

Patent Transfers in the Information Age: FRAND Commitments and Transparency

Jay P. Kesan and Carol M. Hayes, University of Illinois at Urbana-Champaign

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I. INTRODUCTION

This is now a high technology world, shaped by computing, networking, and communications technologies. Many of these technologies are protected by the intellectual property laws of the United States, including patent law under Title 35 of the United States Code. Congress's authority to regulate patent law stems from the Constitution, which empowers Congress to enact laws to "promote the Progress of Science and the useful Arts."¹ Thousands upon thousands of innovations over the last half century have come together to shape modern computing. Supporters of modern intellectual property law attribute many of these innovations to the protections afforded inventors under patent law. Inventors that successfully obtain a patent are granted a legal monopoly for the life of the patent, which is currently twenty years from the first submission of the application. During this patent period, the inventor who retains ownership of the patent can recoup her investment, with two main options available to do so: by being the only person allowed to practice the patent, or by licensing the patent to others and collecting royalties. Organizations may also obtain patents for defensive motives, such as allowing the organization to practice inventions in a way that minimizes the threat of patent litigation.

Modern innovation typically builds on earlier innovations, in a way that Professor Carl Shapiro likens to standing atop a pyramid rather than, as Newton originally described the progress of science, standing "on the shoulders of giants."² It logically follows that many modern inventions may rely to some extent on technologies that are still covered by patents held by others. This is where patent litigation, licensing agreements, and injunctions start to emerge. A patent holder will assert that one invention infringes on his technology, and may file suit against the alleged infringer if the parties are unable to reach an agreement. The patent holder's goal in an infringement action may be damages, often in the form of court-ordered royalty payments, or an injunction to prevent the defendant from practicing the patent holder's invention. If the patent holder thinks he can obtain an injunction, the patent holder might also use the potential injunction as leverage to obtain a higher royalty payment than the infringer would have been willing to pay otherwise. The alleged infringer is likely to defend by arguing that either the asserted patent was invalid, or that if it was valid, there was no infringement.

The complications arising from the aggregate nature of innovation are compounded by the modern need for technology, especially communication technology, to be interoperable. The ability of gadgets to interact with each other is of paramount importance in this age where information is exchanged across thousands of miles. Interoperability benefits consumer choice, giving consumers more options in how they use technologies. The more interoperable technologies are, the greater the network effects – that is, the positive effects that emerge as more people adopt the technology. Network effects are especially prevalent in the computer, Internet, and telecommunications industries.

¹ U.S. CONST. Art. 1 § 8.

² Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, in 1 INNOVATION POLICY AND THE ECONOMY 119, 120 (Adam B. Jaffe et al. eds., 2000), available at <http://www.nber.org/chapters/c10778.pdf>.

In these industries, the establishment of standards is important for the twin goals of achieving higher levels of interoperability and obtaining greater network effects. Sometimes, an industry may establish de facto standards through wide usage, but more often, standards are formally established through the actions of standard setting organizations (SSOs). In this report, we will examine several issues relating to patents and the formal standard-setting process. In Section II, we will introduce some of the major issues that arise in the context of interoperability and standards, with a focus on the presence of agreements to license on fair, reasonable, and nondiscriminatory (FRAND) terms.³ The section concludes with a detailed hypothetical to illustrate what we view as some of the most significant potential issues. In Section III, we will provide some background information about how FRAND agreements have been treated in courts applying different theories, including some based in antitrust and contract law. In Section IV, we will discuss how four areas of law (antitrust, formal contract, detrimental reliance, and property law) could be applied to address the problems we raised in our earlier hypothetical. In Section V, we will explore some issues relating to SSO policies and the direction of future research. Finally, in Section VI, we will discuss the separate issue of transparency in patent ownership, with a focus on recent action by the United States Patent and Trademark Office (USPTO) that might lead to a requirement that patent owners record patent assignments with the USPTO.

II. INTEROPERABILITY AND STANDARDS

Above, we noted the importance of interoperability in modern computing and the information economy. One way that a particular industry can encourage interoperability is by establishing technology standards. In the computer, Internet, and telecommunications industries, standards are often developed by SSOs. The standard setting process typically involves a number of industry actors that are members of the SSO, and these members work together to determine the optimal features and functions to facilitate interoperability. A standard may be “open” or “closed,” though how to define this continuum varies. Because a standard is just a document that describes the functions of the standard, some view standards as “open” merely by the fact that the standard document is publicly available, even if the technology required to implement the standard is covered by patents. By this definition, a standard would be “closed” if the entity that creates it does not publicly describe how the standard functions. In contrast, others might view standards as truly “open” only if there is a way to implement the standard that does not rely on any proprietary technology, and under this view, a standard would be “closed” if implementing the standard requires the payment of royalties to patent owners. Whether a standard is “open” or “closed” has little bearing on the topics within this paper, but it is a distinction that is worth noting when examining the literature concerning technology standards.

Many times, standards will rely on proprietary technologies still under patent, often called standard essential patents (SEPs). A patent that is relevant to a standard may be viewed as essential in three main ways: 1) Core essential, where the patent is technologically essential to a

³ In the United States, these terms are usually referred to as “reasonable and nondiscriminatory,” or RAND. Judge Posner wrote recently that the “fair” part of “fair, reasonable, and nondiscriminatory” does not add anything substantive to the phrase. *Apple v. Motorola*, 2012 WL 2376664, *8 (N.D. Ill. 2012). However, because “FRAND” is sometimes used to describe these terms in the United States anyway, and is how these terms are typically described in analysis elsewhere (including Europe), we use the term FRAND in this report instead of RAND to better encompass the international scope of the discussion.

core function of the standard; 2) Non-core essential, where the patent is technologically essential to an optional function of the standard; and 3) Commercially essential, where the patent's claims cover an option that is not technologically essential to the standard. A standard may also discuss technologies covered by “non-essential” patents, where the patent claims of a single patent may describe one of several alternatives for implementing the standard or optional features described by the standard. The industry differs on how to define commercially essential, with three conflicting views, which we characterize as broad, intermediate, and narrow. Under the broad definition, a technology would be commercially essential when nearly unanimous market demand for the option renders it necessary for competitors to include that option to compete. The intermediate view of commercially essential patents emphasizes technologies that enable interoperability, which developers of complementary technology will need to use in order to make their products compatible. Thus, while the broad view might view patented features as commercially essential based on their popularity in the market, the intermediate view relies on popularity of a technology that enables interoperability. The narrow definition, on the other hand, would limit commercial essentiality to non-essential patents that are included in the standard. There are two main options for a non-essential patent to be considered a commercially essential patent: 1) the alternative technologies would be too costly, leaving only one technology that is commercially feasible; or 2) one of the options is being so widely followed that it is not commercially feasible to choose one of the alternatives.

Whether a technology is considered a SEP is largely determined by the SSO's intellectual property rights (IPR) policy. Commercially essential patents are only considered SEPs by a minority of SSOs. The IEEE is one of the SSOs that includes commercially essential patents as SEPs, and the IEEE's definition adopts the narrow view of commercial essentiality.⁴ Standards are typically set by technical professionals, so when an SSO refers to a patent being “essential,” the SSO generally means that it is technologically essential unless the IPR policy explicitly refers to commercial essentiality. Industry indications suggest that SSOs typically view technological essentiality as including both core essentiality and non-core essentiality.

In our view, SSOs should be permitted to consider commercially essential patents as SEPs, but in the absence of an explicit provision, it is an open question as to whether the term “essential patent” should be limited to one or both types of technological essentiality. It is also an open question as to whether a narrow, intermediate, or broad definition of “commercially essential” is more appropriate. Declaring broadly defined “commercially essential” technologies to be SEPs can be problematic. One aspect of the smart phone war concerns the use by competitors of some of the patented design elements of Apple products, like slide-to-unlock. A broad definition of commercially essential might characterize this feature as commercially essential if nearly all smart phone users demand it. On the other hand, Google takes an intermediate approach to commercial essentiality, arguing that some popular technologies are so central to interoperability and necessary for complementary technologies that they should be viewed as *de facto* standards, with relevant patents treated as SEPs.⁵ However, Apple counters that treating product-differentiating technology as something that all competitors are entitled to

⁴ *Infra* note 82.

⁵ John Paczkowski, Google Says Some Apple Inventions Are So Great They Ought to Be SEPs, All Things D, July 20, 2012, <http://allthingsd.com/20120720/google-claims-popularity-has-made-some-apple-patents-de-facto-essentials/>.

because of the technology's popularity would reduce incentive to innovate.⁶ The conflict between Google and Apple on this point underscores the tension in the industry between proponents of the broad, intermediate, and narrow definitions of commercial essentiality.

SSOs generally have IPR policies that set forth the members' obligations with regard to intellectual property implicated by the standard. During the standard setting process, a board or committee may request that members disclose relevant patents, and may also seek agreements from patent holders to either license these patents on royalty-free (FRAND-RF) or FRAND terms to anyone who requests a license.⁷

Depending on the member's business model, however, requiring the disclosure of all potential SEPs might be very costly and burdensome. A member company with a large patent portfolio, for instance, might have hundreds of patents that are potentially relevant to a standard that is being developed. In such a situation, the member would have to have someone read through each claim of every potentially relevant patent to identify patents that *might* be essential to a standard that has not yet been finalized or adopted. Having attorneys review all of these patents would likely be cost prohibitive, but the main alternative to doing so would be to assign the task to experienced technical professionals who are familiar with the proposed standard, thus taking these individuals away from their normal responsibilities. Thus, companies may have incentive to not undertake expensive investigations of their own patent portfolios for the purpose of disclosing specific patents as potential SEPs. The IPR policy of the ITU is seemingly written with this situation in mind. In Section 7, concerning assignment and transfer of patent rights, the ITU requires members to make reasonable efforts to secure an assignee's agreement to be bound by commitments that the patent owner reasonably believes that they made to the ITU.⁸

FRAND agreements tend to be more common than FRAND-RF agreements. There are some SSOs that require FRAND-RF licensing schemes, but most SSOs allow patent owners to obtain royalties for their inventions in typical circumstances. FRAND agreements are generally between the patent holder and the SSO. However, apart from the amorphous language requiring that licenses be fair, reasonable, and non-discriminatory, the SSO generally provides no guidance for what terms will be acceptable. It is also not always clear from the language of the IPR policy if the policy covers: 1) core essential and non-core essential patents; 2) just core essential patents; or 3) both types of technologically essential patents as well as commercially essential patents, and if so, which characterization of commercial essentiality applies.

Industries that rely on standards recognize their importance. When a standard is widely adopted, small companies can compete with large companies on a national level, or even a global level, by innovating and creating a new technology that is nonetheless interoperable with

⁶ *Id.*

⁷ RF and FRAND terms are often seen as alternatives to one another. In the standards context, parties occasionally cross-license on RF terms, as Apple allegedly offered to do if ETSI adopted its design for a new Nano-SIM card as essential to a new standard. Posting by Eric Slivka to MacRumors, *Apple Offers Royalty-Free Patent Licenses to Push Proposed Nano-SIM Standard*, Mar. 26, 2012, 6:47 AM PDT, <http://www.macrumors.com/2012/03/26/apple-offers-royalty-free-patent-licenses-to-push-proposed-nano-sim-standard/>. However, a more common approach is for SSOs to treat RF licenses as a punitive measure, as in the case of SSOs that include provisions in their IP policies to require members to license on RF terms if they own essential patents that they intentionally fail to disclose.

⁸ Guidelines for Implementation of the Common Patent Policy for ITU-T/IRU-R/ISO/IEC 5 (Apr. 23, 2012), available at http://www.itu.int/dms_pub/itu-t/oth/04/04/T04040000010003PDFF.pdf.

technologies already broadly accepted and used by the public. Interoperability can aid in the adoption of the new technology by easing the transition. Thus, standards can be used to support a competitive environment, but misuse of SEPs can interfere with this goal. Ideally, parties that own a SEP could be trusted to not take advantage of standards to demand a higher royalty from competitors than the individual patent would warrant on its own. The patent litigation wars of the last few years, however, suggest that this may be an area in need of policy oversight.

a. LITIGATION AND STANDARDS

Litigation in the standards context is very problematic, and has far-reaching implications beyond the instant litigants. If the standard has already been adopted, the industry may be locked in, and it is likely to be impracticable to change the standard so that every good faith adopter of the standard is no longer infringing. Currently, there are several situations where problems may arise in the standards context: a patent may be concealed during the standard setting process, a patent holder may change his mind after making a FRAND agreement or otherwise seek arguably non-FRAND terms, or a patent holder who made a FRAND agreement may transfer the patent to a third party that refuses to be subject to the FRAND agreement.

The first situation, concealment, may arise when a party has a patent that is essential to a standard under development, and then intentionally fails to disclose this patent to the SSO. Once the standard has been adopted, this patent holder might sue good faith adopters of the standard for infringement. Some SSOs address the problems raised by the threat of patent concealment by including provisions in their rules that require RF licenses to be granted by patent owners that intentionally concealed patents.⁹ If the patent holder would otherwise at least be entitled to a reasonable royalty for the use of the patent by standard adopters, a requirement that the patent holder license the patent on a royalty free basis would be less appealing to a company that desires revenue, and thus patent holders participating in these SSOs have incentive to disclose patents to the SSO.

In the second situation, a party may disclose his patent to the SSO and initially agree to license the patent on FRAND terms to anyone who requests a license. The patent owner might then later change his mind or otherwise demand excessive royalties from competitors that want to implement the standard. This situation is problematic in part because the potential licensee may have already made substantial investments in reliance on the FRAND promise.

The third situation, where a patent is assigned to a new owner who did not make a FRAND agreement with the SSO, is less clear. The effect of patent transfers on the enforceability of FRAND agreements is currently an open question. The FRAND agreement is typically viewed as a contract between the initial patent holder and the SSO, so the question arises of when and under what circumstances a successor in interest can be bound by that contract, and by whom. The approaches of SSOs vary on this point. Many state in their policies a preference that future assignees be bound by the FRAND agreement. However, some SSOs merely require the contracting party to make a reasonable effort to obtain the assignee's

⁹ E.g., VSO Policies & Procedures – Revision 2.6, at 14 (Nov. 30, 2009), available at <http://www.vita.com/home/VSO/vso-pp-r2d6.pdf> (“If a WG Member fails to adequately and timely disclose... a patent claim or license terms for it as set forth in this Section 10... the VITA Member Company must license it to the extent it is essential to a Draft VSO Specification on a royalty free basis...”).

agreement to be bound, while others require that any assignment have the express condition of being subject to the FRAND agreement.¹⁰ SSOs also may vary on whether the agreement explicitly addresses granting licenses to non-members, and whether the FRAND agreement applies to technologically essential, commercially essential, or non-essential patents.

b. LITIGATION OVER FRAND AGREEMENTS

Litigation over a FRAND agreement may come in several forms, most commonly focused on antitrust law or contract law. If the FRAND agreement creates a duty to negotiate in good faith, as some courts have suggested, the reality of negotiation introduces more complications. For example, in normal negotiations, if the party seeking a payment is the first to offer, they will often highball the other party, thus causing future negotiations to use that high initial offer as a reference point. Similarly, if the party that will be making a payment is the first to offer, they will often lowball the other party, and future negotiations may thus be slanted downwards due to the lower initial reference point. But what about when there is a FRAND agreement? Both parties know that the end result has to be fair and reasonable. Some recent court cases have emphasized that an initial offer must be at least made in good faith. Additionally, some SSOs use language connecting FRAND terms to the negotiation process, suggesting that the initial offer must also abide by FRAND principles.

When a patent owner has previously entered into a FRAND agreement, she may attempt to comply with this agreement at first, and engage in negotiations with the potential licensee. However, if the negotiations are unsuccessful or not likely to be successful, the parties might file suit and request that a court set the FRAND terms. If a court is asked to set reasonable royalties, the court will often weigh a number of factors.¹¹ In the FRAND context, a court is likely to be cognizant of the increased value that a patent enjoys by being essential to a standard, and may eventually set the royalties at the level that would be appropriate if the patent's value had not been inflated by its use in a standard.

As is true with most litigation, FRAND litigation is rarely focused on a single issue. The patent holder may also be seeking an injunction, and the defendant may also be arguing patent invalidity and non-infringement. Under *eBay Inc. v. MercExchange, LLC*, the normal four-factor test for determining the appropriateness of an injunction also applies to patent disputes. To obtain a permanent injunction under that test, a patent owner will have to demonstrate: 1) irreparable injury; 2) the inadequacy of money damages to compensate for the injury; 3) that a remedy in equity is warranted after considering the balance of hardships between the parties; and 4) that a permanent injunction would not be harmful to the public interest.¹² Patent law inherently gives patent owners a right to exclude others from practicing their invention, so when a court determines that an injunction is not appropriate but that the non-owner was infringing the patent, the court may set an ongoing royalty rate to provide a reasonable compensation to a patentee who has thus given up his right to exclude the infringer from practicing the patent.¹³

¹⁰ See Section V.a. for a discussion of four SSOs and their very different rules about the effect of patent transfer on FRAND agreements.

¹¹ *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

¹² *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006)

¹³ *Paice LLC v. Toyota Motor Corp.*, 609 F. Supp. 2d 620, 624 (E.D. Tex. 2009).

Litigation over a FRAND agreement may also raise antitrust issues, with one or both parties asserting that the other is behaving in an anticompetitive manner and violating antitrust law.

c. APPLYING THE LAW TO LITIGATION OVER FRAND AGREEMENT TRANSFERABILITY

When a patent holder assigns her patent to a third party, and the patent was previously subject to a FRAND agreement with an SSO, is the third party assignee bound by this agreement? This is a difficult question that current law inadequately addresses. Currently, the discussion of these topics mostly focuses on patent law, antitrust law, and contract law.

i. Patent Law

Some principles of patent law may have some applicability to the current controversy, including laches and equitable estoppel, implied licenses, or a theory that allows the original patent owner's wrongdoings to be imputed to the successor in interest. Laches is a type of statute of limitations in patent law that prevents patent holders from profiting by their delay in bringing suit for infringement.¹⁴ When raising a defense of laches, the defendant must establish two things: 1) that there was an unreasonable delay before the patent owner asserted a claim, and 2) that the delay caused prejudice or injury to the defendant.¹⁵ The length of time necessary for a delay to be unreasonable varies with the situation, but if the delay is six years or more, that is generally viewed as *prima facie* unreasonable. The prejudice prong may refer to economic prejudice, with a focus on investments or damages that would not have accrued if the patent owner had brought suit sooner, or evidentiary prejudice, where the defendant's ability to present a full defense on the merits has been prejudiced due to factors like a witness's death or loss of records.

However, laches turns on notice of specific infringement and typically requires there to be a communication between the owner and infringer about that infringement. In the standards context, a patent holder may not have specific notice of every implementation of the infringing standard. Thus, even if the patent holder decides to wait several years to track down and sue specific infringers, the clock for laches probably would not start running because the patent holder might not have any notice about a particular infringing incident, and the infringers would not have been contacted to inform them of the possibility of litigation.

A defense related to laches is equitable estoppel, which allows a plaintiff to claim that the patent owner's course of conduct "reasonably gave rise to an inference" that the patent would not be enforced.¹⁶ Equitable estoppel and laches are both defenses that focus on nonenforcement, but equitable estoppel focuses on the mindset of the potential licensee, rather than the patent owner. Where laches requires the patent owner to be aware of specific infringement and not take action, equitable estoppel requires at a minimum that the accused infringer is aware that the patent owner made statements addressing nonenforcement of the patent and that the accused infringer then relied on that statement. The Federal Circuit, in *A.C. Aukerman Company v. R.L. Chaides*

¹⁴ See Robert P. Merges and Jeffrey M. Kuhn, *An Estoppel Doctrine for Patented Standards*, 97 CAL. L. REV. 1, 33-34 (2009).

¹⁵ *A.C. Aukerman Company v. R.L. Chaides Construction Co.*, 960 F.3d 1020, 1032 (Fed. Cir. 1992).

¹⁶ Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1918 (2002).

Construction Co., stated that reliance requires for the infringer to “have had a relationship or communication with the plaintiff which lulls the infringer into a sense of security.”¹⁷ Equitable estoppel arguments may also apply to statements made in the marketplace or directly to customers.¹⁸

In the SSO context, Mark Lemley suggests that equitable estoppel should exist when the standard adopter is aware of a statement that the patent owner made to the SSO concerning enforcement of the patent.¹⁹ However, Professor Lemley expresses doubt that equitable estoppel would protect standard adopters who rely on FRAND promises, because the promise does not prompt a reliance on nonenforcement of the patent, but rather an expectation that the patent will be asserted and reasonable royalties sought. Thus, a slightly amended approach to equitable estoppel might be needed to address repudiated FRAND commitments, allowing a standard adopter to estop a patent owner from denying a license or seeking an injunction, even if the patent owner was not the party that initially made the commitment to the SSO.

Another option that might assist standard adopters when a patent owner reneges on a FRAND commitment is the possibility of implied licenses. An implied license is a quasi contract doctrine that turns on the expectations of the parties in a sales transaction. In a patent case, the implied license issue may arise in the case of a patented process that requires the use of a non-patented item. In such a situation, a court might say that the purchaser of the non-patented good has an implied license to use the patented process that the purchaser acquired the non-patented good to use. Professor Lemley has argued that viewing a FRAND commitment as an implied license would allow all of the standard adopters to benefit, regardless of whether they would have had standing to sue for contract damages, and that such an approach would also reduce opportunism in litigation over SEPs.²⁰

The final approach that we noted under patent law, imputing the wrongdoings of a predecessor in interest, is likely insufficient to address most of the disputes that would arise in the context of transferring patents subject to a FRAND agreement, but is worth noting. If the previous owner of the patent made an intentional fraudulent representation to the SSO or to the USPTO, that misrepresentation could potentially lead to the patent being invalidated.²¹ This may be an option if the potential licensee can establish that the patent was transferred for the purpose of avoiding the obligations of the FRAND agreement, but this theory is not likely to help in situations where the initial owner did not engage in intentional wrongdoing.

ii. Antitrust and Unfair Competition

A second major area of law that is raised in the SSO context is antitrust and unfair competition. To establish an antitrust violation of monopolization or attempted monopolization, the party must prove the defendant’s market power, anticompetitive conduct, and intent.²² The

¹⁷ 960 F.3d 1020, 1043 (Fed. Cir. 1992).

¹⁸ Lemley, *supra* note 16, at 1921.

¹⁹ Lemley, *supra* note 16, at 1920-21.

²⁰ Lemley, *supra* note 16, at 1925.

²¹ Barnes & Noble, Inc. v. LSI Corp., 2012 WL 359713 (N.D. Cal. 2012) (noting that fraud prior to issuance and subsequent to issuance can make a patent unenforceable).

²² Lemley, *supra* note 16, at 1928.

law of unfair competition, especially as set forth in Section 5 of the FTC Act,²³ is a body of law that often overlaps with antitrust law, though some practitioners prefer to use the term “antitrust” in a more limited sense.

The overlap of antitrust law and patent law is the subject of much discussion among academics. Antitrust law aims to prevent abuses through monopolistic and anticompetitive behaviors, but some monopolies are lawful and permitted. Patents, for instance, always create a monopoly, and thus courts generally act with more deference to the patent system when weighing monopolistic behaviors by patent owners.²⁴ SEPs, however, have the potential to be more harmful to competition and the market if that monopoly power is abused. When a patent owner has a SEP, therefore, a court may weigh the owner’s behavior as a patent owner against his obligations under antitrust law. The viability of antitrust claims in the FRAND litigation context, however, is unclear. Some cases indicate that if a patent is assigned to a new party, the antitrust claim may not be able to be brought against the successor in interest.²⁵ Additionally, the *Noerr-Pennington* doctrine may also limit the extent to which an alleged infringer can make a counterclaim based on antitrust law.²⁶

Antitrust law has also been raised as a possible attack on SSOs themselves, with some theorizing that in some circumstances, an SSO’s behavior may resemble that of a cartel and thus violate section 1 of the Sherman Act.²⁷ However, courts often recognize the innovation and pro-competitive value that SSOs foster,²⁸ so attacks on SSOs on antitrust grounds are typically unsuccessful.

iii. Contract

Contract law is another area of law that is relevant to these disputes, because FRAND agreements are typically recognized as being valid contracts. Which element is viewed as the offer and consideration is not important for our purposes. Some may view the contract as being created by the SSO’s offer to include the patented technology in the standard, with the consideration being the patent owner’s promise to license on FRAND terms. On the other hand, some may view the contract as being created by the patent owner’s offer to license on FRAND terms, with the consideration being provided when the SSO includes the patent in its standard. The important thing for our purposes is that if the patent owner refuses to make a FRAND agreement, the SSO may decline to use the patented technology in the standard. What we are most concerned about is whether the obligations of this contract transfer when the patent is assigned to a new owner. Under conventional contract law, it is unlikely that this agreement will

²³ 15 U.S.C. § 45 (2006).

²⁴ Merges & Kuhn, *supra* note 14, at 14 (noting that authorities faced with antitrust claims often defer to patent law because of patent law’s inherent tradeoff between competition benefits and incentives for innovation).

²⁵ *Vizio, Inc. v. Funai Elec. Co. Ltd.*, 2010 WL 7762624 (C.D. Cal. 2010).

²⁶ *Apple, Inc. v. Motorola Mobility, Inc.*, 2012 WL 3289835 (W.D. Wis. Aug. 10, 2012). The *Noerr-Pennington* doctrine is often understood as being based on the First Amendment. In *Apple v. Motorola*, the court held that the *Noerr-Pennington* doctrine applied because Apple’s claim about Motorola’s anticompetitive conduct arose from Motorola’s attempt to enforce its patents in court, and thus the counterclaim was dismissed on summary judgment.

²⁷ See Lemley, *supra* note 16, at 1937 (noting the existence of this argument).

²⁸ *Intel Corp. v. Via Tech., Inc.*, 174 F. Supp. 2d. 1038 (N.D. Cal. 2001) (“Without [technology standards], the industry would balkanize, improvements would slow, and consumers would suffer.”).

transfer unless the original owner makes it explicit that the patent is being transferred subject to prior agreements and the new owner accepts these terms.

iv. Property

A fourth body of law that could potentially apply to these situations, though there has been no discussion of this option up to this point, is property law. But while the question of FRAND agreements has not been addressed using a property theory, there is a growing literature asserting that intellectual property licenses are analogous to property rights,²⁹ and these arguments typically run counter to the traditional view of licensing as creating only a contract promising that the licensor will not sue the licensee for the licensee's use of the intellectual property.³⁰ We argue that, like licenses, commitments to license can also be characterized as a property interest. Both licenses and commitments to license create an encumbrance on the intellectual property owner's right to exclude. The biggest difference between the two is the identity of the beneficiary. With licenses, it is clear who is favored by that encumbrance. With commitments to license, on the other hand, the encumbrance is the IP owner's commitment to be open to future license negotiations and not deny a license to parties entitled to obtain one.

A FRAND agreement is an enforceable contract, but it is also an enforceable contract that pertains to the treatment of intellectual property. Under U.S. patent law, patents are deemed to "have the attributes of personal property."³¹ However, it might be appropriate or helpful to analogize to real property in the case of standards and patent transfers. With real property, promises to do or not do something with the property may "run with the land." In Section IV.d., we examine the possibility that the law of real property can offer some useful analogies to buttress arguments that FRAND agreements "run with the patent." For example, by treating FRAND agreements like equitable servitudes or negative easements, the main issue would become whether the assignee had notice of the agreement, rather than whether the predecessor in interest secured a commitment from the assignee to be bound by the agreement.

d. MAJOR PROBLEMS IN THE FRAND AGREEMENT CONTEXT

There are several major problems with patents and standards that will become more visible in the near future, and there is a dire need to determine the optimal legal theories to use in resolving these problems. To illustrate the issues, consider the following a hypothetical situation.

FRAND AGREEMENTS IN THE WIDGET WORLD

²⁹ E.g., Christopher M. Newman, *A License Is Not a "Contract Not To Sue": Disentangling Property and Contract in the Law of Copyright Licenses*, 98 IOWA L. REV. (forthcoming Mar. 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2010853; Molly Shaffer Van Houweling, *The New Servitudes*, 96 GEO. L.J. 885 (2008).

³⁰ See, e.g., Spindelfabrik Suessen-Schurr Stahlecker & Grill GmbH v. Schubert & Salzer Maschinenfabrik Aktiengesellschaft, 829 F.3d 1075, 1081 (Fed. Cir. 1987) ("As a threshold matter, a patent license agreement is in essence nothing more than a promise by the licensor not to sue the licensee."); Mark R. Patterson, *Must Licenses Be Contracts? Consent and Notice in Intellectual Property*, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2009934 (forthcoming in Florida State University Law Review 2013) ("This article argues that the weight of judicial authority and sound policy support a contractual approach.").

³¹ 35 U.S.C. § 261 (2006).

The widget is a technology that is growing in popularity because of its ability to help people communicate. However, there are many ways to make a widget. The widgets can be designed in a number of sizes, or using a number of different technologies. Widgetech makes one widget that relies on combining a five inch gizmo with a transplate that transmits information at a frequency of 120 MHz. It currently licenses the patent for the five inch gizmo from Gizmo, Inc, and holds the patent for the transplate used in its widget. Widgecom makes another widget that relies on combining a three inch gizmo with a transplate that transmits information at a frequency of 20 MHz. Widgecom licenses the patent for the three inch gizmo from G-Tech, Corp. and the patent for the transplate from HF Plate, Inc.

It has become obvious that the widget technology has the potential to be very beneficial for consumers, but currently, customers of Widgetech cannot change to Widgecom's service, and vice versa, because the two widget technologies are too different. Because widget technologies are not uniform, most people have elected to instead remain using wadgets, an older technology that doesn't work as well or have as many features as the widget, although the wadget does allow content to be broadcast to a television. The widget industry forms an SSO with the intent of developing a standard for widget technology. Widgetech, Gizmo, Inc., G-Tech, Corp., and HF Plate, Inc. are all members of this SSO. Widgecom, however, does not join the SSO.

After evaluating the different options for widgets, a five inch gizmo and a 20 MHz transplate are eventually adopted as essential elements of the widget standard, and Gizmo Inc. and HF Plate both disclose to the SSO that they have patents on these respective technologies. The SSO also addresses the possibility that consumers may want to use the widget to broadcast to their televisions, so the organization notes that if a widget producer wishes to make their widget compatible with this purpose, the producer should use the telesend technology, which is covered by a patent owned by Telescreen, Co. Gizmo, Inc.'s gizmo and HF Plate's transplate are both core essential patents for the widget, and the telesend is a non-core essential patent. Telescreen is not a member of the Widget SSO, but it is a member of the Wadget SSO, which adopted their telesend patent as a core essential patent.

Upon the SSO's request, Gizmo Inc. and HF Plate both sign an agreement with the SSO, promising to license their relevant patents on FRAND terms to parties that wish to adopt the standard. A year later, Gizmo Inc. buys Telescreen's patent portfolio, and HF Plate sells its patent portfolio to PatBuy, Inc. PatBuy is a non-practicing entity that relies on patent royalties for most of its revenue.

A year later, the market for widgets has grown, and consumers are almost universally demanding that widgets include the capability of broadcasting content to televisions, thus retaining one of the benefits of the wadget. The telesend patent, while initially a non-core essential patent, thus may also now be a commercially essential patent, even though it was not commercially essential when the standard was announced.

After spending the better part of the last year making its widget production capable of producing widgets that adhere to the new standard, Widgecom and Widgetech start to produce widgets that comport with the standard. When the standard was announced, Widgecom sent a letter requesting a patent license to Gizmo, Inc., and a letter indicating an intent to continue licensing the transplate patent to HF Plate. Similarly, Widgetech sent a letter to Gizmo, Inc. indicating an intent to continue licensing the gizmo patent, and a letter to HF Plate, Inc. requesting a license to practice its transplate patent. Widgetech also decides that it wants to

include a feature in their widget to allow broadcasting to televisions, so it sends a letter to Telescreen, Co. to request a license. Widgecom's attempt to license from Gizmo, Inc. reaches a stalemate, and an acceptable royalty payment cannot be determined. Widgetech and Widgecom receive a letter from HF Plate stating that they no longer hold the transplate patent, but the letter does not say who the patent was assigned to. Widgetech receives a similar letter from Telescreen concerning the telesend patent.

Gizmo Inc. sues Widgecom for infringing its gizmo patent, and sues Widgetech for infringing its telesend patent. PatBuy sues Widgetech and Widgecom for infringing its transplate patent. Widgetech and Widgecom both argue that the patent owners are obligated to license the patent on FRAND terms, and thus the court should assist the parties in setting those terms.

This hypothetical illustrates several problems. A court evaluating the following problems is likely to first refer to the IPR policy of the Widget SSO, which we did not include above. The existence of these problems is our main focus, and we note that there is currently a lot of variation in how SSOs treat the sorts of problems that we outline below.

1. Widgecom is not a member of the Widget SSO. Gizmo Inc. asserts that when it made its FRAND promise to the SSO, this promise only applied to SSO members. Can Widgecom benefit from the promise and obtain a license for the gizmo even though it is not a member of the Widget SSO?
2. The telesend patent is now held by Gizmo Inc, but it was acquired after Gizmo made the FRAND promise to license its patents. This situation contains two distinct problems with their own complications.
 - a. The first problem concerns the telesend patent's status as a non-core essential patent that now may also be commercially essential, and this problem contains three parts.
 - i. First, the parties will need to look at the IPR policy of the Widget SSO to determine if non-core essential patents are considered SEPs. If the answer is yes, the FRAND commitment will apply, and the analysis for this problem ends here.
 - ii. If the above answer is no, the parties then ask whether the Widget SSO considers commercially essential patents to be SEPS. If that answer is no, the analysis ends and the FRAND commitment does not apply.
 - iii. But if the answer to the second subpart is yes, that introduces the problem of a non-essential patent *becoming* essential. The parties will then need to analyze the Widget SSO's IPR policy to determine the frame of reference for time – that is, does the IPR policy state that FRAND agreements apply to patents that were essential *at the time the standard was published*?
 - b. The second problem concerns the telesend patent's status as an after-acquired patent, which Gizmo Inc. acquired only after making the initial FRAND agreement. As a company that made a FRAND agreement to license widget patents, is Gizmo Inc. bound by this agreement such that they have to license the telesend patent on FRAND terms?

3. PatBuy was not a member of the SSO, and did not make any FRAND promises. Does the FRAND commitment made by HF Plate also bind PatBuy and limit the royalties that PatBuy can seek for the transplate patent?
4. Finally, as a policy matter, should there be a recordation requirement for assignments such that the assignments to Gizmo Inc. and PatBuy would have been required to be on file with the USPTO, making it easier for parties seeking licenses to identify the current patent owner? If these patents had been easier to track down, the party seeking a license could have made a formal, prompt request. Instead, Widgetech and Widgecom pushed forward with production of standard-compliant products to remain competitive, with the danger of patent litigation looming overhead, relying only on the earlier FRAND agreement to assure them that a license would be made available.

III. FRAND AGREEMENTS IN CASE LAW

There has been a fair amount of litigation over FRAND agreements and related behavior. The litigation has focused on different theories, including antitrust and contract law. The law, however, is currently very unclear on these issues, so many of the cases that we will discuss in this section are currently unpublished pretrial opinions where the court's most important contribution to the dispute was not a resolution, but rather a conclusion that valid claims were being pled. Some of these cases are so recent that a trial is possible, but others are older cases that were most likely settled after the initial denial of a pretrial motion to dismiss.

a. ANTITRUST AND UNFAIR COMPETITION

One of the more developed legal theories for FRAND litigation is that violation of FRAND agreements amounts to anticompetitive behavior that runs afoul of antitrust law. Standards are important to competition, and an essential part of FRAND agreements is the requirement for licenses to be granted on nondiscriminatory terms. When a supplier treats competitors differently, this may raise antitrust issues. It is therefore reasonable that scholars and courts alike have thus far focused on competition law to address these issues.³² However, antitrust law and the law of unfair competition are areas that are largely based on case law, because the governing statutes (e.g., the Sherman Act and the Clayton Act, the Federal Trade Commission Act) are written in very high level and general language. Thus, fact-specific inquiries are very important in antitrust and unfair competition cases.

Perhaps due in part to antitrust's reliance on fact-specific inquiries, the legal conclusions about FRAND agreements and antitrust have been spotty. The case of *Broadcom Corp. v. Qualcomm Inc.*, for example, emphasizes that there may be antitrust liability when there is active deception of the SSO.³³ Similarly, in *Research In Motion Ltd. v. Motorola, Inc.*, the court concluded that Motorola's breach of a FRAND promise was harmful to competition.³⁴ There

³² E.g., George S. Cary, Mark W. Nelson, Steven J. Kaiser, & Alex R. Sistla, *The Case for Antitrust Law to Police the Patent Holdup Problem in Standard Setting*, 77 ANTITRUST L.J. 913 (2011); Adam Speegle, Note, *Antitrust Rulemaking as a Solution to Abuse of the Standard-Setting Process*, 110 MICH. L. REV. 847 (2012); Joshua D. Wright & Aubrey N. Stuempfle, *Patent Holdup, Antitrust, and Innovation: Harness or Noose?*, 61 ALA. L. REV. 559 (2010).

³³ 501 F.3d 297 (3d. Cir. 2007).

³⁴ 644 F. Supp. 2d 788 (N.D. Tex. 2008).

may also be antitrust liability when there is an active attempt to conspire to harm competition.³⁵ However, under the reasoning in *Vizio*, the mere transfer of a patent is likely not enough to show anticompetitive behavior, and a refusal to abide by the FRAND agreement made by a predecessor in interest is not inherently a harm to competition. The cases also indicate a trend towards requiring active deception of an SSO for antitrust liability under the Sherman Act to attach, with the important case of *Rambus, Inc. v. FTC* standing for the proposition that showing a mere failure to disclose a patent, even when combined with the patent owner's actions in amending a patent application to make the claims fall within the standard specifications, would not sufficiently establish anticompetitive harm.³⁶

Because of cases like *Rambus* and *Vizio*, the application of antitrust law as a solution for a FRAND agreement dispute may be very limited. When there is an omission instead of an active attempt at deception, the reasoning of *Rambus* may persuade a court to find against antitrust liability. Similarly, *Vizio* seems to stand for the idea that antitrust liability does not automatically follow the patent. While *Vizio* left it open for antitrust liability to attach to conspiracies to harm competition, it also deferred to the patent owners with respect to the issues of patent transfer and repudiation of commitments made by a predecessor in interest. Similarly, as seen in *Apple, Inc. v. Motorola, Inc.*, the Noerr-Pennington doctrine may limit the ability of defendants to raise antitrust issues as counterclaims upon being sued for infringement.³⁷

The FTC, which is one of the agencies authorized to enforce antitrust law, has also examined this topic. The above referenced *Rambus* case overturned an FTC opinion where the FTC concluded that Rambus's actions did amount to anticompetitive conduct. When the FTC decided the case against Rambus, it drew on both Section 2 of the Sherman Act and Section 5 of the FTC Act, finding that Rambus had unlawfully monopolized several technology markets through its deceptive conduct.³⁸

Some FTC adjudications result in consent decrees, which focus on prohibiting future actions like the behavior under investigation, and are generally not appealed. One of the first examples in the Information Age where the FTC investigated a company for standards-related misbehavior is *In re Dell*. There, the FTC found that Dell had violated Section 5 of the FTC Act by failing to disclose its interest in a SEP and then exercising its rights against implementers of the standard eight months after the standard was adopted.³⁹

Another FTC adjudication, which also resulted in a consent decree, involved the actions of Negotiated Data Solutions LLC (NData). In that case, the FTC ordered NData to comply with the terms of FRAND agreements that its predecessor in interest (National Semiconductor Corp.) made with the Institute of Electrical and Electronics Engineers, Inc. (IEEE).⁴⁰ In the NData adjudication, the FTC concluded that NData's actions with regard to the patent amounted to unfair competition under Section 5 of the FTC Act, 15 U.S.C. § 45. This broader view that

³⁵ *Vizio, Inc. v. Funai Elec. Co. Ltd.*, 2010 WL 7762624 (C.D. Cal. 2010).

³⁶ 522 F.3d 456 (D.C. Cir. 2008).

³⁷ *Apple, Inc. v. Motorola Mobility, Inc.*, 2012 WL 3289835 (W.D. Wis. Aug. 10, 2012).

³⁸ *Rambus*, 522 F.3d at 461.

³⁹ *In re Dell Computer Corp.*, 121 F.T.C. 616, 618-19 (May 20, 1996).

⁴⁰ Decision and Order, *In re Negotiated Data Solutions LLC*, FTC File No. 051-0094, available at <http://www.ftc.gov/os/caselist/0510094/080122do.pdf>.

focuses on unfair competition rather than outright restraints on trade and monopolistic behavior has been examined by some researchers.⁴¹ Application of Section 5 of the FTC Act through FTC adjudication thus may still preserve a viable outlet for antitrust and unfair competition theories in the context of the transferability of FRAND agreements, but the remedies available for FTC actions under Section 5 are narrower than those available for violations of Sections 1 and 2 of the Sherman Act. Also, FTC adjudications are typically subject to review by the D.C. Circuit, which demonstrated in *Rambus* an inclination towards limiting antitrust law's application.

b. BANKRUPTCY

Under the bankruptcy law of the United States, patents are generally treated as an asset subject to sale by the trustee in the event that the patents are found to be non-exempt assets of the bankruptcy estate pursuant to the bankruptcy code.⁴² IP licenses, however, are granted some protection, with licensees being given the power to elect to retain their rights.⁴³ This issue came up recently in litigation over Qimonda AG's bankruptcy proceedings, with the primary dispute being whether license rights should be covered by U.S. bankruptcy law, or German bankruptcy law under comity.⁴⁴ The German law potentially allows debtors to terminate patent licenses, so there may be a direct conflict between U.S. and German law on the issue of license continuation in insolvency.⁴⁵

However, a FRAND agreement does not create an express license, though it arguably imposes on the patent owner a duty to negotiate in good faith, so the agreement's fate under a bankruptcy proceeding is unclear. The court and the parties can take action to clarify this issue. In the case of the bankruptcy proceeding for Nortel Networks, Inc., the bankruptcy court stated that debtors would take assets free of any other liens or interests, except for a few categories of interests. One of the enumerated categories that Nortel's debtors took assets subject to was enforceable agreements with SSOs.⁴⁶ The Nortel example shows that bankruptcy courts are aware of the value of FRAND agreements made to SSOs, and that these courts have the power to prevent these agreements from being discharged in bankruptcy.

c. BREACH OF CONTRACT

Another major question concerns the status of FRAND agreements under the law governing formal contracts. The FRAND agreement is between the patent holder and the SSO, but does it really create a contract? When approaching these problems from a Contract law perspective, this is the threshold question. Fortunately, it is also a threshold question that has been repeatedly answered in the affirmative. In *Microsoft v. Motorola*, the court concluded that a FRAND agreement is a valid contract, with the agreement involving an offer, an acceptance, and consideration.⁴⁷ There, the court concluded that the SSO's promise to include or consider

⁴¹ E.g., Adam Speegle, Note, *Antitrust Rulemaking as a Solution to Abuse of the Standard-Setting Process*, 110 MICH. L. REV. 847 (2012).

⁴² 11 USC § 522(d)(5) (2006) (exemptions); 11 USC § 363 (2006) (sale of assets by trustee).

⁴³ 11 U.S.C. § 365(n) (2006).

⁴⁴ *In re Qimonda AG*, 470 B.R. 374 (E.D. Va. 2012) (granting request to appeal to 4th Circuit).

⁴⁵ A German court recently concluded that, for various reasons, Qimonda could not terminate the licenses under German law. *Infineon v. Jaffe*, Regional Court of Munich I, Case no. 7 O 1906/11 (2012).

⁴⁶ *In re Nortel Networks, Inc.*, 2011 WL 4831218 (Bkrtcy. D. Del.).

⁴⁷ *Microsoft Corp. v. Motorola, Inc.*, 2012 WL 2030098 (W.D. Wash. 2012).

including the patent in the standard in exchange for the FRAND promise was consideration. On an interlocutory appeal concerning a related injunction issued against Microsoft by a German court, the Ninth Circuit concluded that the district court's characterization of a FRAND agreement as a valid contract was not legally erroneous.⁴⁸

So there is a valid contract, but the contract was created by an agreement between the patent owner and the SSO. If a patent owner violates the agreement, the SSO could sue as the other party to the contract, but what about the potential adopters of the standard? Do they have a claim against the patent owner? So far, the answer has been yes. The standard adopters are likely to be third party beneficiaries under the contract, which means that they receive a direct benefit from the contract even though they are not a party to the contract. In the case of FRAND agreements, these contracts are specifically intended to benefit parties that want to adopt the standard, so there is a solid argument for these adopters being third party beneficiaries. In *Microsoft v. Motorola*, the court specifically noted that Microsoft was a third party beneficiary of the FRAND commitments that Motorola made to the SSO.⁴⁹ It would also lead to unjust results if a patent owner who makes a FRAND agreement was permitted to sue standard adopters for infringement, but the standard adopters were not allowed to rely on the FRAND agreement as part of their legal theory.

So far, however, most of the litigation involving questions of third party beneficiaries to a FRAND commitment has occurred in a context where the third party beneficiary was a member of the SSO. Thus, case law is currently unclear as to whether a non-member would be considered a third party beneficiary, though there is at least one case where a court permitted a claim to proceed where a non-member of the SSO in question sought to enforce a FRAND agreement made by a patent owner and its predecessor in interest.⁵⁰

But what does this contract create? In the case of *Apple v. Samsung*, the parties agreed that Samsung's FRAND declaration to the European Telecommunications Standards Institute (ETSI) was a contract that at least created a duty for Samsung to negotiate licenses in good faith.⁵¹ In *Microsoft v. Motorola*, Motorola attempted to argue that the FRAND agreement imposes this duty to negotiate in good faith on the potential licensee, such that if the patent owner makes the first contact with the potential licensee, the obligation to license on FRAND terms is expunged.⁵² However, the court rejected this argument, reasoning that it would defeat the purpose of a FRAND promise if the patent owner could evade the obligation by making first contact. The court further rejected Motorola's argument that Microsoft repudiated the FRAND agreement by filing suit against Motorola instead of negotiating for a license. In the court's February 27, 2012 ruling granting a partial summary judgment, the court opined in advance that a potential licensee would not be repudiating an agreement if the potential licensee filed suit to request that a court determine whether terms comported with the FRAND agreement.⁵³ This

⁴⁸ Microsoft Corp. v. Motorola Inc., Case No. 12-35352 (9th Cir. Sep. 28, 2012)

⁴⁹ Microsoft Corp. v. Motorola, Inc., 2012 WL 2030098 (W.D. Wash. 2012).

⁵⁰ ESS Tech v. PC-Tel, No. C-99-20292 at 5 (N.D. Cal. 1999).

⁵¹ Apple, Inc. v. Samsung Electronics Co., Ltd., 2012 WL 1672493 (N.D. Cal. 2012).

⁵² Microsoft Corp. v. Motorola, Inc., 2012 WL 2030098 (W.D. Wash. 2012).

⁵³ Microsoft Corp. v. Motorola, Inc., 2012 WL 627989 (W.D. Wash. 2012) ("As stated above, the court believes that reasonable parties may disagree as to the terms and conditions of a RAND license, leaving the courthouse as the

dicta was made official in the court's June 6, 2012 ruling on separate summary judgment motions.⁵⁴

It is also important to note that the FRAND agreement typically requires a license to be *granted* on FRAND terms. The process of negotiations frequently involves a lot of back-and-forth, as each party tries to obtain a result that is more beneficial for himself, and it is not unusual in normal negotiation contexts for a party to make an initial offer that he thinks is unlikely to be accepted. What happens to the negotiation process when the patent owner knows that the end result has to be based on the principles of FRAND? Sometimes, SSOs state that *negotiations* should be on FRAND terms, but more often, SSOs simply state that the license must be *granted* on FRAND terms.

Is the patent owner obligated by the FRAND agreement to make an initial offer on FRAND terms? In *Microsoft v. Motorola*, the court said no, but that the initial offer "must comport with the implied duty of good faith and fair dealing."⁵⁵ This reasoning suggests that negotiations for royalty payments must start at a point that is not so far from FRAND that it appears to be made in bad faith. There, Motorola's initial offer to license the patent to Microsoft was at a 2.25% royalty per unit.⁵⁶ By including the "good faith and fair dealing" language, the court retained the authority to review the propriety of the initial offer, without inserting new language into a contract that, on its face, only refers to the granted license and not the initial offer.

Once a court determines that contractual obligations exist, the focus then turns to whether there was a breach of those obligations. If there was a breach, what is the appropriate remedy? If there was not a breach yet, and the parties are seeking assistance from the court to determine how the parties can comply with the terms, the court can assist by providing guidance for enforcement of the terms.

The remedy question for breaching a FRAND commitment may more easily be characterized in terms of remedy for patent infringement. For instance, would it be appropriate for the patent owner to seek an injunction against the use of a SEP by a standard adopter? When the Ninth Circuit decided an interlocutory appeal in *Microsoft v. Motorola*, the Court noted in dicta that injunctive relief "is arguably a remedy inconsistent with the licensing commitment."⁵⁷ While the Ninth Circuit did not state its position on this matter as a legal conclusion, its choice of wording did provide some hints as to the Court's position. In addition to noting that an injunction was "arguably" inconsistent with a FRAND commitment, the Ninth Circuit also noted that "it could well be" that the only remedy that a patent owner could seek consistent with FRAND commitments would be for the court to set a reasonable royalty rate and have it apply

only viable arena to determine the meaning of "reasonable" under the circumstances. It would be illogical, therefore, to deem it repudiation of one's rights under a policy to file a lawsuit to enforce one's rights under that same policy.").

⁵⁴ Microsoft Corp. v. Motorola, Inc., 2012 WL 2030098 (W.D. Wash. 2012) ("[T]he court determines that it was not the intent of the contracting parties (Motorola and the IEEE/ITU) to require that implementer of a standard first apply for a license and then negotiate for a license in good faith before Motorola's RAND obligations are triggered.").

⁵⁵ Microsoft Corp. v. Motorola, Inc., 2012 WL 2030098 (W.D. Wash. 2012).

⁵⁶ Motorola claimed that a royalty of 2.25% based on the price of the end product (for example, each Xbox 360 that used the 802.11 wireless standard) would be a reasonable royalty.

⁵⁷ Microsoft Corp. v. Motorola Inc., Case No. 12-35352 (9th Cir. Sep. 28, 2012).

retrospectively.⁵⁸ Thus, if a patent owner sues a standard adopter for infringement, trends in case law in the United States suggest that a court that finds infringement might limit remedies to reasonable royalties, reasoning that injunctions are an inappropriate means of redress when the patent in issue is a SEP. A court that does so and orders payment of past royalties at a reasonable rate, as determined by the court, would effectively be enforcing the FRAND commitment by denying the patent owner the option to deny a license.

While a standard implementer might choose to sue for breach of contract due to an excessive initial royalty offer, a more likely scenario is that the parties fail to reach an agreement after prolonged negotiations. The standard implementer might then file suit, claiming that by failing to reach an agreement, the patent owner breached the contract with the SSO. In one such case, the mobile phone companies Ericsson and Samsung sued each other after reaching a stalemate in an attempted renegotiation of a cross-license of SEPs.⁵⁹ Both companies asserted that the other party's failure to reach an agreement was a breach of contract of the FRAND promise that each made to ETSI.

If a FRAND agreement is construed as an enforceable contract, and the litigation continues to a final judgment, the court may be asked to determine a reasonable royalty under the contract. When analyzing this question, some courts look to the 1970 case of *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, which set forth a very detailed fifteen factor test for determining a reasonable royalty, reproduced below:

1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.
2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.
3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.
4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.

⁵⁸ *Id.* ("Whatever the appropriate method of determining the RAND licensing rate, it could well be that retrospective payment at the rate ultimately determined and a determination of the future rate, not an injunction banning sales while that rate is determined, is the only remedy consistent with the contractual commitment to license users of ITU standard-essential patents.").

⁵⁹ Ericsson Inc. v. Samsung Electronics Co., Ltd., 2007 WL 1202728 (E.D. Tex. 2007).

6. The effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.
7. The duration of the patent and the term of the license.
8. The established profitability of the product made under the patent; its commercial success; and its current popularity.
9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.
10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.
11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.
13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.
14. The opinion testimony of qualified experts.
15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee- who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention- would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.⁶⁰

These factors, while potentially cumbersome at first glance, nonetheless prove helpful to courts tasked with determining a reasonable royalty. Sometimes, the reasonable royalty question is simplified by the existence of a number of other licenses for the same patent, but a court

⁶⁰ Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

following the above *Georgia Pacific* factors may emphasize that the existence of comparable royalty arrangements is only part of the test. Because owning a SEP gives the owner a greater power in negotiations, courts have also discussed a reasonable royalty for a SEP as being guided by the royalty that the patent would have warranted on its own in the absence of the standard. This is also a position supported by the FTC in its recent Intellectual Property Marketplace Report, which recommended capping royalties at the licensing value of the patent at the time the standard was defined.⁶¹

d. SEEKING FRAND LICENSES FROM ASSIGNEES

While contract theories are pretty straight forward when the litigation focuses on the obligations of the party who made the promise, the topic gets muddled when the patent starts changing hands. As we noted above with bankruptcy law, licenses are often an easier case than FRAND agreements. In *Intel, Inc. v. Negotiated Data Solutions, LLC*, the court held a 1976 license valid even though the patent had been assigned multiple times and had been successfully granted reissue by the USPTO since the license was initially created.⁶² Similarly, in *Rembrandt v. AOL*, the current owner of the patent was found to be bound by the prior license agreement and subsequent sublicensing agreements.⁶³ In that situation, both the patent and the license had been assigned multiple times.

FRAND agreements, however, are potentially more complicated, because they do not create a license, and instead only leave open the possibility for a license. In *Rembrandt v. Harris Corp.*, a Delaware court ran the gamut, and so did the litigants. Harris sought a FRAND license from Rembrandt for the '627 patent, an HDTV-related patent that Rembrandt obtained from AT&T. The same patent was also the subject of multidistrict litigation (MDL) in federal court, though Harris was not a party to that litigation. Based on the terms of the FRAND agreement that AT&T entered into with the Advanced Television System Committee (ATSC), the court initially granted Harris's motion for partial summary judgment on the issue that Rembrandt, as AT&T's successor in interest to the relevant patent, owed Harris a FRAND license to essential patents.⁶⁴ This ruling could potentially have helped standard adopters, but it quickly unraveled from there after a *Markman* hearing in the MDL suggested that the patent might be invalid, and the parties altered their theories in the Delaware proceeding accordingly. The Delaware court later vacated the earlier grant of partial summary judgment.⁶⁵ Nonetheless, the court's initial approach to the question of whether a successor in interest is bound by the previous owner's FRAND commitment shows that courts may be receptive to contract-based arguments for the assignability of FRAND obligations, at least when, as here, the party seeking to enforce the FRAND agreement is a member of the SSO.

⁶¹ Federal Trade Commission, The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition 194 (Mar. 2011), available at <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>.

⁶² *Intel, Inc. v. Negotiated Data Solutions, LLC*, 699 F.Supp.2d 871 (E.D. Tex. 2010).

⁶³ *Rembrandt v. AOL*, 641 F.3d 1331 (Fed. Cir. 2011).

⁶⁴ *Rembrandt Tech. LP. V. Harris Corp.*, 2008 WL 4824066 (Del. Super., 2008). Harris is listed as a member of ATSC. ATSC Members, <http://www.atsc.org/cms/index.php/policies/50-details/146-members> (last visited Aug. 21, 2012).

⁶⁵ *Rembrandt Tech. LP. V. Harris Corp.*, 2009 WL 2490873 (Del. Super., 2009).

Though the status of FRAND commitments after a patent transfer is not fully established under U.S. law, the European Commission takes a much stronger position about FRAND agreements and the transferability of FRAND commitments pertaining to essential patents. In 2001, the European Commission set out guidelines for applying European competition law to “horizontal cooperation agreements,” including SSOs.⁶⁶ Specifically, paragraph 174 of the guidelines specifies that when industry actors work together to create a standard, “access to the standard must be possible for third parties on fair, reasonable and non-discriminatory terms.” Paragraph 285 of the “Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements” duplicates this language, also adding a requirement that the FRAND commitment must also be binding against assignees.⁶⁷ In 2009, the European Commission reacted favorably to IPCom’s agreement to abide by the FRAND commitment made by Bosch, its predecessor in interest to a number of SEPs.⁶⁸ However, as noted above, antitrust law in the United States takes a potentially more restrictive view of FRAND agreements than does European competition law.

e. PATENT LAW

Above, we noted the possibility that a court might find an implied license in the FRAND context. This specific approach has not been examined in detail in case law, but implied licenses are an accepted possibility in patent law. However, the cases addressing implied licenses generally focus on contexts where there is a relationship between the patent owner and the party claiming an implied license. For example, in *Wang Laboratories Inc. v. Mitsubishi Electronics America, Inc.*, the Federal Circuit found an implied license where Wang had entered into an agreement with Mitsubishi to manufacture (and then sell back to Wang) SIMM cards that Wang had developed.⁶⁹ Wang did not inform either Mitsubishi or the SSO JEDEC that it was seeking a patent on the SIMM technology. Professor Lemley has argued that the implied license doctrine may assist in resolving disputes over FRAND agreements, suggesting that the FRAND agreement creates an implied license under proper circumstances, but it is currently unclear how courts would respond to this argument.

Equitable estoppel is another defense to patent infringement that courts have considered. Some courts have found estoppel when there was intentionally misleading silence on the part of the patent owner,⁷⁰ so an equitable estoppel defense may be relevant in situations where an SSO

⁶⁶ Commission Notice: Guidelines on the applicability of Article 81 of the EC Treaty to horizontal cooperation agreements, Official Journal C 003 (06/01/2001), *available at* [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001Y0106\(01\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001Y0106(01):EN:HTML); *see also* Case COMP/39.615--Nokia/Bosch+IPCom, Press Release, European Comm'n, Antitrust: Commission Welcomes IPCom's Public FRAND Declaration (Dec. 10, 2009) (MEMO/09/549), *available at* <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/549&format=HTML&aged=0&language=EN>

⁶⁷ Commission Notice: Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, Official Journal C 011 (01/14/2011), *available at* [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52011XC0114\(04\):EN:NOT](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52011XC0114(04):EN:NOT)

⁶⁸ Case COMP/39.615-- Nokia/Bosch+IPCom, Press Release, European Comm'n, Antitrust: Commission Welcomes IPCom's Public FRAND Declaration (Dec. 10, 2009) (MEMO/09/549), *available at* <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/549&format=HTML&aged=0&language=EN>.

⁶⁹ 103 F.3d 1571 (Fed. Circ. 1997).

⁷⁰ *Stambler v. Diebold, Inc.*, 11 U.S.P.Q.2d 1709, 1714-15 (E.D.N.Y. 1988) (“Plaintiff could not remain silent while an entire industry implemented the proposed standard and then when the standards were adopted assert that his patent covered what manufacturers believed to be an open and available standard”).

member has failed to disclose a patent to the SSO. The law of equitable estoppel currently focuses on whether the patent user relied on an assertion of nonenforcement by the patent owner. In Professor Lemley's 2002 article, he argues that the current law of equitable estoppel could be effectively applied to the standards context, but a later article by Robert Merges and Jeffrey Kuhn asserts that both implied licenses and equitable estoppel are insufficient to address the range of issues that arise in the standards context, instead proposing a new concept that they call "standards estoppel."⁷¹

Though potentially less likely to arise in the FRAND context, there is some case law precedent supporting the idea that patent may be invalidated based on intentional misrepresentations that a predecessor in interest made to an SSO. In *Barnes & Noble Inc. v. LSI Corp.*, the court allowed such a claim to proceed where the claim was based on an assertion that LSI's predecessor in interest (Lucent) "intentionally and knowingly made material misrepresentations and/or omissions in connection with standards-setting organization."⁷² The court in *Barnes & Noble* also noted that fraud, both prior and subsequent to patent issuance, can make a patent unenforceable.

The patent-related claims that concern FRAND agreements occasionally overlap with contract law claims, but not always in the same litigation. The interrelated nature of disputes over patents and FRAND agreements can lead to litigation being severely impeded, especially when the disputes are being addressed by different courts. Consider, for example, the previously discussed Delaware case of *Rembrandt v. Harris Corp.*, and the concurrent multidistrict litigation, *In re Rembrandt Technologies, LP Patent Litigation*. In the litigation against Harris, one of the issues concerned the '627 patent and the application of a FRAND agreement that AT&T, Rembrandt's predecessor in interest, made to the ATSC during the promulgation of the HDTV standard. Harris was not a party to the MDL, but the '627 patent's validity was being challenged in the MDL, so Rembrandt sought Harris's admission as to the '627 patent's validity.⁷³ If Harris had admitted to the patent's validity, that admission could have been used as evidence in the patent litigation. The concurrent disputes led to changes in the parties' position in the Delaware litigation when there were changes in the status of the MDL proceedings, to the occasional frustration of the courts.⁷⁴ Patent issues, patent-based theories to address FRAND agreement issues, and contract claims would ideally be treated by the same court that has full access to information from the parties, but jurisdiction issues may make this difficult. This is another topic that is ripe for further analysis by policy professionals and academics.

IV. LEGAL THEORIES TO ADDRESS FRAND AND PATENT TRANSFER ISSUES

Above, we discussed a number of cases relevant to the topic of SSOs and FRAND agreements. In this section, we will go into more detail in an attempt to conclude which theories,

⁷¹ Merges & Kuhn, *supra* note 14, at 39.

⁷² 2012 WL 359713 (N.D. Cal. 2012).

⁷³ *Rembrandt Tech. v. Harris Corp.*, 2009 WL 1509103 *1 (Del.Super. 2009) ("If Harris admitted infringement, then the admission could be used as evidence in the prosecution of the patent litigation. If Harris denied infringement, then, based on the language of the commitment on which Harris' demand for the license was based, Rembrandt would not owe a license to Harris and this case would be over. The Court denied the motion.").

⁷⁴ *Rembrandt Tech. v. Harris Corp.*, 2009 WL 1509103 *1 (Del.Super. 2009) ("Throughout the life of this litigation, the parties have used this action principally as a device to gain strategic advantages in related multi-district federal patent litigation. Positions taken here come and go with the changing tides of the federal litigation.").

if any, are best suited to address the problems faced by the parties in our Widget hypothetical: the transferability of FRAND agreements; the enforcement of FRAND agreements by non-members of the SSO; the application of FRAND agreements to “core” essential patents, “non-core” essential patents and commercially essential patents; and the application of FRAND agreements to after-acquired patents. The remedies under these different theories also vary significantly.

a. ANTITRUST AND UNFAIR COMPETITION

In the standard-setting context, the law of competition has been the most visible aspect of the law governing these disputes. As noted above, however, the case law on antitrust issues indicates that this body of law may not be well-suited for the current controversy. The DC Circuit in *Rambus*, for instance, concluded that concealing patents and amending a patent application to fall within the specifications of a standard did not rise to the level of anticompetitive conduct that could be addressed under antitrust law if the concealment was intended to avoid limits that an agreement with the SSO would have placed on the patent royalties that Rambus could collect.⁷⁵ The *Rambus* court also holds the FTC to a high causation bar, requiring a showing that but for the concealment, the SSO would have chosen an alternative technology. *Rambus* further emphasizes the Supreme Court case of *NYNEX Corp. v. Discon, Inc.*, specifically the part in *NYNEX* where the court held that fraudulent behavior along with harm to consumers in the form of increased prices was not a *per se* antitrust violation where the increased cost to the consumer could be attributed to the exercise of a lawful monopoly power.⁷⁶ The *Rambus* court’s reading of *NYNEX* is problematic for plaintiffs in antitrust cases concerning patents in general, and is potentially broad enough to restrict or eliminate the application of antitrust law in cases involving patents that are part of a standard.

Antitrust claims are also dismissed if the court does not think that sufficient harm to competition has been alleged, which in the patent and standards context, typically requires a showing of harm to competition in general, not just a harm to the alleged infringer.⁷⁷ And as we’ve seen from the *Rambus* case, a broad application of the principles of *NYNEX* to the standard setting context can lead to a conclusion that harm to consumers arising from a party charging others more for access to the party’s lawful monopoly (e.g., a patent) might not be viewed as an anticompetitive harm that can be addressed under antitrust law. There is also case law that suggests that relying on antitrust law for the transferability of FRAND commitments would not work, because as a default rule, the obligations under antitrust law with respect to FRAND agreements would primarily apply to the party that makes the FRAND agreement, and would not transfer to a successor in interest.⁷⁸

⁷⁵ *Rambus Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008) (“But the latter – deceit merely enabling a monopolist to charge higher prices than it otherwise could have charged – would not in itself constitute monopolization.”).

⁷⁶ *Rambus Inc. v. FTC*, 522 F.3d 456, 465 (D.C. Cir. 2008) (citing *NYNEX Corp. v. Discon, Inc.*, 525 U.S. 128 (1998)).

⁷⁷ *E.g., ESS Tech v. PC-Tel*, No. C-99-20292 at 5 (N.D. Cal. 1999) (“The court finds that plaintiff has failed to sufficiently allege injury to competition beyond the impact on plaintiff.”).

⁷⁸ *Vizio, Inc. v. Funai Elec. Co. Ltd.*, 2010 WL 7762624 (C.D. Cal. 2010). However, agreements or external forces can intervene to make these agreements transfer. For example, in the Nortel bankruptcy proceeding, the court specified that the patents would be transferred subject to agreements with standard setting organizations. The Department of Justice has also indicated (after an initial investigation) that it would continue to watch Google,

The remedy system under antitrust law may also be less appealing to individual litigants. Antitrust violations may be addressed through three outlets: claims brought by the Department of Justice, which can be either criminal or civil; adjudication by the FTC, which can result in the company being fined or ordered to disgorge profits; and litigation by private litigants.⁷⁹ Typically, remedies in private litigation are focused on money damages, and can include treble damages and attorney fees. There is also the possibility of obtaining an injunction in appropriate situations, but it is unclear if disputes in the patent and standards context could lead to equitable relief under antitrust law, such as requiring a patent owner to grant a license to the plaintiff.

On the other hand, claims brought under Section 5 of the FTC Act, claiming “unfair methods or competition” or “unfair or deceptive acts or practices,” may be more likely to succeed, but with lesser remedies than under the Sherman Act. If Section 5 of the FTC Act is violated, the FTC may issue a complaint against the violator. After following the procedures of Section 5 leading to a cease and desist order (except in cases where a consent decree resulted), the FTC may bring a civil suit against the violator, with a possible maximum penalty of \$10,000 for each violation.⁸⁰

As to the other issues raised in the hypothetical, the law of unfair competition may have promise for extending FRAND promises to commercially essential patents, and for applying the FRAND agreement to benefit non-members of the SSO. Under European competition law, the possibility of requiring owners to grant access to commercially essential technologies was recently examined when the European Commission evaluated Google’s acquisition of Motorola Mobility. There, the Commission noted that “in exceptional circumstances, notably where a technology has become an indispensable input for competitors, a refusal to grant access to that technology may be abusive.”⁸¹ However, the Commission’s opinion emphasized that this would be a fact-intensive inquiry.

We express doubts, however, that either antitrust law or the law of unfair competition would assist with the problems surrounding after-acquired patents in the United States. For after-acquired patents, we look to the reasoning of the *Rambus* and *Vizio* cases to conclude that antitrust law is not likely to apply to after-acquired patents in the absence of a conspiracy to monopolize. If the SSO’s policy addresses after-acquired patents, this may make the problem capable of being redressed under contract law, but we do not think that such contract language would automatically affect the antitrust issues.

As noted above, the law governing unfair competition may assist in applying FRAND terms to previously non-essential patents that have since become commercially essential. If a patent owner knows that there will be virtually *no demand* for a product that implements a

Apple, Microsoft, and Research In Motion to ensure that these companies do not use newly acquired SEPs in a way that would be anticompetitive, and that these companies comply with their own promises to be bound by the previous patent owners’ promises to SSOs. Statement of the Department of Justice’s Antitrust Division on Its Decision to Close Its Investigations of Google Inc.’s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp. and Research In Motion Ltd.(Feb. 13, 2012), available at http://www.justice.gov/atr/public/press_releases/2012/280190.htm.

⁷⁹ See generally Edward Cavanagh, *Antitrust Remedies Revisited*, 84 OR. L. REV. 147 (2005).

⁸⁰ 15 U.S.C. § 45(m) (2006).

⁸¹ GOOGLE/MOTOROLA MOBILITY, Case No. COMP/M.6381, para. 59 (Feb. 2012), available at http://ec.europa.eu/competition/mergers/cases/decisions/m6381_20120213_20310_2277480_EN.pdf

standard without the option that the owner holds the patent to, and the patent owner nonetheless refuses to license this “commercially essential” patent to competitors who wish to implement the standard, this could arguably be viewed as an unfair method of competition. But as noted above, some in the industry allege that treating commercially essential patents as SEPs would harm innovation. If policymakers decree that competitors should be granted access to commercially essential patents, limiting claims to redress under Section 5 of the FTC Act might strike a balance between acknowledging obligations and not imposing excessive liability on the owners of commercially essential patents.

Some SSOs, including IEEE, define “essential patents” as including commercially essential patents, but the bare language may only refer to essentiality at the time a standard is adopted.⁸² A refusal to license a non-essential patent is not likely to have the same effect on competition as would a similar denial of a license to a SEP. However, if a patent has become commercially essential, and the SSO treats commercially essential patents as SEPs, principles in favor of fair competition suggest that the SSO should also treat patents as SEPs if they later *become* commercially essential. This would also further the purpose of the SSO. In such a situation, a patent owner who denies licenses to standard implementers may be frustrating the entire purpose of the standard, as implementers may elect to not use the standard at all if they cannot include technologies that have become commercially essential. We also anticipate that antitrust law and the law of unfair competition would permit nonmembers to enforce FRAND commitments, because the focus of these areas of law is on the market as a whole rather than on specific parties to a contract.

Additionally, one of the core ideas of the FRAND agreement is nondiscrimination in royalty setting. One of the recurring themes in antitrust law and the law of unfair competition is the prevention of anticompetitive behavior that results in higher costs for competitors. For example, consider an alteration to the hypothetical above in Section II.d. If Widgetech was a subsidiary of Gizmo, Inc., and Gizmo licensed its patents to Widgetech at a price substantially lower than it offered to Widgecom, then that would likely violate the nondiscrimination prong of the FRAND agreement *and* raise antitrust or unfair competition concerns. In addition to requesting that a court set FRAND terms, Widgecom might also petition the federal government to intervene to address Gizmo’s anticompetitive behavior. Thus, even if Widgecom were unable to enforce the FRAND agreement against Gizmo, Inc. because Widgecom was not a member of the Widget SSO, there still might be some recourse available in that Widgecom could petition the FTC to investigate Gizmo, Inc.’s behavior as a potential violation of the Sherman Act and Section 5 of the FTC Act.

b. FORMAL CONTRACT

⁸² IEEE, Standards Board Bylaws, <http://standards.ieee.org/develop/policies/bylaws/sect6-7.html> (last visited Sep. 25, 2012) (defining an “essential patent claim” as a claim that “was necessary to create a compliant implementation of either mandatory or optional portions” of the standard, for which there is “no commercially and technically feasible non-infringing alternative” at the time the standard was approved). The IEEE definition explicitly excludes patent claims that are only essential for enabling technologies, a term which is defined in part as “any technology that may be necessary to make or use any product or portion thereof” that complies with, but is not explicitly required by or set forth in, the standard.

Parties to a contract can generally agree to anything that doesn't violate the law, isn't contrary to public policy, and doesn't render the contract so unfair as to be unconscionable. When a contract addresses all of the possible issues, and there is valid offer, acceptance, and consideration sufficient to support the formation of a contract, there would be no problem. However, there is currently no standard for standards – that is, SSOs adopt a wide variety of language as FRAND agreements, and there are many things that may be left out of these agreements.

The first problem that we introduced in the above widget hypothetical concerned the enforceability of a FRAND agreement by a party who was not a member of the SSO. This issue will largely be influenced by the IPR policy of the SSO, and is likely to be resolved under contract law by reference to the third party beneficiary doctrine. The FRAND agreement is typically recognized as being a valid contract, and the potential licensee is a third party beneficiary of that contract. The Restatements (Second) of Contracts states that a party may be the intended beneficiary of a contract if the agreement indicates an intention to provide a right to the third party under the contract.⁸³

A FRAND agreement where the patent holder agrees to license on FRAND terms to anyone who intends to implement the standard clearly creates a category of intended beneficiary for all potential adopters of the standard. Thus, accepting that the agreement is a valid contract, and that potential licensees are the intended beneficiaries under the contract, there is a good legal basis for potential licensees bringing suit in court to enforce a FRAND agreement, whether they are SSO members or not. However, some have expressed concern that this broad interpretation of intended beneficiary as including non-members may be impermissible under contract law in the absence of explicit language in the FRAND agreement.⁸⁴ An SSO can address this ambiguity by inserting language indicating that the FRAND agreement is intended to benefit all potential standard adopters, including non-members. If the Widget SSO adopted such language, the fact that Widgecom was not a member of the Widget SSO would not prevent it from enforcing the FRAND agreement against parties who are otherwise bound by it.

Problem 2b of the hypothetical raises the issue of after-acquired patents. Assume that Gizmo, Inc. promised in 2010 to license patents on FRAND terms to adopters of the Widget standard, back when the only relevant patent held by Gizmo, Inc. was the 5 inch gizmo patent. In 2011, Gizmo, Inc. obtained Telescreen's patent on the telesend technology. Assuming that the FRAND agreement applies equally to "core" essential and "non-core" essential patents, can Widgetech and Widgecom demand a FRAND license to the telesend patent as well as the gizmo patent? The question of after-acquired patents is another issue that an SSO could address in advance in its IPR policy.

Of all of the options that we consider in this report, contract law is probably the best suited to address the problem of after-acquired patents. Contract terms that create an interest in after-acquired property are also not new to the law. The branch of contract law concerned with

⁸³ Restatement (Second) of Contracts § 302.

⁸⁴ Mark A. Lemley, Intellectual Property Rights and Standard-Setting Organizations, 90 Cal. L. Rev. 1889, 1915 (2002). However, Professor Lemley is arguing that it would be inconsistent with Contract law to read a contract as making the public at large an intended third-party beneficiary. In the SSO context, the public is not the intended beneficiary, but rather the potential implementers of the standard.

commercial law and the Uniform Commercial Code already addresses the issue of interests in after-acquired property. Specifically, Article 9 of the U.C.C. allows for the creation of security interests in after-acquired collateral, such as if a small retail business obtained a loan from a bank, and in exchange for this loan, the business owner granted the bank a security interest in present and after-acquired inventory.

Security interests and FRAND agreements are similar to each other in a number of ways. First, both are promises relating to something that may not exist yet, and these promises are being offered as consideration for something desirable. With security interests, the promise is that the entity that makes a loan will have protection in the event that the borrower defaults. When a patent owner enters into an agreement with an SSO to license its patent on FRAND terms, this is often as a condition of the patent's claims being adopted as part of the standard. The patents of mechanical devices are often not worth much on their own except as part of a larger product that relies on several technologies, but when a standard relies on a particular patent, that patent owner can then expect an increase in the demand for licenses.

Second, neither a security interest nor a FRAND commitment is a concrete thing, and neither would line up perfectly with contract law in the absence of specific provisions. If after-acquired collateral were not already an accepted premise in the law of secured transactions, loan terms allowing a lender to claim as yet undefined collateral might be argued as being vague and unenforceable under contract law. Similarly, a FRAND commitment to license to undisclosed parties on undisclosed terms often raises arguments from patent owners that the FRAND agreement is too vague to be an enforceable contract. This argument for unenforceability is likely to fail, because while “fair, reasonable, and nondiscriminatory” does not specify the specific terms required in a license, the modern rule of contract law permits parties to leave some terms subject to future determination, such as with references to a “reasonable market price.”

Problem 3 of the hypothetical poses the problem of the transferability of a FRAND agreement. Contract law focuses on mutual assent to contract terms, so in order for the FRAND agreement to apply to PatBuy, Inc., PatBuy would have to have agreed to be bound by this prior agreement. To the extent that solutions under contract law focus on the parties stating their own preferences, one solution to the FRAND agreement transferability problem is for SSOs to address the transferability of the agreement in the initial contract with the patent owner. Thus, the issue of whether PatBuy, Inc. takes the transpile patent subject to the FRAND agreement that HF Plate made with the Widget SSO may depend on how the Widget SSO addressed transfer in its IPR policy. If the Widget SSO stated in its IPR policy that transfers *must* be made subject to the FRAND agreement, the focus would be on whether HF Plate obtained the required consent to be bound. However, it is unclear what the proper recourse would be if a patent owner violated the terms of the SSO by failing to secure the assignee's consent to be bound by the agreement. There may be a possibility of the implementers or the SSO holding the original patent owner liable for failure to abide by these terms, but even if damages could be obtained from the original patent owner, the implementers could probably not use the previous patent owner's breach to compel a license from the current owner. In Section V.a, we discuss the differing approaches of four SSOs to the issue of FRAND agreement transferability.

All of the problems that we raised in the Widget hypothetical could essentially be resolved through contract language, as long as the language wasn't excessively broad or

unreasonable. SSOs could impose a requirement that SEPs be transferred subject to the FRAND agreement made by the prior owner. They could also make it explicit that the FRAND agreement is a promise to license on FRAND terms to *all* adopters of the standard, not just adopters who are also members of the SSO. The SSO could also include a provision addressing the after-acquired problem, explicitly stating that the FRAND agreement also applied to SEPs that the agreeing party obtained after entering into the agreement. Finally, the SSO could clarify whether the term “standard essential patent” includes “core” essential patents, “non-core” essential patents, and commercially essential patents. If the SSO considers commercially essential patents to be SEPs, the SSO should further clarify whether it is adopting a broad, intermediate, or narrow definition of commercial essentiality.

But to what end? If potential licensees rely on pure contract law to enforce a FRAND agreement, the remedies under contract law may not be sufficient. Specific performance is traditionally disfavored as a remedy, and a more likely outcome would be that the breaching party would be ordered to pay damages to the contract beneficiary, either measured based on expectation or reliance. Expectation damages would aim to put the beneficiary in the position he would have been in had the patent owner fulfilled its promise to license on FRAND terms. This would probably be very difficult to calculate in the patent context, and might turn on very uncertain calculations of how much profit the beneficiary might have expected after developing, manufacturing, and selling the product that comports with the standard, minus the reasonable royalty rates that the beneficiary would have paid for use of patented technologies. To complicate the calculation, the court will also need to apportion the appropriate value of the patent, with the key inquiry looking at how much of the value of the product can be attributed to that specific patent or specific standard. The key question would become: if the failure to obtain a license requires the beneficiary of the agreement to not include the standard in the final product, how much profit would the manufacturer have made from a final standard-compliant product versus a non-compliant product?

Reliance damages may be easier to calculate, where the patent owner may be required to compensate the beneficiary in the amount that the beneficiary has already expended in reliance on the FRAND agreement. This value might be determined based on the value of the patent or standard as a proportion of the overall investment, which might prove to be as difficult to calculate as expectation damages, but reliance damages could also potentially be applied to deter patent holdup. If a patent owner promises an SSO that it will grant licenses on FRAND terms, and then refuses to license to a specific manufacturer, the manufacturer could potentially argue that he was entitled to compensation for all of the investment that he has made in reliance on the availability of a license from the patent owner. This outcome might not effectively compensate for the delay, but it may restore some of the contract beneficiary’s resources that can then be applied to designing a way to work around the blocking patent.

In any case, pure money damages are likely to be less attractive than requiring the patent owner to grant a license and enable the contract beneficiary to manufacture a product and compete in the relevant market. However, SEPs may be characterized as sufficiently unique that specific performance is appropriate, a possibility that we examine in more detail in the law of servitudes subsection below.

c. DETRIMENTAL RELIANCE

Sometimes, the law of formal contracts will not be effective. While the third party beneficiary doctrine may protect standard adopters as the intended beneficiaries of a FRAND agreement, and the law of security interests provides helpful guidance for dealing with after-acquired patents, there are still gaps that formal contract law does not fill. For that reason, some scholars have suggested turning to an estoppel argument to permit standard adopters to argue that they relied to their detriment on the patent owner's assertion that it would license on FRAND terms.⁸⁵ A theory of detrimental reliance would focus on whether a specific agreement is binding against other entities outside the four corners of the agreement because of the expectation that the agreement creates for third parties.

A detrimental reliance argument also might be preferable to an argument founded on pure contract principles because of the possible outcome. Under a contract theory, a potential standard adopter might be able to obtain some sort of money damages to compensate the adopter for the costs incurred in preparing to adopt the standard, such as designing and manufacturing a product that implements the specifications of the standard. Generally though, obtaining a license is likely not available under a formal contract law approach, and money damages probably will not help the potential adopter's ability to compete, which is now harmed if a license is denied and the adopter cannot produce goods that comply with the standard. On the other hand, under a detrimental reliance theory, the potential standard adopter could more easily seek an equitable remedy, such as a compulsory license on FRAND terms of the patent covered by the standard.

A detrimental reliance theory is also likely to be more helpful than a formal contract theory in the case of patent transfers. Under formal contract law, the FRAND agreement would likely have to be accepted by the assignee for the agreement to be binding after the patent is transferred. On the other hand, a detrimental reliance theory is focused on the standard adopter's investments in reliance on the availability of a patent. In this situation, the standard adopter is fully willing to pay the cost of licensing, but in the interest of competition, may feel pressured to adopt the standard prior to solidifying a licensing agreement.

However, detrimental reliance is not perfect either. First, it is unclear if a court would conclude that it was reasonable for parties who are not members of the SSO to rely on a patent owner's promise to the SSO. And even if the detrimental reliance theory is effective at addressing some SEP licensing problems, it is unclear if the same theory could apply to non-core essential patents, commercially essential patents, or after-acquired patents. Whether a detrimental reliance theory would assist with the voluntary-turned-essential patent problem may depend on the level of knowledge that the standard adopter has of the patents that the patent owner disclosed to the SSO. Detrimental reliance is also not likely to assist in the case of after-acquired patents, unless the previous owner made a FRAND commitment to the same SSO concerning that patent.

d. PROPERTY LAW AND THE LAW OF SERVITUDES

Patents have aspects that resemble several different areas of law. Under the patent statutes, they are treated as personal property. When a patent owner grants a license to another party, the license is often analyzed as a contract. Patent law also has flavors of tort law, with

⁸⁵ E.g., Lemley, *supra* note 16; Merges & Kuhn, *supra* note 14.

patent infringement claims being based on principles of strict liability. We noted above that there is currently a debate about the extent to which patent licenses should be viewed as property interests instead of purely as creations of contract. In our view, this argument has merit, but we view the property and contract traits of patent law as being interrelated.

The idea that a patent license is a “covenant not to sue” is a very old one that represents the view of federal courts for over a century.⁸⁶ However, this does not mean that courts view patent licenses as purely creatures of contract. This position is based on an even older view of patents themselves: that obtaining a patent does not give the owner a right to practice the invention, but instead gives the owner a right to exclude everyone else from practicing the invention without the owner’s permission.⁸⁷ The patent is thus a “right against the world,” like other property rights. Waiving this right against individuals through a license and thereby allowing them to practice the patent without fear of suit can thus be analogized to a property owner who grants certain permissions to another. This waiver of the right to exclude exists throughout property law. In the law governing personal property, when an owner entrusts chattel to another for safekeeping, a bailment is created. In the law governing real property, when an owner grants another the right to use real property in a way that would otherwise be trespassory, a servitude is created.

Thus, even if patent licenses are viewed as covenants not to sue, this does not detract from the argument that a patent license is a property interest. In the law of servitudes, for example, a “real covenant” is a promise to do or not do something with one’s land, and it is viewed as a property interest, but it is enforceable at law instead of in equity. Nor does the fact that the license is created by a contract detract from its status as a property interest. After all, interests in real property are almost always created by contract.

This section extends this reasoning to FRAND agreements, arguing that FRAND agreements can be characterized as contractually created property interests in covered patents. A FRAND agreement is not a license, but when a patent owner makes a FRAND agreement, we argue that this acts as a conditional covenant not to sue, whereby the patent owner promises to not sue standard implementers for infringement *unless and until* good faith attempts at negotiation fail.

i. Analogizing to the Law of Servitudes

There are a wide variety of interests in real property law, including fee simple estates, life estates, and leaseholds. In addition to these, there are also interests created by the law of servitudes, through which interested parties make land use arrangements based on private agreements. There are four general categories of servitudes: easements, profits, licenses, and covenants. Covenants can either be real covenants or equitable servitudes, depending on how they are enforced.

⁸⁶ *Henry v. A.B. Dick, Co.*, 224 U.S. 1, 24 (1912) (“As a license passes no interest in the monopoly, it has been described as a mere waiver of the right to sue by the patentee.”); *see also De Forest Radio Telephone & Telegraph Co. v. United States*, 273 U.S. 236, 242 (1927) (affirming the above quoted language of *Henry*).

⁸⁷ *Bloomer v. McQuewan*, 55 U.S. (14 How.) 539, 548 (1852) (“The franchise which the patent grants, consists altogether in the right to exclude every one from making, using, or vending the thing patented, without the permission of the patentee. This is all that he obtains by the patent.”).

By examining relevant elements of the law of servitudes, we can illustrate why analogizing FRAND agreements to servitudes is appropriate. We begin this analysis with further discussion of benefits and burdens. The law of servitudes focuses on benefits and burdens that are either appurtenant or in gross. To say that a burden or benefit is “appurtenant” means that it is “tied to ownership or occupancy of a particular unit or parcel of land.”⁸⁸ A burden or benefit that is “in gross,” on the other hand, is not tied to such ownership or occupancy.⁸⁹ The law of servitudes allows an appurtenant benefit or burden to transfer automatically with the property interest.⁹⁰ For example, if a large parcel of land is subdivided into multiple lots, only one of which faces the main road, an appurtenant easement will likely be created by the landowners, who will then construct a driveway perpendicular to the main road. This appurtenant easement would thus give access to the main road to owners of lots that are not adjacent to the road by creating a right of way across parcels owned by others. According to the Restatement (Third) of Property: Servitudes, benefits in gross were historically prohibited, as were benefits created in third parties.⁹¹ However, the modern rule according to the Restatement permits both of these, and also allows for a burden to be appurtenant while a benefit is in gross.⁹²

The nature of the FRAND agreement introduces some complexity into legal analysis under a formal contract law theory, because the agreement is between the SSO and the patent holder. For a FRAND agreement to transfer under formal contract law, the potential licensee needs to establish that it is an intended beneficiary of the FRAND agreement. As we noted above, there is a strong argument that potential standard adopters are intended beneficiaries of the FRAND agreement, because the SSO would likely not enter into these agreements unless they intended them to have some legal effect for potential implementers of the standard. However, it is unclear the extent to which non-members of the SSO can enforce a FRAND agreement against a patent owner. The formal contract law issue is also generally not problematic when the patent holder is the same party that entered into the FRAND agreement, but when there has been an assignment, the assignee will generally need to accept that the transfer is subject to the terms of prior agreements in order for the agreement to be enforceable against the assignee. Some SSOs, however, are more flexible about whether the patent holder must require the assignment to be subject to the FRAND agreement, or whether the patent holder must just make a good faith attempt to persuade the assignee to take the patent subject to the FRAND agreement.

If we analogize FRAND agreements to creating entitlements similar to those created under the law of servitudes, this addresses the transfer issue very effectively. First, like formal contract law and the idea of intended beneficiaries, the law of servitudes permits the benefit of a servitude to be created in a third party.⁹³ Formal contract law, however, does not include the concept of a “contract benefit held in gross.” The idea of a “benefit in gross” is something that

⁸⁸ Restatement (Third) of Property: Servitudes § 1.5(1) (2000).

⁸⁹ Restatement (Third) of Property: Servitudes § 1.5(2) (2000).

⁹⁰ Restatement (Third) of Property: Servitudes § 5.1 (2000).

⁹¹ Restatement (Third) of Property: Servitudes § 2.6, illustration 2 (2000) (providing an example of a burdened parcel of land).

⁹² Restatement (Third) of Property: Servitudes § 2.6, comment a (2000).

⁹³ Restatement (Third) of Property: Servitudes § 2.6(2) (2000); *see also* Willard v. First Church of Christ, Scientist, 498 P.2d 987 (Cal. 1972) (holding that when deeding real property to one person, a grantor may reserve an easement that benefits a third party).

can be applied from the law of servitudes to simplify some of the issues that arise with the transfer of patents subject to FRAND agreements. If the benefit of a FRAND agreement is held in gross for standard implementers, it will not matter whether the implementer is a member of the SSO. Second, the issue of transferring the burden created by the FRAND agreement is almost completely resolved if we view the FRAND agreement as creating an appurtenant burden and a benefit in gross. Rather than requiring an active acceptance on the part of the assignee, as is likely the case under a formal contract law approach, an appurtenant burden can be binding on an assignee automatically, though the transfer of the burden may require the assignee to be on notice of the prior agreement. The fact that a property interest theory would rely on notice for a burden to transfer, rather than assent to the agreement as would be required for a contract to transfer, arguably could assist with the problem of how to ensure that these agreements are binding against new assignees. If an assignee does not explicitly consent to the agreement, but has actual or constructive notice that they are acquiring a SEP, this property theory could help avoid “innocent purchaser” defenses raised by assignees that seek excessive royalties for newly acquired SEPs. In other words, provided there is constructive or actual notice, the agreement will “run with the patent” and prohibit excessive rent-seeking behaviors on the part of new assignees.

It is true that a patent is generally not being transferred when a FRAND agreement is made. But there is no property transfer when a servitude is created either, just the creation of a right of use. An illustration in the Restatement (Third) of Property: Servitudes provides a strong justification for our analogy to apply in this case. Illustration 2 of Section 2.6 explains the current law of benefits in gross as follows:

As a condition of granting planning approval, the City of X requires Developer, the owner of Blackacre, to execute an agreement limiting the density of development on Blackacre. The agreement states that the burden shall run with Blackacre and the benefit shall be held by the City in gross. The agreement creates a servitude burdening Blackacre. The City of X holds the benefit in gross.

This illustration offers an excellent analogy to the transfer of SEPs subject to FRAND agreements. Borrowing the above language, the FRAND agreement problem with SEPs and the corresponding solution from adopting the law of servitudes can be described as follows:

As a condition of [including the patent owner’s patent in the standard under development], the [standard-setting organization] requires [the owner of Patent X] to execute an agreement limiting [licensing agreements to fair, reasonable, and nondiscriminatory terms]. The agreement states that the burden shall run with [Patent X] and the benefit shall be held by [implementers of the standard] in gross. The agreement creates a servitude burdening [the owner of Patent X]. The [implementers of the standard] hold[] the benefit in gross.

The possibility for servitudes to have an appurtenant benefit *or* a benefit held in gross also provides an opportunity for distinguishing between licenses and FRAND agreements. With

a FRAND agreement, as discussed above, the benefit must be characterized as being held in gross. On the other hand, if a patent license also creates a servitude, we would characterize that servitude as having an appurtenant benefit.

Generally, FRAND agreements address the issue of the agreement being enforceable against successors in interest. However, these agreements do so under the theory that a FRAND agreement is governed solely by formal contract law. If FRAND agreements can be viewed as creating a property interest analogous to interests created under the law of servitudes, this could resolve many of the problems that arise in the context of transferring SEPs.

A servitude theory of FRAND agreements would also assist in addressing problems that might arise in the bankruptcy context. Under the Restatement, servitudes are explicitly noted as not being dischargeable in bankruptcy.⁹⁴ Viewing FRAND agreements as creating servitude thus helps fill in a gap within bankruptcy law, where even though a licensee is given the power to elect to retain their license, a FRAND agreement would likely be treated as less than a license unless the bankruptcy court explicitly stated otherwise, as in the case of *Nortel Networks*.

ii. Analogizing to Specific Types of Servitudes

Above, we noted four types of servitudes: easements, licenses, profits, and covenants. An easement is an interest in land that entitles one party to usage of land possessed by another. Easements can either be affirmative, giving one party a right to do something on the other party's land that would otherwise be a trespass, or negative, forbidding one landowner from taking actions that might harm the beneficiary of the easement. An affirmative easement may be something like a right of way across land, while a negative easement might include a prohibition against the landowner building a structure that blocks the neighbor's view. Historically, there were four types of negative easements recognized under English common law. These four easements gave property owners the right to stop their neighbors from: 1) blocking the property owner's windows; 2) interfering with air flowing to the property owner's land through a defined channel; 3) removing the support of the property owner's building, such as by excavating or removing a supporting wall; and 4) interfering with the flow of water in an artificial stream.⁹⁵

A FRAND agreement might be argued as creating a negative easement, because it restricts the patent owner's ability to demand an unacceptably high royalty for use of a SEP. On the other hand, an agreement to license on FRAND-RF terms might be closer to an affirmative easement, because it gives benefited standards implementers a right to use the patent owner's property in a way that would otherwise be an infringement of the owner's interests. In this sense, agreeing to license a patent on royalty free terms is analogous to granting a specific class of users a right of way across land, while agreeing to license a patent on FRAND terms is analogous to a restriction against building tall structures that would block the public's view.

One type of negative easement is a conservation easement, where a landowner grants to an organization an interest in the property that restricts the landowner from building on the

⁹⁴ Restatement (Third) of Property: Servitudes § 7.9 (2000).

⁹⁵ JESSE DUKEMINIER, JAMES E. KRIER, GREGORY S. ALEXANDER, AND MICHAEL H. SCHILL, PROPERTY 736 (6th Ed. 2006).

property except in ways that are specified in the grant.⁹⁶ When a patent is adopted as part of a standard and the owner agrees to license the patent on reasonable and nondiscriminatory terms, the patent owner is agreeing to limit what they will do to obtain value from the property that they own. In this sense, a FRAND agreement is like a conservation easement.

Another option under the law of servitudes would be to treat the interest created by a FRAND agreement as a covenant, which can either be a real covenant or equitable servitude. These two types of covenants typically only differ in the remedy, with a real covenant generally being associated with money damages, and an equitable servitude generally being associated with an injunction to prohibit the action that violates the agreement. In the context of FRAND agreements, it is likely that the standards implementers will be more interested in equitable relief in the form of a court-ordered license, instead of seeking money damages from the patent owner, so a FRAND agreement is more likely to be viewed as creating an equitable servitude. In real property law, negative easements have generally been treated as the equivalent of equitable servitudes, so the rules governing equitable servitudes are likely to be very important.

The test for whether burdens and benefits run with a real covenant traditionally involved analysis of complex horizontal and vertical privity issues.⁹⁷ However, the traditional test for whether burdens and benefits run with an equitable servitude did not look at either version of privity. For a benefit to run under the common law test, the party had to establish intent and that the agreement “touches and concerns” the land. For a burden to run, the party had to establish intent, that the agreement “touches and concerns” the land, and that the burdened party was on notice of the interest. Under the traditional rule for whether an agreement touches and concerns the land, such a promise would need to relate to the use of the land. Negative covenants have almost always been held to touch and concern land because such covenants directly affect the possible uses of the land and the value of the land.

However, the current Restatement largely discards the concept of “touch and concern,” instead saying that servitudes are valid unless illegal, unconstitutional, or contrary to public policy.⁹⁸ Under the Restatement, a servitude may be contrary to public policy if the servitude: 1) is arbitrary, spiteful, or capricious; 2) is unreasonably burdensome of a fundamental constitutional right; 3) unreasonably restrains alienability; 4) unreasonably restrains trade or competition; or 5) is unconscionable.⁹⁹ A patent owner looking to invalidate a servitude created by a FRAND agreement may argue that the agreement imposes an unreasonable restraint on alienability, but we expect that this argument would fail. The applicable restriction on alienability is addressed in Section 3.5 of the Restatement, which says that indirect restraints on alienation do not cause a servitude to be invalidated. Under the Restatement, an indirect restraint may include use limitations, reducing the realizable amount from transferring the property, or some other act that reduces the property’s value. We would thus characterize the restriction on acceptable royalties imposed by a FRAND agreement as an indirect restraint on alienation that would not affect the servitude’s validity.

⁹⁶ *Id.* at 738.

⁹⁷ *Id.* at 743.

⁹⁸ Restatement (Third) of Property: Servitudes § 3.1 (2000).

⁹⁹ Restatement (Third) of Property: Servitudes § 3.1 (2000).

Accordingly, the most applicable types of servitudes in the context of FRAND agreements and SEPs are negative easements and equitable servitudes. A FRAND-RF agreement, on the other hand, might be either an affirmative easement or an equitable servitude. Requiring a patent assertion entity (PAE)¹⁰⁰ to agree to a FRAND-RF agreement could arguably be contrary to public policy as a restraint on the trade of this entity, if licensing patents is its sole business model. As noted above, some of the litigation that arises in the FRAND and SEP transfer context involves patents that were obtained by PAEs with this sort of business model. In these situations, if the agreements with the SSO required FRAND-RF agreements, thus depriving the PAE of any income from the patent that they likely purchased as part of a patent portfolio, this total loss of value might amount to an unreasonable restraint on alienation or an unreasonable restraint on trade. However, an PAE that found itself subject to a servitude created by a FRAND agreement could still obtain some value from the patent in its possession, and thus the servitude would probably be valid.

iii. Applying the Servitude Theory to Other FRAND Problems

As we noted above, applying a servitude theory is likely to significantly simplify issues that may arise when the standard adopter is not a member of the SSO and when a relevant patent is transferred. We also expect that a property theory would assist in addressing the voluntary-turned-essential patent problem.

In the law of servitudes, there is a concept called a servitude by necessity. A servitude by necessity may be created by implication when the absence of such a servitude would deprive one party “of rights necessary to reasonable enjoyment of the land.”¹⁰¹ One might argue that the existence of a standard suggests a servitude by necessity for companies that need to implement the standard to remain competitive. This theory might even work in the absence of FRAND agreements, at least for technologically essential core patents. It is less likely, however, that a servitude by necessity theory would require FRAND licenses to be granted for non-core essential patents.

Our approach, on the other hand, focuses on the existence of a FRAND commitment that creates a servitude in the covered patents. The existence of an easement by necessity in the law of servitudes implies that express servitudes are not limited by concepts of technical necessity. If Albert and Bill agreed that Albert could cross Bill’s property to reach the highway, allowing Albert to avoid an unprotected left turn onto a side street in front of his house and cutting a tenth of a mile off of Albert’s commute, this would clearly not be a servitude by necessity, but it is still a valid servitude because it is the subject of the parties’ agreement. Similarly, we expect that a servitude could be created in both core and non-core essential patents in the context of standards. However, the creation of such a servitude would likely need to be explicit, as courts may be hesitant to adopt broad readings of FRAND obligations either under a servitude or formal contract theory. Similarly, an explicit agreement as to commercially essential patents could also be viewed as creating a servitude.

¹⁰⁰ The label “PAE” was promoted by the FTC in its 2011 report to distinguish a specific type of non-practicing entity (NPE). Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, at 8 (Mar. 2011), *available at* <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>.

¹⁰¹ Restatement (Third) of Property: Servitudes § 2.15 (2000).

However, because our property theory relies on the idea that the servitude attaches to the specific patent at the time of the FRAND commitment, it is unlikely that a property theory would assist with the problem of after-acquired patents. Thus, a contract theory analogizing to the law of secured transactions would likely still be necessary to address after-acquired patents. If the SSO's IPR policy does not cover non-essential in addition to essential patents, a property theory also might not help in the case of a non-essential patent that later becomes essential.

The final issue that we will explore with the law of servitudes is the remedy question. We view the servitude theory and formal contract approach as being intimately connected, so this section has been drafted to apply some of the same principles that we discussed in the formal contract subsection above. We expect that property rights would arise from FRAND agreements through operation of language within the contract. Drawing an analogy to the law of servitudes serves to unify some of the benefits of property law with the underlying organization of formal contract law. In our view, SEPs can easily be analogized to real property when addressing the issue of remedy.

Real property is often viewed as an area where ordering specific performance of a contract may be appropriate, because real property is viewed as a unique item. If a retailer breaches a contract to sell a customer a television, and the customer has already paid, a proper remedy would be a refund of the customer's money, with a possible addition of any extra funds that the customer will have to pay to obtain an identical television from another retailer. The television is not a unique object, so specific performance to require the retailer to sell that specific television to that specific customer would not be appropriate. However, if a seller enters into a contract with a buyer to sell a specific parcel of land, and the seller breaches the contract, the contract can be enforced with specific performance because that parcel of land is unique.

Similarly, while patents are nonrivalrous and thus can be used by multiple people at once, we view a technologically essential patent in a standard as being unique insofar as the standard adopter cannot avoid using the patent if they want to implement the standard. Thus, specific performance is likely to be available to address disputes, at least for core essential patents. We view commercially essential patents as being similar to technologically essential patents in this situation as well, except implementation of the standard without the relevant patent is a practical impossibility in the case of commercially essential patents, rather than being a technological impossibility. Thus, if the FRAND agreement covers commercially essential patents, an equitable remedy should be available. It is not as clear whether specific performance could or should be available for a breach of a FRAND agreement as to a non-core essential patent. However, a potential standard adopter could at least get damages when applying a servitude theory to non-core essential patents in a context where the FRAND agreement explicitly covers non-core essential patents.

For a table comparing the different theories as they might apply to the problems listed in the hypothetical, please refer to the Appendix to this report.

V. SSO POLICIES AND THE POTENTIAL FOR FUTURE RESEARCH

SSOs vary widely in their approaches to intellectual property. If the technology industry continues to rely on contract theories to resolve FRAND agreement disputes, the outcomes of

litigation will continue to depend on the IPR policy of the relevant SSO. This puts industry actors in an awkward position, because private technology companies may be involved with multiple SSOs, and two disputes over the same patent may have entirely different outcomes if the disputes are governed by the IPR policies of two different SSOs. To achieve more consistent outcomes in disputes over FRAND agreements, there are two main avenues to a solution: for government to put regulations in place to set default rules for these agreements; or for private actors to foster coordination among the variety of SSOs that exist. Both approaches would likely involve careful examination of existing SSO policies and the effects thereof.

The first major aspect of an SSO's IPR policy is the approach that the SSO takes to licensing obligations. For our purposes, there are three main options: the SSO might request that members grant FRAND licenses; the SSO might establish a patent pool to which members can contribute; or the SSO might require patents to be licensed on royalty-free terms. The effectiveness of each option is influenced by the industries and the business models of the participants, with FRAND-RF agreements potentially leading to reduced innovation in some circumstances. Some SSOs also allow the patent holder to choose the type of licensing obligation that they will assume. For example, the IPR policy of AVS allows members of the subgroup developing a standard to select between the above three types of licensing obligations (FRAND, FRAND-RF, or participation in the patent pool).¹⁰² Under the AVS policy, if a member is not a member of the relevant subgroup when the standard is adopted, they have a fourth option in addition to the above three options: to not take on any licensing obligation.

Second, SSOs that emphasize FRAND licensing vary among themselves as well. Most limit the policy to technologically essential patents while others allow the FRAND agreement to apply to commercially essential patents. Additionally, some SSOs limit the licensing obligation to members of the SSO while others use broad language to describe the parties that are entitled to FRAND licenses. To get a sense of the variation, one could read the 2002 article by Professor Mark Lemley where he analyzed the intellectual property policies of over forty standard setting bodies.¹⁰³ Professor Lemley categorized the SSOs according to: 1) whether the SSO had an IPR policy, and if so, what forms of IP were covered; 2) whether the SSO's policy required disclosure of relevant patents; 3) whether the IPR policy addresses an obligation to search for relevant patents; 4) whether the SSO would permit the final standard to rely on proprietary technology (most said yes, though some qualified that technologies covered by IP rights would only be included if technologically necessary); and 5) what licensing provisions the IPR policies contained (e.g., FRAND-RF or FRAND).

Professor Lemley's work lays an important foundation for the study of the standard setting process, and many of his conclusions about the lack of uniformity in the standard setting process are still valid today. However, his work did not examine all of the facets of possible IPR policies, and a future study might aim at updating and expanding on Professor Lemley's initial findings. For example, researchers might evaluate: 1) the different approaches of SSOs to patent transfers, 2) whether the licensing provisions apply equally to members and non-members of the SSO; 3) whether the IPR policies require the licensing of core essential patents, core and non-

¹⁰² See AVS, Audio Video Coding Standard Workgroup of China, <http://www.avs.org.cn/en/> (click on "IPR Policy") (last visited Sep. 25, 2012).

¹⁰³ Lemley, *supra* note 16.

core essential patents, or core and non-core essential patents as well as commercially essential patents; and 4) whether the IPR policies address after-acquired patents.

a. IPR POLICIES AND PATENT TRANSFER

Above, we discussed the transferability of FRAND commitments under several theories, namely antitrust law, formal contract law, the law of detrimental reliance, and property law. If an SSO specifically addresses transfers in its IPR policy, however, that will render other legal justifications unnecessary. In such a situation, by agreeing to be bound by the terms of the SSO's IPR policy, the member is agreeing to be bound by the SSO's requirements for the transfer of intellectual property and FRAND commitments.

In preparing this report, we have reviewed the IP policies of several SSOs, though far fewer than the number analyzed by Professor Lemley, with an eye to getting an introductory understanding of the different approaches these SSOs take with regard to the transfer of patents covered by the standard. Even looking at just four IPR policies (IEEE, ITU, AVS, and ETSI), we saw a variety of approaches to the issue of transferring patents that are covered by a standard. For instance, the approaches varied significantly as to whether the transfer has to be subject to the same FRAND commitment, or whether the SSO just expresses a preference that the transfer be made subject to the same FRAND commitment.

On this point, ITU and ETSI both require the member executing a transfer to make “reasonable efforts” to notify the assignee of the relevant obligation. ITU also requires that the member who reasonably believes that he is bound by a FRAND agreement as to the patents that he is assigning must make “reasonable efforts” to obtain the assignee's agreement to be bound by the FRAND commitment. However, if the member fails to obtain such an agreement upon making reasonable efforts, the member will have no further express obligations with regard to the licensing commitment and the transfer.¹⁰⁴ The ETSI policy also addresses an inability to obtain a FRAND commitment. Under Section 8 of the ETSI policy, however, if an essential patent becomes unavailable after the standard is finalized, the burden is on ETSI to seek a commitment from the patent owner to license on FRAND terms, and a failure to obtain such a commitment could even lead to ETSI scrapping the entire standard. On the other hand, both IEEE and AVS require the patent owner to secure the assignee's agreement to be bound, rather than merely requiring the patent owner to make “reasonable efforts” to do so.

These four SSOs thus represent three distinct approaches to transfers in an SSO's IPR policy: 1) a statement of the SSO's preference for transferability without imposing concrete obligations; 2) imposing some responsibility for obtaining FRAND agreements from new assignees on the SSO itself; 3) explicit language that transfers *must* be made subject to the FRAND commitment. Analysis of a larger sample might reveal even more options. The fact that we found three different approaches to transfers in four SSOs, however, seems to support extending Professor Lemley's conclusions about non-uniformity in SSOs to other issues that Professor Lemley did not examine, such as whether the SSO requires patents to be transferred subject to the FRAND agreement.

¹⁰⁴ Section 7 of the IPR policy of the ITU, however, does specify that if the member had specifically identified patents to the standard-setting body, the member would be required to obtain the assignee's consent to be bound by the same agreement as the member.

While transfers are increasingly addressed in IPR policies, the remaining three issues might not be. We felt that a full study of a large number of IPR policies would be necessary to grasp the nuances of how the three remaining issues play out in modern IPR policies. Therefore, the remainder of this Section focuses on why these questions are important to study, rather than on preliminary observations.

b. THE IMPORTANCE OF THE “MEMBERS AND NONMEMBERS” QUESTION

In addition to examining the transfer policies, a study of the IP policies of SSOs should also emphasize the parties benefited by the agreements. Whether an assignee is a member or nonmember of the relevant SSO might be an issue in some circumstances, but we view it as less likely to lead to controversy due to most assignments being made subject to preexisting obligations. However, if the SSO’s IPR policy explicitly refers to an obligation to grant licenses on FRAND terms to “members,” a party who was never a member of the SSO would likely not be an intended beneficiary of the contract. The member-nonmember distinction is thus important for the way that it affects the scope of the commitment assumed by a patent transferee.

There are a number of models that SSOs can adopt, and the appropriateness of reading the model as applying to nonmembers may vary accordingly. An SSO that forms a patent pool, for instance, might require cross-licensing agreements among its members that permits these members to use the patents in the pool on FRAND or FRAND-RF terms. In a situation like this, the FRAND or FRAND-RF license obligation may be limited only to other members that contribute IP to the pool. In an alternative patent pool arrangement, the SSO might permit members of the public to purchase access to the entire patent pool, and distribute the revenue across the members that contribute patents to the pool. The FRAND agreement approach, however, promotes a direct relationship between the patent owner and the licensee, retaining a clearer parallel to how the licensing process would work in the absence of a standard.

This leads to the following question: how *should* the licensing process work when the patent is part of a standard? When the SSO imposes a requirement that patent owners license a patent broadly, should this requirement be read to benefit all potential adopters of the standard, or just potential adopters of the standard that are members of the SSO? In approaching this question, a researcher will need to take into account a number of elements of an SSO’s IPR policy, including terms that an SSO includes to protect the rights of the patent owner, and should examine the trade-offs inherent in any given approach within an IPR policy. An SSO that requires FRAND agreements, for instance, could be said to be imposing a baseline for the terms of the license, but leaving the patent owner with the discretion to negotiate licenses according to his individual needs as long as the licenses did not violate the agreement. An SSO that requires FRAND-RF agreements, however, deprives the patent owner of control over the royalty amount, but may allow the patent owner to impose a number of non-monetary restrictions on implementers in order to protect the patent owner’s rights in his intellectual property.

We anticipate that a researcher who compares FRAND-RF and FRAND terms side by side will see that rights are made broader in some ways and narrower in others. It may be, for example, that one conclusion from analyzing the trade-off between FRAND and FRAND-RF is that FRAND-RF licenses must be made available to a smaller class of users, *e.g.*, members of the SSO, and that it would be reasonable to interpret FRAND licenses as applying both to members

and nonmembers by default.. However, the current law of contracts and intended beneficiaries makes it more difficult for this broad intent to be legally enforced to the benefit of nonmembers in the absence of explicit statements in the FRAND agreement. Thus, the question of whether the IPR policy benefits only members or whether the benefits of a FRAND licensing obligation extends to nonmembers is an essential question for further study.

c. THE IMPORTANCE OF THE “ESSENTIAL VERSUS NON-ESSENTIAL” QUESTION

The third element that we think should be studied in the context of FRAND licensing agreements is whether these agreements apply only to technologically essential patents, or whether patents that are technologically optional to the standard are also subject to being licensed on FRAND terms. The literature and cases that discuss standards tend to focus on technologically essential patents, and there is a lot of room in the literature for more discussion about patents that are either commercially essential or non-essential.

We have adopted a view of essential and non-essential patents as falling into several categories. First, essential patents can either be technologically essential or commercially essential. It is currently an open question as to whether commercially essential patents should be covered by FRAND agreements, and whether commercial essentiality should be viewed through the broad, intermediate, or narrow lenses noted above. Technologically essential patents, moreover, can either be “core” essential patents that are necessary for the implementation of core functions of the standard, or “non-core” essential patents that are necessary for the implementation of optional features of the standard.

On the other hand, if a standard lists multiple options for implementing a particular feature of the standard, the patents covering those options are likely to be viewed as “non-essential” because standard implementers have multiple technologies to choose from. But the status of non-essential patents can change over time. For example, if there are three options listed for a particular feature, and each option is covered by a patent held by a different party, none of the three are likely to be viewed as technologically essential. However, if a single party acquires all three patents, the patents for this specific feature may now be viewed as technologically essential because one patent owner has control of all three. Similarly, if one of the three options becomes so popular that demand for the option becomes unanimous in the market, that option may have evolved into a commercially essential patent.

Opinions vary as to whether commercially essential patents should be treated the same as technologically essential patents. Professor Lemley argues that FRAND agreements should only apply to essential patents, reasoning that allowing FRAND agreements to apply to non-essential patents would “complicate the disclosure and licensing processes” and could result in members disclosing patents with the twin goals of avoiding nondisclosure liability and obtaining royalty payments.¹⁰⁵ Professor Lemley refers to patents that are “necessary as a practical matter” being essential, a fairly broad wording that suggests that Professor Lemley would view essential patents as including commercially essential patents, not just technologically essential patents. It is unclear, however, whether Professor Lemley would adopt a broad, intermediate, or narrow characterization of commercial essentiality. On the other hand, Professor Shapiro defines

¹⁰⁵ Lemley, *supra* note 16, at 1959.

essential patents as patents that are “necessary to comply with [the] standard.”¹⁰⁶ This narrower wording suggests that Professor Shapiro would view the term “essential patents” as being limited to technologically essential patents. SSOs also vary in how they address the question of technologically versus commercially essential patents. Very few discussions on this topic, however, consider the problem of how to address the possibility that non-essential patents could later become either technologically or commercially essential, and whether these newly essential patents should be treated as subject to earlier FRAND agreements.

We expect that after further examination, researchers would conclude that FRAND agreements should apply equally to patents that are essential under the SSO’s terms at the time the standard is adopted *and* that later become essential as defined by the SSO. In the absence of explicit language from the SSO including commercially essential patents as SEPs, it is currently unclear whether FRAND agreements should be understood to require the licensing of commercially essential patents. As we have learned from this committee, the industry is currently very divided on the question of commercially essential patents. We anticipate that there are three possible conclusions: 1) FRAND agreements should apply to technologically and commercially essential patents, in which case a consensus will also need to be reached about whether the definition for commercial essentiality should be broad, intermediate, or narrow; 2) FRAND agreements should apply to technologically essential patents, but the market should self-regulate on the issue of commercially essential patents; and 3) the market should self-regulate, regardless of whether the patents are technologically essential or commercially essential. The desirability of each conclusion will likely depend on what is considered the socially optimal goal. If the goal is to minimize injunction-seeking behavior, the first option might be best. If the goal is to encourage the market to work around blocking patents, the third option might be best. On the other hand, the second option might be best if the goal is to find a balance between the interests of reducing injunction-seeking and encouraging innovation.

d. THE IMPORTANCE OF THE “AFTER-ACQUIRED PATENTS” QUESTION

Finally, research concerned with determining the optimal approach to FRAND agreements should also take after-acquired patents into consideration. A company’s patent portfolio is a major asset in today’s information economy. In the standards context, the problem of after-acquired patents can arise in several situations. For our purposes, two of the most pertinent circumstances are from withdrawal during standard development, and acquisition of patents after a standard is set. In the first circumstance, a party acquires a patent after withdrawing from an SSO during the standard development process, and this acquisition can be using any method, including through the party’s own application to the USPTO or by purchasing additional patents. In the second circumstance, an SSO member who remains a member throughout the standard setting process may acquire a patent after the standard is finalized, perhaps as part of a business transaction.

The question that arises here is whether these newly acquired patents should be subject to the preexisting FRAND agreements. Above, we suggested viewing after-acquired patents for FRAND purposes in a similar way to after-acquired collateral in the law of secured transactions. However, that will require specific provisions in the IPR policies of SSOs. Currently, we do not

¹⁰⁶ Shapiro, *supra* note 2, at 128.

think that many SSOs address the issue of after-acquired patents, but maybe they should – and if they should, perhaps steps should be taken to standardize an approach to after-acquired patents in high technology industries where patents change hands so frequently.

VI. TRANSPARENCY FOR RECORDATION OF ASSIGNMENTS

The problem of patents changing hands frequently in high technology industries leads us to the final policy question posed by the above Widget SSO hypothetical: transparency of patent ownership. The transparency issue is significant in part due to the additional information that registration would provide. When standard implementers can quickly identify the current legal owner of the patent, knowing the identity of the owner can put the implementer at ease if he knows that the patent owner has a record of licensing patents on reasonable terms. In the alternative, the identity of the patent owner could also trigger caution on the part of the implementer if the patent owner is identified as a PAE or has a reputation for being very litigious. In either circumstance, ownership transparency can provide greater certainty to standard implementers. An SSO could also be benefited by ownership transparency, as transparency might make it easier for the committees responsible for setting the standard to research patent ownership interests and design the standard and policies related to the standard with an eye to mitigating future conflict.

Some prominent policy actors, including academics, the FTC, and the USPTO, have expressed support for requiring recordation of patent assignments. The FTC, in a 2011 report on patent law issues, asserted that accurate patent assignment records would assist parties in clearing patent rights.¹⁰⁷ In November 2011, the USPTO published a request for comments (RFC) concerning a possible rule change to make assignment recordation mandatory.¹⁰⁸ Like the FTC, the USPTO also noted that uncertain patent ownership has the potential to complicate patent clearance and interfere with market efficiency. These justifications for transparency are also relevant in the standards context, where incomplete information can lead to very costly harm.

a. RECORDATION

Recordation requirements are found in several areas of the law. In the law of real property, for instance, there are very detailed registration and title schemes for land, and property purchasers typically must do a title search before closing to verify that they are purchasing property that is free of other claims. Similarly, the law of secured transactions under Article 9 of the U.C.C. requires recordation of security interests in order for these interests to be perfected and thus be entitled to priority over earlier unperfected interests. Recordation in these instances serves to give notice to others that might have conflicting claims to the property or collateral. This is also the purpose of the current patent recordation provision of Section 261 of Title 35 in the U.S. Code, which reads in pertinent part:

¹⁰⁷ Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, at 130-31 (Mar. 2011), available at <http://www.ftc.gov/os/2011/03/110307patentreport.pdf> (“Recording assignments of government-conferred rights to exclude is necessary to ensure public notice and will not unduly burden patent transfers.”).

¹⁰⁸ 76 Fed. Reg. 72372 (Nov. 23, 2011).

An assignment, grant, or conveyance [of a patent] shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.¹⁰⁹

In addition to the statutory requirement above, Executive Order 9,424, issued February 18, 1944, also requires the prompt recordation of licenses, assignments, and other interests in patents held by government entities.¹¹⁰ If the USPTO promulgates regulations as proposed in the RFC, these regulations would serve to expand the situations when a patent assignment must be recorded. The current rule is written as a prophylactic rule intended to protect subsequent purchasers for value. Currently, the recordation of an assignment by non-government parties mainly serves to prevent the seemingly unlikely conflict that might arise when a patent owner sells the same patent to two different buyers, and patent owner who does not anticipate this situation arising is likely to forego registration. Thus, while some argue that the modern recordation rule does benefit the public by providing information about patent ownership, the benefits of the current rule are limited by the voluntary nature of registering in situations that do not follow the fact pattern of the statute.

Because patents are analogous to personal property, we also note that recordation with regard to personal property has precedent in the real world. Consider, for example, the registration requirement for automobiles. These registrations are justified by the public interest, though registration records for automobiles are not generally made available to the public in the same manner as registration records for land title. If assignment recordation requirements are implemented for patent registration, allowing assignments to be searchable by the public would likely be necessary for the public interest purpose.

One of the reasons that increased transparency would be beneficial in the patent context is because, with limited exceptions, patent owners typically retain full rights in their patents regardless of their actions to enforce or not enforce their rights. The primary exception in patent law is that a patent may expire and pass into the public domain if the patent owner fails to pay the maintenance fees, which are due every four years after the patent is granted.¹¹¹

Apart from expiration for nonpayment, however, no other action or inaction on the part of a U.S. patent owner can trigger a default rule that lessens a patent owner's rights in his invention against all potential users. This puts patent law in direct contrast with other forms of U.S. property law, including real property, personal property, and trademarks. Real property can be lost through adverse possession when the property owner fails to assert his rights against a party that exercises control over all or part of the legal owner's land. With personal property, there are default rules in the law pertaining to lost, mislaid, and abandoned property that allow ownership to be transferred based on the property owner's action or inaction with regard to the personal property. Finally, trademark is a separate body of intellectual property law that allows rights to arise in a mark based on use. With trademark law, a famous mark that is in use by its owner can be lost through dilution when the trademark owner fails to enforce its trademark against others.

¹⁰⁹ 35 U.S.C. § 261 (2006).

¹¹⁰ 37 C.F.R. § 3.11(b).

¹¹¹ 35 U.S.C. § 41(b) (2006).

Section 261 of Title 35 specifies that patents are to be treated like personal property. However, courts have not recognized situations where patent rights can be lost or abandoned like personal property. The defense of laches is similar in some ways to the real property doctrine of adverse possession, but very different in others. Chiefly, if a specific infringer uses the patent for an extended period of time in a manner that would be considered “open and notorious” under adverse possession law, the only possible party that could be benefited by laches is the infringer who can get a court to prohibit the patent owner from asserting the patent against that particular infringer. Thus, using a laches theory, the infringer may use the patent owner’s inaction against the owner if other requirements are met. The actual title to the patent, however, will not actually transfer as it would with adverse possession of real property.

Additionally, when a dispute implicates the similar defense of equitable estoppel, the court will generally require some level of certainty about the ownership of the patent and will also require that there were assertions of nonenforcement by the patent owner. In the absence of recordation, there are no common law doctrines in patent law that will protect a good faith infringer who does not know the identity of a patent owner and is put in the position of deciding between not using the technology at all, or using the technology at the risk of infringing someone else’s rights. If sued for infringement, the entity that previously tried and failed to identify the owner of the patent may find itself the victim of patent holdout, where the patent owner takes advantage of the infringer’s investment to demand higher royalties or threaten an injunction.

b. PROPOSED REGULATION BY THE USPTO

In November 2011, the USPTO published an RFC concerning a possible rule change to make assignment recordation mandatory.¹¹² The USPTO notes that over half of business outputs in the U.S. are now intangible assets, underscoring the importance of intellectual property rights regimes to allow these assets to be protected and transacted. The RFC addresses several possibilities for incentivizing recordation, such as providing a discount to maintenance fees for patent owners that verify or update assignee information; or requiring the timely identification of new ownership rights that have implications for a patent owner’s small entity status.

i. Features

In the RFC, the USPTO asserts that more complete assignment records would have a number of benefits to different parties, including providing more information to financial markets about company assets, and providing more information to inventors and manufacturers about competition in their fields.

The USPTO enumerates several potential changes in the RFC: 1) requiring the disclosure of assignees at the time of the filing of the patent application; 2) requiring that the patent issue in the name of the entity listed as the assignee at the time that the issue fee is paid; 3) requiring that patent owners update assignment information after the filing date for the purpose of including that information in the patent application publication (“PGPub”); 4) requiring that patentees identify new ownership rights that affect whether the issued patent is entitled to small entity

¹¹² 76 Fed. Reg. 72372 (Nov. 23, 2011).

status; and 5) discounting maintenance fees when the patentee verifies or updates assignee information around the time that maintenance fees are paid.

The above proposals change the current regulations in several ways. Currently, it is treated as optional for patentees to list assignees at the time of filing, payment of the issue fee, and for inclusion in PGPub, and these proposed changes would make it mandatory to report assignments at these times. The small entity entitlement rule currently only requires a patentee to notify the USPTO when he loses the entitlement, and does not require the patentee to identify the new assignee that led to a change of the small entity status. Finally, the USPTO bases its proposed maintenance fee discount for updating assignment information on its new fee setting authority, which was granted to the USPTO under Section 10 of the America Invents Act.

The RFC set forth eight specific questions on the proposed regulation, and these questions touched on a number of elements of this issue. The first question was broadly worded, asking for “any reason that the mandatory disclosure of any assignee or assignees should not take place at the time of application filing.” The second, third, and fourth questions introduced the possibility of requiring updated assignment information at various times (respectively, at the time of allowance, during patent prosecution, and after patent issuance) and whether these requirements would be in the public interest. The fifth question asked whether changes to USPTO regulations would be necessary to accomplish adequate and timely recording. The sixth question focused on whether the small entity status rule should be amended to require the patentee to identify the new ownership rights that affected the small entity status. The seventh question asked whether a maintenance fee discount or similar financial incentives for updating assignment information would be proper in light of the America Invents Act. The eighth question posed a broader question to commenters, asking the commenters to recommend changes to the USPTO’s regulations that would assist in providing “a more complete record for transactional purposes.”

ii. Response to the RFC

By the January 23, 2012 deadline, seventeen comments were submitted.¹¹³ Of the seventeen comments, there were five from intellectual property organizations, one from a law firm, four from private companies, and seven submissions from individuals. Most of the individual comments were in favor of a recordation requirement for assignments, as were the comments submitted by three of the four private companies. However, one company, the law firm, and four of the five intellectual property organizations expressed opposition to the idea of mandatory assignment recordation requirements. The Intellectual Property Law Association of Chicago, for instance, maintained that reporting assignment information should be viewed as a “best practice,” but opposed making such recordation mandatory.¹¹⁴

Opposition to the proposed rules typically argued that a mandatory regulation as proposed would increase costs for practitioners and would add to the expense of patent prosecution. The Intellectual Property Owners Association (IPO) pointed out that in the case of

¹¹³ Comments on Eliciting More Complete Patent Assignment Information, USPTO, http://www.uspto.gov/patents/law/comments/patent_assignment_information.jsp (Mar. 2, 2012).

¹¹⁴ Comment on Eliciting More Complete Patent Assignment Information, submitted by IPLAC, available at http://www.uspto.gov/patents/law/comments/a_iplac_120123.pdf.

some organizations with large patent portfolios, the patent prosecution and patent ownership issues may be handled by two separate departments, and sometimes even by two entirely separate sets of outside counsel.¹¹⁵ All of the comments opposing a mandatory recordation requirement asserted that such a requirement would increase costs for applicants, with most reasoning that additional legal analysis would be required to resolve ownership questions in order to report accurate and sufficiently documented information to the USPTO.

Several of the comments opposing the proposed regulations also questioned whether there was actually a real problem to solve. The American Intellectual Property Law Association (AIPLA) asserted in its comment that there was no empirical data indicating that any problems were actually caused by failure to record.¹¹⁶ Comments in support of the RFC, on the other hand, typically viewed the proposed recordation requirement as a way to address a number of uncertainties faced by potential licensees. IBM's comment in support of the proposed regulation went so far as to say that the uncertainty and "the potential for unnecessary costs and risks"¹¹⁷ could even effectively deter potential licensees from entering the market altogether.

Statutory authority was also disputed by many of the commenters opposed to recordation requirements. The comment submitted by the law firm of Oliff & Berridge, PLC, for instance, asserted that the existing statutory regime indicates that Congress wanted the recordation of assignments to be voluntary except insofar as necessary to protect subsequent bona fide purchasers for value.¹¹⁸ In IPO's comment, that organization asserted that the regulation is not supported by the USPTO's statutory authority to disseminate information to the public about patents under Section 2(a)(2) of Title 35.¹¹⁹ IBM, on the other hand, examined the source of the USPTO's authority in detail in its comment, arguing that a recordation requirement would be considered a procedural requirement that is covered by Section 2(b)(2).¹²⁰ Similarly, Phillips (also a supporter of the recordation proposal) argues that the additional information provided by mandatory assignment recordation could also reduce some of the "back-and-forth" that takes place between patent applicants and the USPTO during the prosecution process, thus making this proposed regulation of the type that would be authorized by statute because it would "facilitate and expedite the processing of patent applications."¹²¹

c. BALANCING THE INTERESTS

¹¹⁵ Comment on Eliciting More Complete Patent Assignment Information, submitted by IPO, *available at* http://www.uspto.gov/patents/law/comments/a_ipo_120123.pdf.

¹¹⁶ Comment on Eliciting More Complete Patent Assignment Information, submitted by AIPLA, *available at* http://www.uspto.gov/patents/law/comments/a_aipla_120123.pdf.

¹¹⁷ Comment on Eliciting More Complete Patent Assignment Information, submitted by IBM, *available at* http://www.uspto.gov/patents/law/comments/e_ibm_120123.pdf.

¹¹⁸ Comment on Eliciting More Complete Patent Assignment Information, submitted by Oliff & Berridge, PLC, *available at* http://www.uspto.gov/patents/law/comments/d_oliff_120124.pdf.

¹¹⁹ Comment on Eliciting More Complete Patent Assignment Information, submitted by IPO, *available at* http://www.uspto.gov/patents/law/comments/a_ipo_120123.pdf.

¹²⁰ Comment on Eliciting More Complete Patent Assignment Information, submitted by IBM, *available at* http://www.uspto.gov/patents/law/comments/e_ibm_120123.pdf; *see also* 35 U.S.C. § 2(b)(2) (2006).

¹²¹ Comment on Eliciting More Complete Patent Assignment Information, submitted by Koninklijke Phillips Electronics N.V., *available at* http://www.uspto.gov/patents/law/comments/e_phillips_120120.pdf; *see also* 35 U.S.C. § 2(b)(2)(C) (2006).

Further research might be needed to determine the extent of the problem that the recordation requirement is intended to address. As to the jurisdictional opposition, the existence of arguments in favor of and against the USPTO's authority to regulate indicates that this is a question that could have varying answers depending on the precedent offered. The question of cost to patentees, however, is a much more concrete objection, and is the objection that we view as the most salient opposition to additional regulation such as those proposed by the RFC.

If we accept that recordation requirements increase costs, the question then becomes whether the costs to the applicants and patentees are outweighed by the benefits to the public, including potential licensees. A common theme in policy debates is balancing of the interests. In the case of the RFC, supporters of the proposed recordation requirement have asserted that the public benefit would outweigh any increase in costs to the applicants and patentees. Supporters of the RFC often emphasized the benefits that complete assignment records would provide for entities that needed to track down the current owner of a patent. While further research would be beneficial in providing more concrete estimates of both the costs and benefits of this proposed regulation, there are some current possibilities that might assist in striking a balance.

One of the suggestions that AIPLA makes in its comment is that, as an alternative to multiple updates being submitted to the USPTO during prosecution, a patentee could simply submit a single "chain of title" document at a specified point in time, perhaps before the issuance of the Notice of Allowance. A "chain of title" approach might simplify the process for some patent owners with a large patent portfolio. Requiring disclosure of assignments early in the prosecution process would also likely not be very effective. As the AIPLA pointed out in its comment, requiring disclosure at the time the application is filed would likely not have a public benefit due to the fact that a patent application does not become public until eighteen months after filing.¹²²

Even if the timeline of the proposed regulation remains intact, there are other ways to mitigate some of the concerns about costs. Many of the commenters opposed to the proposed recordation requirement argued that the regulation would especially increase costs for large organizations that transfer patents internally during reorganization or for other legitimate business purposes, including tax strategy purposes.¹²³ To reduce these costs, the USPTO could specify that recordation of assignments by corporate organizations is only required for non-internal transfers. However, because some subsidiaries may have very different names from the parent company, it may be advisable for the USPTO to request that companies submit an organizational tree for internal USPTO reference.

For post-issuance assignment changes, the RFC already notes the possibility of allowing patent owners to pay a lower maintenance fee in exchange for confirming or updating the

¹²² Comment on Eliciting More Complete Patent Assignment Information, submitted by AIPLA, *available at* http://www.uspto.gov/patents/law/comments/a_aipla_120123.pdf.

¹²³ AIPLA and IPO both cite tax issues as reasons that a company might transfer its patents internally. One of the tax strategies that these organizations may be referring to is the "Double Irish," which in part involves an assignment of a company's patents to a subsidiary in Ireland to avoid the higher U.S. corporate tax rate that would otherwise apply to its patent royalties. The royalties would then be taxed at the lower Irish corporate tax rate, though some companies also use Ireland's tax law to reduce taxes owed even further. See Charles Duhigg and David Kocieniewski, *How Apple Sidesteps Billions in Taxes*, NY TIMES, Apr. 28, 2012, *available at* <http://www.nytimes.com/2012/04/29/business/apples-tax-strategy-aims-at-low-tax-states-and-nations.html>.

recorded assignments. Though many of the opponents to the proposed regulations question the utility of a discount to maintenance fees as an incentive to record assignments, we view this option as striking a good balance between costs to patent owners and the benefit that would be provided to the public by requiring patent owners to update the records with the USPTO if there is an assignment after the patent issues.

VII. CONCLUSION

Information is like a currency. Some sources indicate that over 50% of the business output of industry in the United States is comprised of intangible assets, many of which are protected by intellectual property rights.¹²⁴ Companies are often bought and sold based on the value of their IP portfolios, especially patents. Patent transfers, however, have significant implications for technology-reliant industries like computing, telecommunications, and Internet services. These industries often utilize standards to facilitate interoperability, with the SSOs often requiring owners of essential patents to commit to licensing these patents on fair, reasonable and nondiscriminatory terms to future licensees. The law associated with FRAND agreements is currently developing, and a number of questions need to be resolved. Do these FRAND agreements transfer to future assignees? Can nonmembers of the SSO enforce these agreements? Do these agreements apply to technologically essential patents only, or are commercially essential patents also covered? If commercially essential patents are covered, should this characterization be understood in a broad way as referring to patents that are close to the standard but that are unanimously demanded by consumers, in an intermediate way to refer to patents that cover popular technologies focused on interoperability, or in a narrow way as referring to a patented technology that is already mentioned in the standard as one of several alternatives, but the other alternatives are not commercially feasible? And for technologically essential patents, do the FRAND agreements apply equally to core essential and non-core essential patents? And finally, do these agreements apply to after-acquired patents such that a company that makes a FRAND agreement for Patent X in January can also be required to license Patent Y on FRAND terms even though the company did not acquire Patent Y until May?

The case law on issues arising from FRAND agreements is still developing, and the law is currently unclear. In this paper, we have examined these issues from a number of angles, including antitrust law, patent law, contract law, and property law. This is an area ripe for policy consideration, and relatively few academics have written on these points compared to other topics related to patent law. However, the public has a strong interest in seeing the law governing standards develop in a productive direction that supports innovation and interoperability. SSOs currently are left to their own devices, and take very different approaches to the topic of patent transfers in the context of FRAND agreements. Private coordination of SSO policies or government intervention to set default rules might increase the consistency of results of FRAND disputes.

Another topic related to the patent transfer issue is transparency, and specifically whether patent assignments should have a recordation requirement. Opponents of such a requirement argue that it would increase costs for patent applicants and practitioners, though supporters argue that the benefits to the public would outweigh these costs. The FTC has recommended statutory

¹²⁴ 76 Fed. Reg. 72372 (Nov. 23, 2011).

intervention to require recordation, and the USPTO has recently been considering new patent regulations that would make assignment recordation mandatory instead of discretionary.

While we have some suggestions for how to improve the current state of patent transfers as they relate both to FRAND agreements and transparency, further research is needed to adequately address these questions. As more high level discussion on these points occurs, awareness will increase, shaping proposals for new solutions. Chronologically, we are still fairly close to the beginning of these disputes, so the law has not yet had a chance to fully develop and take all of the nuances into consideration. This is an interesting topic, and we look forward to seeing how this develops and what the committee concludes on these points.

APPENDIX – APPLYING THE THEORIES

| Theory | Transferability of Obligations | Application to Nonmembers | Essentiality | After Acquired Patents | Remedy |
|----------------------|--|--|--|---|--|
| Antitrust | Obligation probably does not transfer in the absence of conspiracy. Vizio, Inc. v. Funai Elec. Co. Ltd. | Likely yes, because antitrust focus is on the market rather than parties to the contract | Probably will not apply to non-essential patents – less relevant to anticompetitive issues; unfair competition law may apply to commercial essentiality | Not likely to apply in the absence of conspiracy to monopolize | DOJ: Criminal or civil, may seek injunctions to protect consumers; FTC: May fine company or order disgorgement of profits; Private litigation: money damages, may seek equitable relief in appropriate circumstances |
| Formal Contract | Yes, if the new owner agrees to be bound by the agreement. | Limited case law suggests contract may be enforceable by nonmembers (ESS Tech v. PC-Tel). Third party beneficiary issue could be simplified by explicit contract language. | Yes, IF the language of the agreement is explicit about FRAND agreement covering tech essential, comm'l essential, and non-essential | Yes, IF the language of the agreement is explicit that after-acquired patents are covered. Contract language referencing after-acquired property is already acceptable, such as in the context of secured transactions and after acquired collateral. | Money damages; specific performance disfavored, may be available when contract involves unique items. |
| Detrimental Reliance | Likely transferable, due to focus being on reliance by IP user instead of solely on representations of new IP owner. | Unclear – Depends on whether it is reasonable for a party to rely on what someone else promises an SSO when the first party isn't a member of the SSO | Yes, if adopter knows that non-essential or comm'l essential patents were disclosed to the SSO and were subject to the FRAND agreement | No, unless the original owner made a FRAND commitment to the same SSO | Equitable relief (injunction, specific performance) |
| Law of Servitudes | Yes, if there is notice. When transferring real property, the transfer of a servitude is generally effective if the new owner had notice of the servitude. | Yes, if the language of the agreement refers to the agreement being for the benefit of nonmembers. Servitudes can be created in a third party, but the agreement may need to be explicit that the benefit is held in gross for the general public. | Yes, if the agreement says that the right attaches to all disclosed patents and non-essential patents are disclosed. Most servitudes do not require necessity. | No, the servitude is a property right that would most likely attach to specific patents at the time of the agreement | Equitable relief or damages |