁵ Bessen and Meurer (2008); Christopher A. Cotropia & Mark A. Lemley, *Copying in Patent Law*, 87 N.C. L. REV. 1421, 1442–43 (2009).

⁵⁶ F. Scott Kieff & Henry E. Smith, *How Not to Invent a Patent Crisis*, REACTING TO THE SPENDING SPREE: POLICY CHANGES WE CAN AFFORD 55 (2009) http://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=1756&context=faculty_publications

Because patent defense insurance seems to be unappealing to most businesses,⁵⁷ supply chain managers are left with indemnification clauses to allocate the risk of patent defense within the supply chain. Much like insurance policies, indemnification clauses can be complicated. The clauses may be limited by floors and caps, and they may be limited to certain technologies and uses. The parties typically decide whether indemnity is triggered by a final judgment, the filing of a lawsuit, or merely the assertion of a patent. They may negotiate the control of settlement and litigation. Finally, the parties may take care to coordinate the roles of multiple potential indemnitors.

Rather than allocating all of the risk to one party or the other, intermediate allocations are also possible. Some indemnitors choose to avoid dealing with frivolous patent assertions by including a floor that must be reached (like a deductible) before any indemnification is paid.⁵⁸ Some indemnitors include a cap that limits the total payment; again, the policy limit is the analogue in an insurance policy.⁵⁹ The cap could be used to motivate the indemnitee to work with the indemnitor to fight the patent suit.

⁵⁷ Joshua M. Dalton & Sarah K. Paige, Finding the Right Way to Deal with Patent Demand Letters, Law360, September 8, 2016, <http://www.law360.com/ip/articles/836518/finding-the-right-way-to-deal-with-patent-demand-letters> (Services from aggregators and insurers “are no panacea. Coverage is not uniform, and the costs often run into the \$100,000s per year. ‘Ultimately it’s an economic decision,’ says Enrique Colbert, general counsel at online retailer Wayfair Inc. ‘But high retention that fails to help with nuisance claims, relatively low limits that may not protect against major threats, and expensive premiums all cut against buying insurance.’”)

⁵⁸ See Michael L. Bloom, Emily R. Goebel, Kelly M. Hagen and Michael J. Schmale, *Indemnification: When Silence Might Not Be a Virtue; The Transactional Lab*, Corporate Counsel (Online), December 12, 2013 (noting use of caps and floors to limit liability in indemnification provisions).

⁵⁹ Michael Bloom, Lindsey Chandler and Alexa Peterson, Some IP Indemnification Considerations for Tech Vendors, Corporate Counsel, June 13, 2016 (noting caps may be used to limit IP indemnification liability); *Moore & Assocs., Inc. v. Jones & Carter, Inc.*, 217 F. App’x 430 (6th Cir. 2007) (interpreting a contract for engineering service and applying a cap from a provision limiting liability to an indemnity clause).

Indemnitors may avoid dealing with frivolous lawsuits⁶⁰ by limiting indemnification to cases in which the indemnitee reaches a final judgment.⁶¹ Only a small percent of patent lawsuits reach final judgment, and thus this limitation is quite severe. A common intermediate term limits indemnification to cases in which a lawsuit is filed. The most generous language for the indemnitee includes cases in which a patent has been asserted but before the filing of a lawsuit.

A moment's reflection reveals why indemnification clauses are often bundled with agreements calling for the indemnitor to pay for and take control of the patent litigation. When the indemnitee has control of settlement and litigation, the indemnitor must worry that the indemnitee will not work hard to defeat the claim and will settle too quickly and generously.⁶² Thus, an indemnification agreement often specifies that the indemnitee provide notice of a patent dispute to the indemnitor, and allow the indemnitor to assume responsibility for the patent defense.⁶³ Courts appear conflicted about what to do if the indemnitee fails to honor these provisions. On the one hand, courts do not want to burden indemnitors with excessive settlement payments or damages, but on the other hand as a public policy matter they favor early settlement of patent disputes.⁶⁴ The same

⁶⁰ Warranty and indemnity obligations do not extend to frivolous claims. See, e.g., *Pacific Sunwear of California, Inc. v. Olaes Enterprises, Inc.*, 167 Cal. App. 4th 466, 474 (2008) (“[Indemnification under California’s version of U.C.C. § 2-312(3)] broadly encompass[es] any nonfrivolous claim of infringement that significantly interferes with the buyer’s use of a purchased good.”); *EZ Tag Corp. v. Casio Am., Inc.*, 861 F. Supp. 2d 181, 184 (S.D.N.Y. 2012) (“a claim of infringement must have some merit beyond being “nonfrivolous” for Rule 11 purposes to support a breach of warranty claim. The Raylon Action, which the Texas court described as “stretch[ing] the bounds of reasonableness,” does not rise to that level.”)

⁶¹ See Chad A. Rutkowski, *Patent Infringement Indemnification: Vendor Indemnification of Patent Infringement Claims: Maximizing the Indemnitee’s Right to Enforcement*, BLOOMBERG CORP. L. J. 289 (2008)

<https://www.bakerlaw.com/files/uploads/Documents/News/Articles/INTELLECTUAL%20PROPERTY/2015/Rutkowski-WW-Vendor-Indemnification-of-Patent-Infringement-Claims.pdf>

⁶² See *id.* at 286. (“Courts are split on whether an indemnitee has a per se right to control or otherwise participate in the defense of an indemnitee.”).

⁶³ See *id.* at 282.

⁶⁴ See *id.* at 287-88.

issues of notice and litigation control arise in implied warranty of non-infringement cases. Again, the courts balance the interests of the parties.⁶⁵ If supply chain managers crave greater certainty regarding the allocation of patent defense costs, then they would be wise to specify these terms explicitly in their indemnification agreements.

Device and software suppliers sometimes limit indemnity to cases in which the buyer cannot combine the seller's product with technology from another vendor without approval from the seller.⁶⁶ This limitation could be quite restrictive for many complex technologies. The seller's goal is to avoid surprises that arise when a combination created by the buyer creates an infringement risk the seller did not anticipate.

Often complex integration of inputs from many different suppliers is unavoidable. In these cases the parties may worry about overlapping indemnification provisions from different sellers.⁶⁷ They may establish a procedure to govern control of settlement and management of litigation by multiple indemnitors. Or they might decide to give control of the litigation to the indemnitee in this case.⁶⁸

⁶⁵ See *Cover v. Hydramatic Packing Co., Inc.*, 83 F.3d 1390, 1394 (Fed. Cir. 1996); *Phoenix Solutions, Inc. v. Sony Electronics, Inc.*, 637 F. Supp. 2d 683, 697 (N.D. Cal. 2009).

⁶⁶ See Virginia DeMarchi, *Contractual Indemnity Obligations for Patent Infringement Claims*, 21 AIPLA Intellectual Property Litigation 1, 17 (2010).

⁶⁷ See *id.*

⁶⁸ See Rutkowski *supra* note 61 at 289. Rutkowski warns that:

This opaque analysis is further muddled when an indemnitee is potentially owed indemnity from more than one vendor. In that case, the indemnitee's desire to maintain control of its own defense can be all the greater, especially if there is a concern that any one indemnitor would "steer" the litigation in a fashion so as to maximize the liability of a co-indemnitor and thereby minimize its own. It appears that the obligation of co-indemnitors in such situations is joint and several, such that the indemnitee could require any one indemnitor to fully indemnify it. The indemnitee should therefore have significant latitude in crafting an allocation scheme, for any co-indemnitor that refuses to accept allocation is at risk for full indemnification. *Id.*

II. RISK MANAGEMENT AND INDEMNIFICATION AGREEMENTS

A. Efficient Management of the Risk of Posed by Patent Assertions

If frictions in the marketplace are not too great then contracting parties should choose contract terms that maximize their joint profit. We can learn much about the efficiency of terms in indemnification clauses by drawing lessons from the economics of warranties. Efficient warranty terms may provide contracting parties with benefits in the form of insurance, credible signaling of private information, and incentives to avoid bad outcomes.⁶⁹ Indemnification terms may provide similar benefits.

If the seller is less averse to risk than the buyer, then value is created when the seller insures the buyer against the harm that results when a product fails, either by giving the buyer cash or by replacing the product. This is the insurance function of a warranty. Indemnification may provide a similar insurance function. If neither the buyer nor seller has better knowledge that they are infringing a patent, or any better ability to take action to avoid infringement, then if the seller is less risk averse, it can insure the buyer by agreeing to defend against a patent lawsuit and paying damages that might result. If the buyer is less risk averse, then making the buyer indemnify the seller maximizes the value of the contract.

A warranty provides a signaling function when the seller has better information than the buyer about the reliability of a product. A rational buyer can draw an inference about product quality by observing whether a seller offers a warranty and how generous the warranty terms are. The inference that stronger warranties are associated with higher

⁶⁹ See, Winand Emons, *The Theory of Warranty Contracts*, 3 J. OF ECON. SURVEYS 44 (1989).

quality is justified if the cost of providing a warranty increases as the quality of the product declines.

Likewise, an indemnification clause may provide a signal to a counterparty that the indemnitor has confidence that the party's joint technology development will not infringe any patents. The signal is useful in cases in which it is hard to observe this sort of information and hard to credibly convey it. Analogous to the case of warranties, the signal works if the expected cost of indemnification is higher for indemnitors with a high probability of being involved in infringement.

A warranty plays a valuable incentive role when it encourages the parties to take steps to make sure that a product does not fail. For example, the seller of a refrigerator may offer a generous warranty on the compressor, but only a limited warranty on the door. The compressor warranty gives an incentive to the seller to monitor the manufacturing process to make sure the compressor is reliable. The limited warranty on the door gives the buyers an incentive to monitor their children and make sure they don't swing on the refrigerator door. Likewise, the scope of an indemnification clause may be tailored to include product features and uses controlled by the indemnitor, and exclude features and uses that are mainly controlled by the indemnitee.⁷⁰

These simple lessons from the economics of warranties provide useful guidance for selecting contract terms in patent litigation indemnification clauses. But this guidance is incomplete in two settings. First, in markets with significant contracting frictions even

⁷⁰ "The economic explanation for the complete shifting of liability from one joint tortfeasor to another that is brought about by indemnity is straightforward. In an alternative-care case we do not want both tortfeasors to take precautions; we want the lower-cost accident avoider to do so. The liability of the other is a backstop in case insolvency prevents the threat of tort liability from deterring the primary accident avoider. Hence the need for a mechanism that will, where possible, shift the ultimate liability to the most efficient accident avoider; indemnity does this." Richard Posner, *Economic Analysis of Law* 190 (6th ed. 2003).

rational parties might not select terms that maximize joint profit. Second, in settings in which patent infringement risk is difficult to manage, then efficient indemnification terms may be determined largely by concerns about how the parties can strengthen their joint bargaining position vis à vis a patent owner who asserts a patent after alleged infringement.

B. Contracting Frictions and Joint Profit Maximization

Rational parties may be discouraged from structuring indemnification agreements to maximize their joint profit because of contracting frictions.⁷¹ These frictions take many forms. In the simplest case, the costs of negotiating and drafting the contract terms are too high compared to the gains from managing the risk associated with an unlikely or low stakes patent lawsuit. For example, nineteen utility patents have issued in the United States since the year 2000 on tambourines and related percussion instruments.⁷² It seems unlikely that firms operating in this field face an expected cost of patent litigation large enough to justify incurring the costs of negotiating and drafting terms addressing patent litigation defense.

Limited wealth creates a more significant friction. It may be common to find small software vendors lack the financial assets required to make a credible indemnification promise to a large buyer. Absent the wealth constraint the parties might have found it optimal for the software vendor to manage the risk of patent infringement; the vendor might have better knowledge of the relevant patent rights, and likely has better

⁷¹ See generally Benjamin E. Hermalin, Avery W. Katz, & Richard Craswell., *The Law and Economics of Contracts*, eds. A. Mitch Polinsky & Steve Shavell, HANDBOOK OF LAW AND ECONOMICS (2007).

⁷² Based on a inspection of the USPTO patent classification of tambourines, 84/814. See <http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&p=1&u=%2Fnetahtml%2Fsearch-bool.html&r=0&f=S&l=50&TERM1=84%2F418&FIELD1=ORCL&d=pall>

knowledge of the technology and whether its employees copied patented software. Wealth constraints may be a significant friction because patent litigation insurance may be unaffordable, and often the damages in a patent suit far exceed the profit that the vendor expected to derive from the sale of its software. Generally, limited wealth may disrupt efficient indemnification in any industry, and potentially discourages entry of start-ups into fields in which vendors are expected to cover the costs of patent litigation.

Lack of competition may create another type of friction. One of the parties may have sufficient bargaining power to impose its favored indemnification clause on its counterparty rather than maximize joint profit. A sloppy but intuitive analysis holds that a large seller with market power would simply refuse to indemnify a small buyer to avoid the expected cost. Likewise, some would argue that a large buyer would insist on indemnification regardless of what is efficient. But this intuition often fails. If the dominant party has good information about its counterparty and bargaining works well, then even dominant parties should strive to choose efficient contract terms – choices that maximize joint profit allow the dominant party to extract more profit through the sales price. In other words, a dominant seller will often prefer to craft an efficient indemnification agreement, and if that agreement imposes the expected cost of patent defense on the seller, then seller recovers that cost (and more) through a higher sales price.⁷³

Up to this point I have considered the selection of an indemnification clause that maximizes joint profit between two members of supply chain. But I have so far ignored the possibility of a broader agreement that includes the patent owner as well as members

⁷³ Market power leads to an inefficient contract term only when the dominant firms' share of the joint profit rises enough to offset shrinkage in total profit associated with the inefficiency. See, x.

of the supply chain. Patent litigation would not arise and indemnification agreements would not be necessary if supply chain members simply obtained a license from the patent owner before commercializing a new technology.

The fundamental market friction that makes indemnification clauses important derives from the difficulty faced by parties commercializing a new technology to learn about the patent rights that might be asserted against them.⁷⁴ Absent early notice of patent rights, supply chain members cannot bargain over patent rights in advance of their design, marketing, and distribution activities. When notice works well indemnification clauses are unimportant. In most industries, parties working to commercialize a new technology normally expect that patents could be asserted against them despite their efforts to clear the rights in advance. Of course, the parties should try to clear patent rights in advance when they can, and the indemnification clause can be used to motivate the party in the best position to clear the rights in advance to do so.

III. LITIGATION BARGAINING POWER AND INDEMNIFICATION

AGREEMENTS

A. Bargaining Power and Control of Litigation

In addition to risk management, firms in a supply chain may benefit from considering the impact of indemnification agreements on litigation and settlement outcomes that may follow the assertion of a patent against a member of the supply chain. It might be the case that a particular member of the supply chain would be a more

⁷⁴ See Dratler, *supra* note 7 at 4.

effective bargainer than others and thus should control litigation and settlement negotiations.

Generally, an effective bargainer is experienced, motivated, well-informed, patient, and tolerant of risk. The firm in the supply chain that best exhibits these characteristics may be the right firm to shoulder the burden of indemnification and control of patent litigation. This depends, of course, on whether risk management concerns are important, and whether the most effective bargainer is different from the most effective risk manager.

On the flip side, when supply chain members have not coordinated patent litigation defense in advance, it makes sense for patent owners to target the weakest bargainers in the supply chain with a patent assertion. Commentators have observed this tactic is often used by PAEs when they assert patents against the customers of computer and communications firms.⁷⁵ For example, the purchaser of a router who uses it in a retail establishment is unlikely to know much about the industry, the technology, or the patent, or have experience with patent litigation.⁷⁶ The manufacturer can mount a stronger

⁷⁵ See generally, Love and Yoon, *supra* note x; Gaia Bernstein, *The Rise of the End User in Patent Litigation*, 55 B. C. L. REV. 1443 (2014); Gaia Bernstein, *The End User's Predicament: Standing to Sue in Patent Litigation*, x B. U. L. REV. x (2016); Cisco, Inc. v. Innovative Wireless Solutions, LLC, (declaratory judgment complaint) Civil Action No. 1:13-cv-00492 <http://www.essentialpatentblog.com/wp-content/uploads/sites/64/2013/06/Cisco-Systems-Inc-v-Innovative-Wireless-Solutions-LLC-Complaint.pdf> (“On information and belief, IWS is pursuing a litigation strategy of suing retail purchasers, as opposed to the actual manufacturers of the standard compliant Wi-Fi products (e.g., Cisco), in order to leverage the cost of litigation against targets that do not have the resources, inclination or technical knowledge about the products or standards necessary to defend against IWS’s allegations.”)

⁷⁶ See Dratler, *supra* note 7 at 6; Brian J. Love & James C. Yoon, Expanding Patent Law’s Customer Suit Exception, 93 B.U.L.REV. 1606, 1614 (2013) (“[M]anufacturers ... generally have greater knowledge of the industry, the prior art, and the patented invention’s value [than customers].”) PATENT INFRINGEMENT INDEMNIFICATION VENDOR INDEMNIFICATION OF PATENT INFRINGEMENT CLAIMS Maximizing the Indemnitee’s Right to Enforcement By Chad A. Rutkowski, Bloomberg Corporate Law Journal (2008) (“vendor typically has the knowledge and expertise to discern what patents are implicated by the manufacture and sale of its product.”) <https://www.bakerlaw.com/files/uploads/Documents/News/Articles/INTELLECTUAL%20PROPERTY/2015/Rutkowski-WW-Vendor-Indemnification-of-Patent-Infringement-Claims.pdf>. 282

defense and bargain more effectively than the customer if it has better knowledge of the prior art that might be used to invalidate asserted patent claims, or better knowledge of the ease or difficulty in redesigning a product to avoid infringement of the claims as construed in court.⁷⁷

From an *ex ante* perspective, the ideal defendant internalizes (i.e., pays attention to and acts on) the interests of all supply chain members with regard to the outcome of the patent litigation. Numerous customers, retailers, or distributors in some supply chains might not have much at stake in a patent litigation and therefore might not find it rational to mount a defense when a patent is asserted against them. Firms at the center of a supply chain will tend to have higher stakes and a more inclusive perspective.⁷⁸

A centrally located member of a supply chain, often the manufacturer, typically has the strongest incentives to litigate.⁷⁹ If the manufacturer sells the same or similar products to multiple buyers, then the number of distinct transactions potentially multiplies the collective gain from effective litigation. The manufacturer is more likely to benefit from litigation savings across all these transactions than any one buyer could benefit.⁸⁰ In fact, when buyers control litigation they may sometimes be tempted to cooperate with the patent owner to the detriment of other buyers. For instance, it is easy

⁷⁷ See Dratler, *supra* note 7 at 35.

⁷⁸ See Love & Yoon, *supra* note 76 at 1625 (manufacturer's may be willing to litigate with NPEs in order to develop a reputation as a tough negotiator).

⁷⁹ See Love & Yoon, *supra* note 76 at 1621-22 (manufacturers will act in the collective interest of their customers if the manufacturers control patent infringement defense).

⁸⁰ See Chad A. Rutkowski, PATENT INFRINGEMENT INDEMNIFICATION VENDOR INDEMNIFICATION OF PATENT INFRINGEMENT CLAIMS Maximizing the Indemnitee's Right to Enforcement, *Bloomberg Corporate Law Journal* 282 (2008)

<https://www.bakerlaw.com/files/uploads/Documents/News/Articles/INTELLECTUAL%20PROPERTY/2015/Rutkowski-WW-Vendor-Indemnification-of-Patent-Infringement-Claims.pdf>. (“Because the vendor wants to sell to as many buyers as possible, it has the incentive to either ensure non-infringement or purchase appropriate licenses.”) (“vendor typically has the knowledge and expertise to discern what patents are implicated by the manufacture and sale of its product. Because the vendor wants to sell to as many buyers as possible, it has the incentive to either ensure non-infringement or purchase appropriate licenses.”)

to see that a buyer might be more willing than the seller to drop a strong invalidation argument in the context of a settlement, despite the benefit that other buyers might derive if the patent is invalidated.⁸¹

Sophisticated PAEs are likely to look beyond simple customer status when they target potential defendants for a patent assertion. For example, they are likely to avoid suing firms that have developed a reputation for fighting PAE assertions. More surprisingly, Cohen, Gurun, and Kominer find that PAEs target firms with high cash balances and firms that are distracted by other litigation.

How can knowledge of these targeting strategies be used to craft supply chain agreements about litigation control? Roughly speaking, tough defendants want to be known and weak defendants want to hide. To elaborate, if firm X has agreed to indemnify its customers and take control of patent litigation defense, and X has a reputation for fighting patent assertions, is not cash flush, and is not currently occupied with other litigation, then X wants potential patent asserters to know its identity and the terms of the indemnification agreement. On the other hand, if firm Y is a manufacturer with characteristics that make it an attractive target, then it might be efficient for customers to be responsible for their own defense, and publicize that firm Y does not indemnify its customers. Or perhaps instead Y does indemnify its customers but tries to hide its identity and its contractual connections to its customers.

Thus far, I have focused on control over litigation. I need to complete my analysis with some comments about the allocation of the cost of litigation and settlement license fees. Control over settlement and litigation, and responsibility for indemnification and are

⁸¹ See Love & Yoon, *supra* note 76 at 1635 (customer defendants may be lured with a generous settlement offer to work with a patent owner and against the interest of future customer defendants)

naturally coupled – the party that pays indemnification wants to control the cost of indemnification. And this works the other way, if a party gives up control over litigation, then it does not want to be on the hook for the cost of litigation.

This coupling of control and financial responsibility generally makes sense. When the two features of the indemnification agreement are separated that creates the potential for conflict. However, in the next section I will analyze reasons why supply chain members might rationally choose less than perfect alignment between control and financial responsibility in a quest for greater bargaining power against a patent assertor.

B. Conflict as a Source of Bargaining Power

If a single party controls litigation for the supply chain and that party is not fully liable for the outcome of litigation, then conflict is possible among supply chain members over the decision to settle with the patent-plaintiff. For example, suppose an indemnification agreement caps liability at \$20 million, and a plaintiff offers to settle a suit filed against an indemnitee for \$20 million. An indemnitee would agree to such an offer and avoid any chance of liability, but the indemnitor might reject the settlement offer if litigation promised lower expected cost – thus, the conflict.⁸²

The parties can avoid this sort of conflict by specifying in their contract that the indemnitor must act in the joint interest of the parties, or that the indemnitee can accept

⁸² Notice that there is not necessarily a conflict. If the cost of litigation is high and the chances of winning the lawsuit are small, then the indemnitor might also be willing to agree to the settlement offer.

any offer, or that the parties jointly decide on settlement decisions.⁸³ Interestingly, avoidance of conflict may not be efficient. Indemnification caps which create possible conflicts may increase the bargaining power of the indemnitor versus the patent-plaintiff, and thus maximize the expected joint profit of supply chain members. Put differently, an indemnitee may be willing to risk an ex post conflict regarding settlement in order to encourage the indemnitor to bargain aggressively.

Here is an example that demonstrates the logic behind such a strategy. Suppose that patent damages are uncertain – they may take a low value of \$3 million with a probability of $2/3$, or they may take a high value of \$9 million dollars with a probability of $1/3$. Suppose that trial cost is \$1 million for both the plaintiff and the defendant. A risk neutral patent owner would demand a minimum of \$4 million in a settlement.⁸⁴ A risk neutral indemnitor would pay as much as \$6 million to settle – assuming the indemnitor is fully responsible for settlement and litigation costs.⁸⁵ The parties could settle for any value between \$4 million and \$6 million inclusive. For simplicity, I will assume the parties have equal bargaining skill and settle at the midpoint of \$5 million.

Now suppose that the indemnitor capped its liability at a value C that is a value greater than \$3 million and less than \$9 million. The patent owner's minimum demand remains \$4 million. The indemnitor is now willing to pay at most $(2/3)(3) + (1/3)C + 1 = 3 + C/3$. (Notice that when $C = 9$, this value is 6, as above.) If the parties have equal bargaining skill then they will agree to a settlement at the midpoint of these values which

⁸³ Despite the obvious contractual solutions to this problem, in the liability insurance context, for many years, these sorts of conflicts were a standard feature of liability insurance contracts. This industry practice ended when state courts imposed a duty of good faith on liability insurers that required them to consider the interest of the insured as well as the insurance company's interest when making settlement and litigation choices in tort litigation.

⁸⁴ Patent owner minimum = $(2/3)3 + (1/3)9 - 1 = 4$.

⁸⁵ Indemnitor maximum = $(2/3)3 + (1/3)9 + 1 = 6$.

is $7/2 + C/6$. The settlement value rises with C . It equals 4 when $C = 3$, and 5 when $C = 9$, and a value between 4 and 5 when C is between 3 and 9. Intuitively, the indemnitor is more aggressive in the settlement negotiation because it is not fully liable if trial occurs and a high level of damages are awarded – the lower the cap, the more aggressive is the indemnitor. But there must be catch – right? The catch is that the indemnitee would suffer expected trial costs from this strategy if the cap is pushed too low. If C is pushed below \$3 million, then the maximum that indemnitor is willing to pay is less than the minimum that the patent owner is willing to accept, and the parties go to trial.

This example reveals the bargaining advantage that the supply chain members can gain from liability caps in indemnification agreements. The example also reveals that caps may create a conflict between the goals of the indemnitor and indemnitee, and that conflict may cause settlement failure. Notice that the bargaining advantage disappears if the indemnitee can intervene in the settlement negotiations and insist on acceptance of an offer within the cap. Thus, the bargaining advantage of the cap depends on the credibility of an indemnitor's commitment not to renegotiate the indemnification agreement with the indemnitee after a patent is asserted against the indemnitee.⁸⁶ Finally, notice that in practice supply chain members are likely to face a more complex litigation environment such that caps create both a degree of bargaining power and an increased risk of inefficient litigation. The choice of an optimal cap would be difficult, and it is possible that no cap at all would be optimal.⁸⁷

⁸⁶ See Meurer (1992) and Sykes (1994).

⁸⁷ Patent defense insurance that contains policy limits may generate the same strategic benefit as indemnification clauses with caps. The new RPX policies do have caps, but I do not know how they are determined. See MARTA BELCHER AND JOHN CASEY, *Hacking the Patent System: A Guide to Alternative Patent Licensing for Innovators* 24 (Jan. 2016). https://www.eff.org/files/2016/01/26/hacking_the_patent_system_belcher_and_casey_updated_january_2016.pdf

CONCLUSION

Parties in a supply chain and other parties who cooperate to bring new technology to the market face a risk that a patent will be asserted against one or more of them. If the risk is sufficiently high then it is efficient for the parties to contract in advance regarding how they will share the costs of patent litigation and settlement licensing, and who will control the settlement and litigation. This Article provides guidance regarding the choice of efficient terms in indemnification agreements that respond to two objectives: efficient risk management and effective bargaining against a patent-plaintiff. Likely, the first objective is more important for chemicals and other technologies for which patent notice works well and patent clearance is manageable. And likely, the second objective is more important for software and most other technologies for which patent notice works poorly and patent clearance is difficult.

This Article does not engage policy questions concerning the social impact of indemnification agreements, but it is easy to identify points of intersection between the descriptive analysis in this Article and patent policy discussion. Let me briefly note a few significant issues. First, indemnification agreements are more effective when an indemnitee recognizes that they have a right to indemnification. This is not always straightforward because many patent assertions are threadbare. If a complaint filed by a patent owner does not identify the claims being asserted or the accused technology in sufficient detail, then the targeted party may not know which (if any) of multiple vendors

(“RPX has developed a variety of specialized policies to account for individual companies’ risk profiles. Annual premiums start at \$5,000, retentions (similar to deductibles) are between \$25,000 and \$500,000,

might be responsible for indemnification. Procedural reforms that require more detailed pleadings in patent cases may effectively respond to this concern.⁸⁸ Second, shifting control of patent litigation to a manufacturer or other party at the center of a supply chain, potentially creates efficiency in resolving litigation. This goal is served by thoughtful indemnification agreements, but it could be further advanced if courts routinely stayed patent suits against customers, and provided a generous test of standing in declaratory judgments suits for indemnitors.⁸⁹ Third, patent courts sometimes assess the significance of indemnification agreements as they relate to patent law doctrine. The nature of an indemnification agreement may be relevant to the question of whether an indemnitor induced patent infringement,⁹⁰ and also to the question of whether a firm is a real-party-in-interest for purposes of instituting an inter partes challenge of patent claims before the Patent Trial and Appeal Board.⁹¹ A good understanding of the nature of the business purposes of indemnification terms should improve courts' analyses of these issues.

and copays start at 10%. The policy provides limits of between \$1 million and \$10 million annually.”)

⁸⁸ Twombly, Iqbal. Virginia DeMarchi, Contractual Indemnity Obligations for Patent Infringement Claims, 21 AIPLA Intellectual Property Litigation 1, 17 (2010).

⁸⁹ See Dratler, *supra* note 7 at 27; Brian J. Love & James C. Yoon, Expanding Patent Law's Customer Suit Exception, 93 B.U.L.Rev. 1606, 1614 (2013) (“Under the customer suit exception, courts can stay litigation filed against a customer until after the resolution of a later-filed declaratory judgment action initiated by the accused product's manufacturer.”) *Id.* At 1617-19 (in recent years courts have restricted the availability of the customer suit exception). *Kahn v. General Motors*, 889 F.2d 1078 (Fed. Cir. 1989) (applying the first to file rule instead of the customer suit exception when Motorola filed a declaratory judgment suit after the patent owner sued General Motors over a car radio) (the Fed Cir said that the Motorola component did not infringe, infringement occurred only when GM combined Motorola component with other components).

⁹⁰ See Dratler, *supra* note 7 at 2; Inducement liability based on indemnification agreements *H.B. Fuller Co. v. National Starch & Chem. Corp.*, 689 F. Supp. 923, 945 (D. Minn. 1988); *Sing v. Culture Prods., Inc.*, 469 F. Supp. 1249, 1255 (E.D. Mo. 1979).

Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1470 (Fed. Cir. 1990) The “Federal Circuit noted that cases had held that an intent to induce infringement could be inferred from an indemnification clause when the primary purpose was to overcome the deterrent effect of the patent laws. It concluded, however, that the purpose of the indemnification clause in the case before it was to obtain the highest sales price for the division, rather than to induce infringement after the sale.”

⁹¹ Under Section 315(b): “An inter partes review may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent.” In a lawsuit brought by the non-practicing entity Intellectual Ventures against JP Morgan Chase, the question arose whether an

indemnitor is a “real party in interest” for purposes of this provision. See Patrick T. Muffo, When an Indemnifying Party Can Be Considered a “Real Party in Interest,” AIPLA Newsstand, Oct. 6, 2015, <http://www.lexology.com/library/detail.aspx?g=906e4ec6-bf86-45c8-aa3f-0e573ff9b36d> The PTAB stated that an important consideration in making this determination is whether the indemnitor “exercised or could have exercised control over a party’s participation in a proceeding.” (quoting Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012)) *IBM Corp. v. Intell. Ventures II*, (Motion for Additional Discovery denied) IPR2015-01322, (September 24, 2015), *aff’d Wi-Fi One, LLC v. Broadcom Corp.*, Fed. Cir., 2015-1944, September 16, 2016