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Modifying RAND Commitments to Better Price Patents in the Standards Setting Context

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MODIFYING RAND COMMITMENTS TO BETTER PRICE PATENTS IN THE STANDARDS SETTING CONTEXT

KYLE ROZEMA

Abstract.....	23
I. Introduction.....	24
II. RAND Commitments Under Patent and Antitrust Law	25
III. The Current Case Law.....	32
A. The R in RAND.....	32
B. The ND in RAND.....	33
C. The Rambus and Qualcomm Cases	35
IV. Controversial Issues	36
A. Proposals for Determining RAND Royalties	37
B. Alternatives to RAND Commitments.....	38
V. Analysis	40
VI. Proposal and Conclusion.....	41

ABSTRACT

This Article addresses a single problem: how can we allow engineers and scientists from different institutions to collaborate to set the best technical standards possible, not considering intellectual property (“IP”) rights, and then establish the royalty rates for each patent owner after the standard is set? The current system attempting to solve this problem requires patent owner participants to sign a Reasonable and Non-Discriminatory (“RAND”) commitment. These RAND commitments require the participants to agree *an ante*, i.e., before the standard is actually set, to license whatever patent rights they may ultimately have in the standard on terms that are reasonable and non-discriminatory. However, RAND commitments do not elaborate on what it means for a license to be reasonable and non-discriminatory, or how the reasonableness determination is different from the non-discriminatory determination. Too often rent seeking patent owners cannot agree on how to split the royalty payments and end up in court.

Nastiness ensues. Through the current *Georgia Pacific*¹ fifteen factor balancing test for determining whether a licensing agreement (or lack thereof) satisfies the RAND commitment, court decisions are almost as unpredictable as if the RAND commitment was not in place. As such, over the past decade, a number of more predictable methods for courts to use to split royalty profits in RAND commitments have been suggested. This Article is not concerned with analyzing which alternative system should replace the current system, however. Using any of three alternative methods for interpreting RAND commitments discussed in this Article would be better than the current system. Thus, this Article differs from others in the literature because it addresses the standards setting problem from a procedural standpoint. Because RAND commitments do not elaborate as to their meaning at all, I recommend RAND commitments elaborate by telling courts what RAND commitments do *not* mean. By adding a clause strictly rejecting the *Georgia Pacific* test in RAND commitments, courts would be free to use any new test they find fit and would be more inclined to strike down the *Georgia Pacific* factors test in the standards setting context.

I. INTRODUCTION

Standards make technology socially feasible. The coat you bought using one-click technology may not have fit without clothing size standards. The PowerPoint presentation on your destroyed hard-drive may not have been backed up without USB standards. And the wallet you lost last month would have had much more cash in it without credit card standards. Standards simply facilitate the interconnectivity of components for complex systems

The standard-setting process can be simple. The tale of how the bow and arrow standard was set provides a great example. A long time ago, it has been told that a wise Chinese ruler at war noticed that many archers were killed in battle after their supply of arrows was depleted. The ruler also noticed the plentiful amount of arrows left over from other fallen soldiers that were not utilized because each archer made his arrows specific for his own bow. As a result, arrows among archers were not compatible with any others' bow. Because this ruler was supreme, his powers allowed him to mandate a standard whereby all bow and arrows would be compatible. He summoned his best engineers to determine which were the best features the army of archers had invented, and to use those features to establish the bow and arrow standard. Thereafter, and as we know it today, an arrow can be shot out of any bow. The ruler's master plan was a success.

Today, however, patents complicate setting standards. Considering that tens, hundreds, and possibly thousands of potential patents holders participate in the standards setting process, Standards Setting Organizations ("SSOs") are needed to facilitate voluntary standards setting process.

This essay addresses the issue of finding the best method to set standards. A great deal of literature addresses the standards setting process as two separate problems. First, economic literature attempts to establish price breakdowns for patent owners in a standard for the purpose of determining if a certain license

¹ *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F.Supp. 1116 (1971).

satisfies a RAND commitment. Second, legal literature analyzes the tradeoffs between patent rights and antitrust implications from the methods dealing with standards setting. A gap exists, however, between the economic and legal literature. Little or no literature has attempted to combine economic pricing systems with legal concepts for the sole purpose of promoting change. In this essay, I attempt to alleviate Chief Justice Roberts' concern that legal scholarship is declining in its influence and that it "isn't of much help to the bar."² I attempt to help design a system that compels courts to change the current system. By no means do my suggestions fill the void between the legal literature and the economic literature, but my intent is to stem interest for others to do so.

When interpreting whether a patent license satisfies a RAND commitment, courts use a fifteen factor balancing test to determine royalties.³ This test has its limitations. One critical problem behind the test is the uncertainty it creates for the entire standards setting procedure. Other tests to value patents in standards setting have been proposed, but courts have adopted none. Many of the proposed tests, if adopted by courts, would remove at least some uncertainty behind the entire process. In turn, the reduction of uncertainty would facilitate standards to be set more often without litigation. In this paper, I propose a simple way to compel courts away from using the *Georgia Pacific* test. I do not recommend a test for the court to use, however. Instead, I argue that any of three proposed tests in the literature would be better than the *Georgia Pacific* test—at least in terms of uncertainty. The hope is that by allowing courts to decide which test is best as applied to the case before them, the result will be better than the current system.

Part I introduces the procedure of standards setting along with the problems it causes. Part II describes the current law governing RAND commitments, and ends by piecing a practical rule out of two recent cases. Part III presents what scholars believe to be the major problems with RAND commitments. This part then introduces three proposals for determining reasonable royalties and alternative solutions for RAND commitments. Part IV discusses the inherent problems with determining a royalty under RAND commitments. It then briefly discusses why any new system should focus on reducing uncertainty with RAND commitment enforcement. Finally, Part VI presents two recommendations to help the courts change the system interpreting royalties under RAND commitments, and make certain of the difference between the reasonable part and the non-discriminatory part of RAND commitments.

II. RAND COMMITMENTS UNDER PATENT AND ANTITRUST LAW

The standards setting process is broken down into two main steps: (1) the technology step; and (2) the legal step. In the technology step, the SSO invites all interested engineers and scientists, i.e., without the lawyers, to put together the best possible technologies to form a standard. But before the first step, the owners of potential patents in the standard agree to put off licensing issues until after the

² Sarah Randag, *Do You Ever Read Law Review Articles? Or Write Them?*, A.B.A. J. (Feb. 15, 2012, 1:31 PM), http://www.abajournal.com/news/article/do_you_ever_read_law_review_articles_or_write_them/.

³ *Georgia-Pacific*, 318 F. Supp. at 1116.

standard is formed. This agreement requires patent owners to commit to license their patent on RAND licensing terms.

Next, in the legal step, patent owners decipher *ex post* the meaning of the *ex ante* RAND commitment. As any “agree now to agree later” commitment goes, negotiations can breakdown. However, these breakdowns only occur once the standard is already set, so changing the standard would be extremely costly.

With any unclear legal regime, parties cannot agree on the terms and litigation results. “It is widely acknowledged that, in fact, there are no generally agreed tests to determine whether a particular license does or does not satisfy a RAND commitment.”⁴ This is because a willingness or commitment to offer a license on RAND terms and conditions is not an actual license. The RAND commitment is only a mechanism to assist in producing a license in the future.⁵ In a standards setting context, the actual negotiations are generally left to the parties themselves without SSO interference. “But for the RAND commitments already in place, courts are stuck with only two choices: interpret the clause in light of its likely purpose, or strip it of meaning and in that way throw into turmoil the economics that undergird countless important consumer technologies.”⁶

Whatever route courts choose, they can fall short. Again and again, courts overvalue patents in the RAND context because no one correct interpretation of a RAND commitment exists. Standard RAND clauses do not elaborate on its meaning in any understandable way. Not only does the language of a standard RAND commitment offer little guidance as to its proper interpretation, most RAND commitments do not even give a starting point for its interpretation.⁷ The standard RAND commitment neither references the meaning of “reasonable” in relation to patent law’s use in the context of “reasonable” royalties, nor does it suggest if “nondiscriminatory” means that “prices must be the same across the board, or . . . that some degree of price differentiation is fine but differences keyed to certain distasteful characteristics—*discrimination*—are verboten.”⁸

Even though courts under achieve in resolving RAND disputes, the purpose of RAND commitments—to help establish the best standard possible—may still have been achieved. So to establish the most efficient way to design a standards setting process, the purpose of RAND commitments cannot be forgotten. Therefore, this Article makes three basic assumptions that promote this main purpose.

The first assumption this Article makes is that *ex ante* negotiation is not an option because the timing for standards setting cannot be bogged down by negotiation and litigation. Without the proper *ex post* information (such as which

⁴ Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1, 5 (2005).

⁵ See Michele K. Herman, *Negotiating Standards-Related Patent Licenses: How the Deal is Done*, Part 1, 3 No. 2 LANDSLIDE 31, 35 (2010).

⁶ Doug Lichtman, *Understanding the RAND Commitment*, 47 HOUS. L. REV. 1023, 1032 (2010).

⁷ See Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1906 (2002) (surveying the bylaws of forty-three SSOs and finding that the majority required licensing of standardized intellectual property on RAND terms. “While ‘reasonable and nondiscriminatory licensing’ thus appears to be the majority rule . . . relatively few SSOs gave much explanation of what those terms mean . . .”).

⁸ See Lichtman, *supra* note 6, at 1031.

patents are included in the standard), negotiations are inefficient and lead to skewed outcomes because determining *ex ante* which patents should be included in the pool is not an easy task. Extensive searches for similar patents must be performed. Each and every claim in each and every patent must be evaluated. The validity of each patent must be evaluated. The amount each patent contributes to the pool as compared to next best alternative must be determined. It must be determined whether every patent is essential to the efficiency and use of the invention in the pool. The value of each patent must be determined. Then, to select a standard, all patent holders must negotiate with these considerations in mind. These negotiations would take an enormous amount of time. As one scholar puts it, “To work through a process where dozens of companies would debate the merits and worth of hundreds of patents would take years. Worse, were consensus not achieved, litigation would run yet more time off the clock, with substantial time lost first at the district court and then on appeal.”⁹

A RAND commitment removes the need for the initial negotiation between patent holders. The associated up-front costs are thereby minimized. The pool members can simply agree to make a license of an essential patent available to the public on reasonable and nondiscriminatory terms. RAND commitments “allow[] technological implementation to move forward while the parties in parallel work out legal and financial details.”¹⁰ “[T]he RAND commitment is, at its heart, a mechanism by which private parties can delay pricing negotiations without inadvertently skewing the outcome of those negotiations.”¹¹ According to one scholar, the goal of RAND is to achieve economically efficient prices.¹² To be more specific:

Financial arrangements will often be more efficient in the long run if their details can be negotiated after the negotiating parties more fully understand how the technology at issue is going to be used and by whom. The RAND commitment delays pricing negotiations and thereby allows at least some of that information to be included in the ultimate royalty negotiation.¹³

The second assumption this Article makes is that modifying the established standard because of negotiation breakdowns is not an option *ex post*. That is, a patent holder should not be allowed to refuse to license his patent after a standard has been locked in. This is because the benefits of standardization are clear. Standards allow firms to produce only one part of a finished product. They align functionality and common specifications in products allowing multiple firms to supply competing products. They also boost the economy by spurring investment in new technology markets because “suppliers can expect the market to expand and are assured that new products will be met with demand In turn, consumers benefit through increased choice, enhanced quality, and lower prices.”¹⁴

⁹ Lichtman, *supra* note 6, at 1028.

¹⁰ *Id.*

¹¹ *Id.* at 1047.

¹² *Id.* at 1033.

¹³ *Id.* at 1029.

¹⁴ Jonathan Hillel, *Standards x Patents ÷ Antitrust = ∞: The Inadequacy of Antitrust to Address Patent Ambush*, 2010 DUKE L. & TECH. REV. 017, ¶ 8 (2010) (footnotes omitted).

Therefore, it is imperative that a mechanism acts as a so-called social planner that allows engineers to work, without outside legal or financial related interruptions, to establish the best possible standards.

The third assumption this Article makes is that RAND determinations for reasonable patent royalties in a standards setting context is complicated. Standing at the intersection of patent law and antitrust law, the real issue for determining royalty rates in standards setting is finding the proper balance between incentives for innovation on the one hand, and diffusion of the fruits of the technology on the other. Innovators need to be compensated with a surplus that “constitutes a socially optimal incentive for investment in innovative activity that is properly balanced against the goal of rapid diffusion of technology.”¹⁵ But consumers also need the best products and to be protected from unreasonably high prices. The problem here is finding a practical way to consistently determine a price. The courts have not found a way. With current law surrounding RAND commitments, no one meaning of reasonable or nondiscriminatory exists; not everyone can agree if they have separate meanings; and some even question if they mean anything at all. Considering these three assumptions, we now turn to the two areas of law that shape the legality of a standards setting process: patent law and antitrust law.

Standards are complicated patent pools. Today, most standards form using a non-negotiated patent pool by way of a RAND commitment. At the simplest level, a patent pool is a pre-negotiated license deal on related patents. Patent pools interest a wide audience. Those looking to grant a license, those looking to receive a license, and the Department of Justice (“DOJ”) who protect consumers are the ones especially interested in patent pools. But what exactly is a patent pool, and how do we know if one exists?

By definition, a patent pool is an aggregation of patent rights (i.e., two or more parties) for the purpose of joint package licensing.¹⁶ The pool can cross-license those rights to each other or license them to third parties. Obviously, a patent pool exists when a group of patent holders says one exists (an explicit agreement). When there is no explicit agreement, a patent pool can still exist if complementary IP rights are likely to be integrated.¹⁷ Either way, the three following components make up a patent pool: (1) aggregated rights, (2) a single royalty payment by a licensee, and (3) the royalty is allocated among the IP holders.¹⁸

Licensees, licensors, and the DOJ usually have the same general concern with patent pools: is the pool enforceable? The concept of patent pool enforceability is simple; its application not so much. A pool is enforceable if the resulting competitive benefits are likely to outweigh the risks of competitive harms.¹⁹ While the application of the rule is difficult and very fact specific, some lessons have been learned overtime.

¹⁵ Swanson & Baumol, *supra* note 4, at 2–3.

¹⁶ See JEANNE CLARK ET AL., U.S. PATENT AND TRADEMARK OFFICE, PATENT POOLS: A SOLUTION TO THE PROBLEM OF ACCESS IN BIOTECHNOLOGY PATENTS? 4 (2000), available at <http://www.uspto.gov/web/offices/pac/dapp/opla/patentpool.pdf>.

¹⁷ See Swanson & Baumol, *supra* note 4, at 5.

¹⁸ See *id.*

¹⁹ CLARK ET AL., *supra* note 16, at 4.

On the one hand, lawful patent pools have a few common attributes. First, all licensors in the pool must grant non-exclusive rights to the pool meaning that licensors are free to license their IP outside the pool.²⁰ Second, only patents that are essential to the pool can be included, and the patents must usually be evaluated by an expert to determine which patents are in fact essential to the pool.²¹ Third, a mechanism must be in place that provides for future review of all patents in the pool.²² Fourth, grant back provisions are limited to essential patents.²³

On the other hand, it is not too difficult to spot obvious unlawful patent pools. In general, patent pools are not enforceable when they deal with monopolization, price-fixing, or an unreasonable restraint on interstate commerce.²⁴ Therefore, only complementary patents that are essential to the effective and efficient use of a technology can be included in the pool.²⁵ Further, pooling may result in anti-competitive conduct in the following scenarios: (1) if the excluded patents cannot effectively compete in the relevant market for the good incorporating the licensed technologies, (2) if the pool participants collectively possess the market power, or (3) if the limits on participation are not reasonably related to the efficient development and exploitation of the pooled patents.²⁶

Package licensing patent pools that deal with tying are also illegal.²⁷ Tying is the refusal to license one or more patents unless other patents are also accepted, that is, when a licensor offers two unrelated patents as a take it or leave it package deal.²⁸ Placing voluntary conditions for licensing one patent on the licensing of another patent is legal, but coercive or mandatory package licenses that extend the reach of one patent to another are likely illegal.²⁹ Even using one patent as a “lever” for the acceptance of other patents is considered forced acceptance and is illegal tying.³⁰ Likewise, it is illegal for a license to tie patents with unpatented technical information.³¹ The overall justification is that a patent holder cannot attempt to sell others patent rights that are not actually needed.³²

Even though these rules are helpful in identifying obvious violations of antitrust law, determining patent pool enforceability still consists of the subjective task of weighing the competitive benefits against anti-competitive risks.³³ However, the subjective task can be made more objective by focusing on the most relevant factors such as the degree of complementarity of the patents to each other

²⁰ See Intellectual Property Committee, INTELLECTUAL PROPERTY DESKBOOK FOR THE BUSINESS LAWYER: A TRANSACTIONS-BASED GUIDE TO INTELLECTUAL PROPERTY LAW 271 (2009) [hereinafter Deskbook].

²¹ See *id.*

²² See *id.*

²³ See *id.*

²⁴ See *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1 (1911).

²⁵ See Deskbook, *supra* note 20, at 270-71.

²⁶ See *id.*

²⁷ See *Int'l Salt Co. v. United States*, 332 U.S. 392 (1947).

²⁸ See *id.*

²⁹ See *Am. Securit Co. v. Shatterproof Glass Corp.*, 268 F.2d 769, 775 (3d Cir. 1959).

³⁰ See Deskbook, *supra* note 20, at 266-67.

³¹ See *Duplan Corp. v. Deering Milliken Inc.*, 397 F. Supp. 1146 (D.S.C. 1974).

³² See Deskbook, *supra* note 20, at 267.

³³ See *id.* at 267.

and the ability of the patent owner to license his patent outside the pool.³⁴

Nonetheless, patent pools provide some pro-competitive benefits. First, patent pools reduce transaction costs associated with patent licensing by reducing potentially many licenses to one license.³⁵ That is, patent pools combine and integrate complementary technologies that would require multiple separate licenses. By combining these multiple licenses into a single pre-negotiated license, patent pools facilitate the exploitation of technology.³⁶ Next, patent pooling gives parties greater freedom in using others' technology by allowing parties to design products covered by patents with many different owners.³⁷ Simply said, patent pooling facilitates the rapid development of new technology by making patented technology more accessible to others. Finally, patent pools help avoid costly litigation because patent pools alleviate ownership disputes.³⁸

However, there are anti-competitive risks associated with patent pools such as eliminating price competition among substitutes, and discouraging research and development ("R&D") by reducing incentives to innovate.³⁹ The competitive benefits and anti-competitive risks of patent pools have shaped the law surrounding patent pools today. The law surrounding patent pools is intertwined between patent law and anti-trust law. Patent pools cannot be analyzed in one area without considering the other.

Antitrust and intellectual property laws necessarily clash.⁴⁰ "[T]he primary purpose of the antitrust laws to preserve competition can be frustrated, albeit temporarily, by a holder's exercise of the patent's inherent exclusionary power during its term."⁴¹ However, the "aims and objectives of patent and antitrust laws . . . are actually complementary, as both are aimed at encouraging innovation, industry and competition."⁴² So before an understanding of the law surrounding patent pools can be achieved, it is important to look at how antitrust law and patent law each apply to patent pools in isolation.

Patent pools face antitrust enforcement by both private plaintiffs and enforcement authorities under federal and state law. Patent pools in the federal context are generally dealt with under Sections 1 and 2 of the Sherman Act.⁴³ Section 1 governs agreements between two or more parties in a restraint of trade.⁴⁴ Section 1 is the primary antitrust law regulating IP licenses. Section 2 governs issues dealing with monopolization and attempts at monopolization.⁴⁵ Section 2 is

³⁴ *See id.*

³⁵ *See id.* at 270.

³⁶ *See id.*

³⁷ *See id.*

³⁸ *See id.*

³⁹ *See id.* at 271.

⁴⁰ *See SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1203 (2d Cir. 1981).

⁴¹ *Id.* at 1203.

⁴² *Atari Games Corp. v. Nintendo of Am., Inc.*, 897 F. 2d 1572, 1576 (Fed. Cir. 1990).

⁴³ 15 U.S.C. §§ 1–2 (2006). However, the Federal Trade Commission ("FTC") has the statutory authority under Section 5 of the FTC Act, to enjoin a broader array of anti-competitive conduct. 15 U.S.C. § 45 (2006).

⁴⁴ 15 U.S.C. § 1.

⁴⁵ 15 U.S.C. § 2.

the primary antitrust law regulating unilateral conduct by IP owners holding a dominant position in a relevant market.

In 1995, the DOJ and the Federal Trade Commission (“FTC”) issued Antitrust Guidelines for the Licensing of Intellectual Property, which even though are not technically legally binding, provide guidance for interpreting the legality of patent pools.⁴⁶ These guidelines set a flexible approach to enforcement of IP licensing based on the pro-competitive benefits of licensing by establishing the three following basic principles: (1) “for the purpose of antitrust analysis, . . . intellectual property [is regarded] as being essentially comparable to any other form of property,” (2) “[there is no presumption] that intellectual property creates market power in the antitrust context,” and (3) “that intellectual property licensing allows firms to combine complementary factors of production and is generally procompetitive.”⁴⁷

Even though these guidelines do not bind United States courts, courts have followed its direction, and current law generally follows the three principles.⁴⁸ However, the principles in the guidelines are broad, leaving many relevant antitrust questions unanswered.⁴⁹ Therefore, the DOJ occasionally provides more guidance on its enforcement policies. In 2007, for example, the DOJ and FTC released a report that provides further guidance on the agencies’ competition views for refusals to license patents, collaborative standards setting, patent pooling, IP licensing, tying and bundling of IP rights.⁵⁰

The DOJ and FTC also occasionally provide specific guidance in real circumstances.⁵¹ For example, the DOJ informed two major SSO’s—VMEbus International Trade Association (“VITA”) and The Institute of Electrical and Electronics Engineers (“IEEE”)—that it did not intend to challenge the SSO’s new policies addressing the potential problem of patent hold-up.⁵² Specifically, VITA proposed to allow disclosure of maximum royalty rates while IEEE proposed to require various member assurances about future licensing terms.⁵³ Through these type of policies and some case law applying the policies, the law surrounding patent pools has been shaped.

⁴⁶ See U.S. Dep’t of Justice & FTC, *Antitrust Guidelines for the Licensing of Intellectual Property* (April 1995), available at <http://www.justice.gov/atr/public/guidelines/0558.pdf>.

⁴⁷ See *id.* at 2.

⁴⁸ Paul H. Saint-Antoine, *Antitrust Law and Intellectual Property: Intersection or Crossroad*, 1025 PLI/PAT 737, 741–42 (2010).

⁴⁹ See *id.*

⁵⁰ See U.S. Dep’t of Justice & FTC, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition* (2007), available at <http://www.ftc.gov/reports/innovation/P040101PromotingInnovationandCompetitionrpt0704.pdf>.

⁵¹ See Letter from Thomas O. Barnett, Assistant Attorney Gen., to Robert A. Skitol, Esq., Drinker, Biddle & Reath, LLP regarding VITA Business Review (Oct. 30, 2006), available at <http://www.drinkerbiddle.com/Templates/media/files/Service%20Pages/Antitrust/Patent%20Policies.pdf>; see also Letter from Thomas O. Barnett, Assistant Attorney Gen., to Michael A. Lindsay, Esq., Dorsey & Whitney LLP, regarding IEEE Business Review (Apr. 30, 2007), available at <http://www.justice.gov/atr/public/busreview/222978.pdf>.

⁵² See *id.*

⁵³ See *id.*

III. THE CURRENT CASE LAW

When the negotiation over RAND terms actually takes place it is important to know what RAND actually promises. Looking at the name itself, RAND actually means R & ND. That is, RAND makes two promises about a future license: that it be (1) reasonable, and (2) non-discriminatory. Therefore, this section attempts to put some meaning behind those two promises.

A. *The R in RAND*

“Reasonable” in RAND commitments requires royalty rates in patent pools be defined *ex post* in relation to *ex ante* market power.⁵⁴ This simple definition of reasonable is the most controversial area of RAND commitments because of courts’ unpredictable nature when determining what is reasonable. To resolve what is reasonable in RAND disputes, some courts balance the *Georgia Pacific* factors.⁵⁵ The *Georgia Pacific* factors are as follows:

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.
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,

⁵⁴ See Swanson & Baumol, *supra* note 4, at 10–11 (“[T]he concept of a ‘reasonable’ royalty for purposes of RAND licensing must be defined and implemented by reference to *ex ante* competition, i.e., competition in advance of standard selection.”).

⁵⁵ See *Georgia-Pac. Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

- 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 agreement⁵⁶

One court discussed whether the existence of non-infringing IP alternatives should impact the determination of a reasonable royalty.⁵⁷ The *Mars* court reasoned:

[E]ven if [the licensee] had shown that it had an acceptable noninfringing alternative at the time of the hypothetical negotiation, [the licensee] is wrong as a matter of law to claim that reasonable royalty damages are capped at the cost of implementing the cheapest available, acceptable, noninfringing alternative. We have previously considered and rejected such an argument. To the contrary, an infringer may be liable for damages, including reasonable royalty damages, that exceed the amount that the infringer could have paid to avoid infringement.⁵⁸

Some read the reasoning to suggest that *Mars* gives significant advantages to patent holders because a judicially determined reasonable royalty is not limited by the increased net margin that a producer gains from using a patent holder's IP over the next best alternative IP.⁵⁹ Further, some read *Mars* to imply that "the reasonable royalty assessment should be separate from a damages assessment that calculates the lost profits from infringement."⁶⁰ However, another court considered the cost of switching to a non-infringing substitute when calculating reasonableness, and set it at the loss of the increased net margin the infringer obtained through the infringing use of the patent holder's IP over the next best substitute product.⁶¹

One court stated that the reasonable royalty was usually best measured by an established royalty when available.⁶² The same court also explained that the benefits to both parties of a license agreement should be considered when determining a reasonable royalty.⁶³

B. *The ND in RAND*

ND is arguably more straightforward than R.⁶⁴ For tangible products, price discrimination is defined as selling the same product with the same costs to customers at different prices, or charging the same prices to customers when costs

⁵⁶ *See id.* at 1120.

⁵⁷ *See Mars, Inc. v. Coin Acceptors, Inc.*, 527 F.3d 1359, 1362 (Fed. Cir. 2008).

⁵⁸ *Id.* at 1373 (citations omitted).

⁵⁹ *See, e.g.*, Hal J. Singer & Kyle Smith, *What Does an Economist Have to Say About the Calculation of Reasonable Royalties?*, 14 INTELL. PROP. L. BULL. 7 (2009).

⁶⁰ *Id.* at 20.

⁶¹ *See, e.g.*, *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1245 (Fed. Cir. 2010).

⁶² *See id.* at 978–79.

⁶³ *See id.* at 980.

⁶⁴ *See* Marc Rysman & Tim Simcoe, *A NAASTy Alternative to RAND Pricing Commitments*, 11 TELECOMM. POL'Y 1010, 1015–16 (2011).

differ to a material degree.⁶⁵ However, even discriminatory royalties do not violate antitrust laws unless they adversely affect competition in a relevant market.⁶⁶

Unfortunately, ND in RAND commitments cannot use this traditional definition because of the differences in cost allocation for patents compared with tangible products. Patents are the result from high upfront costs associated with R&D, which tangible products and services do not usually require to the extent patents do. Moreover, while investing in R&D is risky because a high percentage of R&D costs are not recovered by the fruits of the research, inventing in tangible products and services does not come with a similar degree of risk.⁶⁷ Further, tangible products and services have much higher marginal costs than licensing patents.⁶⁸ For patent licensing, the marginal costs consist of minor licensing monitoring costs and patent maintenance fees, which are usually low compared to the marginal costs of tangible products such as the material and labor to make a product.⁶⁹ Therefore, the high marginal cost justifications for price discrimination in tangible products and services are not present in RAND commitments.

The differences in cost allocation between patent licensing and tangible products and services (i.e., relatively higher upfront costs and low marginal costs for patent licensing) justify a different focus for evaluating the ND in RAND commitments. Specifically, ND in RAND commitments should focus on the actual terms of the license, as opposed to the cost to the licensor, to prevent patent owners from offering different licensing terms to “similarly situated” licensees or offering the same licensing terms to “differently situated” licensees.⁷⁰ Two obvious questions become (1) how are “situations” determined, and (2) how are “situations” compared? Considering that every situation is inherently different and that there is no concrete way to directly compare one situation to the next, certain characteristics should be investigated in most situations, including “the firms’ particular use for the licensed IP (and hence its valuation of that IP), the company’s size and expected revenues, its position in the relevant marketplace, the time span for which the patented technology is expected to remain valuable to licensees (which may be considerably shorter than the statutory term of the patent), and so forth.”⁷¹

How these characteristics are weighed depends on the relevant market and the licensee’s market position.⁷² Again, even though patent holders would be practicing price discrimination in the traditional sense when they set royalty rates according to the above objective observable criteria, ND in RAND commitments

⁶⁵ See ROBERT S. PINDYCK & DANIEL L. RUBINFELD, *MICROECONOMICS* 383–93 (6th ed. 2005).

⁶⁶ See *La Peyre v. FTC*, 366 F.2d 117, 121–22 (5th Cir. 1966).

⁶⁷ See Richard A. Posner, *Intellectual Property: The Law and Economics Approach*, 19 J. ECON. PERSP. 57, 60 (2005).

⁶⁸ See *id.*

⁶⁹ See *id.*

⁷⁰ See JAY DRATLER, JR. & STEPHEN M. MCJOHN, *LICENSING OF INTELLECTUAL PROPERTY* 980–85 (2011).

⁷¹ See Anne Layne-Farrar, *Nondiscriminatory Pricing: Is Standard Setting Different?*, 6 J. COMPETITION L. & ECON. 811, 815 (2010).

⁷² See Deskbook, *supra* note 20, at 13.

do not focus on this type of discrimination.⁷³ The efficiency associated with this type of traditional price discrimination in patent pools justifies allowing it. Overall, the illegality of discriminatory pricing in RAND commitments turns on whether the imposition of discriminatory royalties will either exclude smaller competitors from the market or place them at a significant competitive disadvantage due to higher costs.⁷⁴

Whether courts weigh these characteristics correctly depends on how much information is revealed during negotiations. If enough information is revealed during negotiations, however, patent holders will be able to capture all surpluses anyway because they will know exactly how much licensee's are willing to pay.⁷⁵ While patent holder pricing at licensee surplus is exactly the definition of price discrimination in a traditional case, it is not discrimination under RAND commitments because discrimination "should be read narrowly to prohibit only discriminatory licensing to potential downstream rivals and not price discrimination more generally, else the RAND commitment turn into an inflexible commitment to license at identical terms to all potential licensees."⁷⁶ Without reading ND narrowly, a tension is created between revealing licensee information to determine a ND price and having the licensor use the information obtained to do just the opposite.⁷⁷

C. *The Rambus and Qualcomm Cases*

Determining what is reasonable and what is non-discriminatory, or both, has been a difficult task. Then came *Rambus* and *Qualcomm* to create even more havoc in the RAND commitment world.⁷⁸ However, it is possible to make sense of both cases by looking at what each case tells us about future RAND commitments. *Rambus* tells us that a duty of good faith underlies the standards setting process,⁷⁹ that expectations of those members are relevant, that deception

⁷³ See Daniel A. Crane, *Patent Pools, RAND Commitments, and the Problematics of Price Discrimination*, 20 (Cardozo Legal Studies, Working Paper No. 232, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1120071.

⁷⁴ Scott D. Russell & Hanno F. Kaiser, *Analytical Framework for Antitrust Counseling on Intellectual Property Licensing*, in UNDERSTANDING THE INTELLECTUAL PROPERTY LICENSE 761, 767 (2010).

⁷⁵ See Crane, *supra* note 73, at 26.

⁷⁶ See *id.* at 3.

⁷⁷ See Layne-Farrar, *supra* note 71 at 829.

There is a subset of cases, however, where *potentially* valid reasons exist for concern about discrimination in license fees for intellectual property: those instances when the owner of the IP uses it as an input in a downstream market where competitors also require the IP for the same purpose We suggest that this possibility is (or should be taken to be) the principal justification for the RAND nondiscrimination requirement.

Id.

⁷⁸ See *Rambus, Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008); see also *Broadcom Corp. v. Qualcomm, Inc.*, 501 F.3d at 303 (3d. Cir. 2007).

⁷⁹ See *Qualcomm*, 501 F.3d at 314; *Rambus, Inc.*, No. 9302, 2006-2 Trade Cas. (CCH) ¶ 75364, (F.T.C. Aug. 2, 2006) (holding that "distorting [the SDO's] technology choices and undermining [SDO] members' ability to protect themselves against patent hold-up . . . caused harm to competition").

alone is not enough for a Section 2 claim,⁸⁰ that higher prices do not equal market exclusion and monopolization,⁸¹ and that deception must have led to adoption of the patented technology, not just higher royalties. *Qualcomm* tells us that deception must lead to the adoption of the patented technology in an SSO before anti-competitive conduct becomes actionable.⁸²

Notice the different focus among *Rambus* and *Qualcomm*: “*Rambus* views the RAND commitment as preventing the *exercise* of monopoly power that the standard-owner lawfully holds, whereas *Qualcomm* focuses more on the economic equivalence between creating monopoly power in the first instance versus avoiding restraints on its exercise.”⁸³ Taking *Rambus* and *Qualcomm* together, one reading of the cases suggests that a rule has been formed: “if a patent-holder has engaged in deceptive conduct *ex ante*, whether through nondisclosure of its patent rights or a fraudulent RAND commitment following disclosure, and the SSO would have chosen a non-proprietary technology but for the deception, then the standard-owner may be liable under Section 2.”⁸⁴

IV. CONTROVERSIAL ISSUES

Supporters of RAND commitments contend that they are not too uncertain or lacking transparency; critics disagree.⁸⁵ Critics maintain that there is “insufficient protection against abusive *ex post* license demands”⁸⁶ because relation-specific investments are made before a licensee finds out whether her view of reasonable is different from the patentee’s view of reasonable.⁸⁷ Had this been known *ex ante*,

⁸⁰ Specifically, “the [Rambus] court held that *ex ante* deceptive conduct towards an SSO that enables the future standard-owner to avoid making RAND commitments for its *ex post* licensing to standard-users does not, in itself, violate the Sherman Act.” Hillel, *supra* note 14, at ¶ 34; See also J. Thomas Rosch, *The Common Law of Section 2: Is It Still Alive and Well?*, 15 GEO. MASON L. REV. 1163, 1173 (2008).

We at the Commission were very mindful of Chicago School scholarship and of the Supreme Court’s recent jurisprudence in deciding *Rambus*, and I assume that the Third Circuit was similarly mindful of it in deciding *Qualcomm*. But we were not convinced that deceptive conduct in the context of a standard setting process could or should be considered presumptively legal, much less legal *per se*.

Id.

⁸¹ See Hillel, *supra* note 14, at 47 (“Whereas a monopoly clearly does not exist when a nonproprietary standard is adopted, the *ex post* market structure is identical whether RAND commitments are imposed or not.”).

⁸² See *Qualcomm*, 501 F.3d at 314.

We hold that (1) in a consensus-oriented private standard setting environment, (2) a patent holder’s intentionally false promise to license essential proprietary technology on FRAND terms, (3) coupled with an SDO’s reliance on that promise when including the technology in a standard, and (4) the patent holder’s subsequent breach of that promise, is actionable anticompetitive conduct.

Id.

⁸³ See Hillel, *supra* note 14, at 31.

⁸⁴ See *id.* at 44.

⁸⁵ See Robert Skitol & Kenneth Vorrasi, *Patent Holdup in Standards Development: Life After Rambus v. FTC*, 23 ANTITRUST 26, (2009).

⁸⁶ See *id.* at 30.

⁸⁷ See Herman, *supra* note 5, at 38.

critics hold, the deal would not have been made in the first place (or, alternatively, the patentee's patent might not have been included in the standard).⁸⁸ On a similar note, some critics point out that RAND commitments have no specific limitations placed on it, and that there is no way to gauge the cumulative amount of royalties to be charged *ex ante*.⁸⁹ Overall, some critics contend that RAND discourages standards adoption because of the high risk associated with RAND litigation in general.⁹⁰

Both RAND supporters and critics offer theories to change the RAND system.⁹¹ While supporters generally attempt to find ways to make RAND commitments better, critics often attempt to disprove its effectiveness and propose alternatives to RAND.⁹² At the same time, a number of scholars propose ways to determine what it means to be a RAND royalty.⁹³ The rest of this section briefly discusses proposals for determining what a RAND commitment means, and proposals for alternatives of RAND commitments.

A. Proposals for Determining RAND Royalties

Economic policy and analysis is at the heart of the three most cited proposals for determining RAND royalties—The Efficient Component Pricing Rule (“ECPR”), the Cooperative Game Theory Model (“CGTM”), and Threat Point Royalty Model (“TPRM”). All methods are used to determine RAND royalties when multiple patent holders contribute IP to a final product.

Swanson and Baumol offer an analytical tool for analyzing whether an *ex ante* royalty is reasonable—ECPR.⁹⁴ ECPR sets the royalty rate equal to the incremental value of the best technology option as compared to the next best alternative.⁹⁵ This rate is said to capture the competition between the available technologies to be used in a standard because the royalty rate will be smaller when the available alternatives are of similar value.⁹⁶ Likewise, the royalty rate is higher when the incremental contribution of the best option is greater.⁹⁷ By setting the royalty in this way, the license fee is linked directly to the price of the IP owner's final product.⁹⁸ Therefore, IP owners are indifferent whether or not the IP is

⁸⁸ *See id.*

⁸⁹ *See id.*

⁹⁰ *See id.* at 39. The author argues that “[w]aiting for a court to answer what the parties to a RAND commitment meant when they used the term ‘reasonable,’ and whether the patentee has abided by that meaning . . . can be costly and too time consuming to effectively aid standards implementers.” *Id.* at 36.

⁹¹ *See, e.g.,* Layne-Farrar, *supra* note 71; Skitol & Vorrasi, *supra* note 85.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *See* Swanson & Baumol, *supra* note 4, at 57. For summaries of Swanson's and Baumol's auction model, see Singer and Smith, *supra* note 49; *see also* Anne Layne-Farrar, A. Jorge Padilla & Richard Schmalensee, *Pricing Patents for Licensing in Standard-Setting Organizations: Making Sense of FRAND Commitments*, 74 ANTITRUST L.J. 671, 685–87 (2007).

⁹⁵ *See* Swanson & Baumol, *supra* note 4, at 56.

⁹⁶ *See id.*

⁹⁷ *See id.*

⁹⁸ *See id.* at 32.

licensed.⁹⁹ Overall, the model considers all economic costs when determining the reasonable royalty because higher royalties will be given to great innovations, while smaller royalties will be given to a less great pioneered technology. By comparing innovations against each other, the model allows the reasonableness of royalty rates to be measured. With the ECRP, the “nondiscriminatory” component of the a RAND commitment is usually met because it finds the implicit royalty rate the patent holder charges itself.¹⁰⁰

CGTM determines reasonable royalties by using game-theoretic models with five different scenarios.¹⁰¹ CGTM allows each actor to receive her marginal contribution to the cooperative group according to four principles: (1) the total value of the spoils is distributed among all actors and nothing is left over; (2) the value received by any actor is independent of the ordering of the claim; (3) if an actor does not contribute anything to any possible collaboration, it receives a payoff of zero; and (4) payoffs to individual actors will be the same whether two actors are analyzed separately or together as a single actor.¹⁰²

Lemley and Shapiro describe a royalty rate that depends on the “threat points” of each party—TPRM.¹⁰³ TPRM assumes that without a licensing agreement, expensive litigation is inevitable between the patent holder and the manufacturer.¹⁰⁴ TPRM determines a benchmark reasonable royalty rate based on the bargaining skill of the patent holder (measured by the patent holders fraction of gains from settling the inevitable patent infringement case), the value the patented innovation confers on the infringer over the next best alternative (measured per unit of the infringing product), and the strength of the patent (measured by the probability the patent holder will win the inevitable patent infringement suit).¹⁰⁵ In the model, the benchmark royalty rate is determined by multiplying the value assigned to the bargaining skill of the patent holder by the value the patented invention confers on the infringer over the next best alternative.¹⁰⁶ However, TPRM is only valid in an “ideal” patent system—a system without holdup.¹⁰⁷

With no indication that courts will use any of these proposed tests to determine royalties under RAND commitments in the future, alternatives to RAND commitments have been suggested.

B. Alternatives to RAND Commitments

A debate exists as to whether *ex post* bilateral negotiations are the best mechanism to arrive at RAND terms and conditions.¹⁰⁸ Some proposals to change

⁹⁹ See *id.* at 36.

¹⁰⁰ *Id.* at 30.

¹⁰¹ See Layne-Farrar, *supra* note 71, at 816.

¹⁰² See Singer & Smith, *supra* note 59, at 15.

¹⁰³ See Mark Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1995–96 (2007).

¹⁰⁴ See *id.* at 1996.

¹⁰⁵ See *id.* at 1997–98.

¹⁰⁶ See *id.* at 1999.

¹⁰⁷ See *id.*

¹⁰⁸ See Herman, *supra* note 5, at 36.

RAND policies focus on patent holdup, such as by encouraging bilateral licensing negotiations *ex ante*,¹⁰⁹ allowing mandatory royalty-free or minimum-fee licensing,¹¹⁰ establishing royalty caps on cumulative royalties, holding auctions,¹¹¹ mandating *ex ante* licensing term disclosure, allowing joint negotiations,¹¹² adding a term to the agreement endorsing *Georgia Pacific* factors for what it means to be reasonable,¹¹³ and adding a “no injunctive relief” term to RAND assurances.¹¹⁴

Some propose to allow *ex ante* bilateral licensing.¹¹⁵ As one scholar explains, it would “simply take the current process of confidential licensor-licensee negotiations and shift it in time to a point before a standard’s technology path is frozen, when technological alternatives might still exist and compete with one another.”¹¹⁶ Supporters argue that “*ex ante* bilateral negotiations are a promising . . . option preventing *ex post* opportunistic licensing” because they “appear[] a less risky solution to *ex post* licensing problems.”¹¹⁷ Others propose adding a term similar to a most-favored nations (“MFN”) clause.¹¹⁸ An international trade law concept, an MFN clause in an IP license allows any potential licensee get the same deal as any other licensee.¹¹⁹ That is, if an MFN clause is included in an IP license, any licensee is entitled to any more favorable terms that other licensees can later negotiate with the licensors.¹²⁰ Even others propose to hold an auction while the standard is being developed.¹²¹ The theory is that holding an auction compensates a patent holder only for his contribution to an SSO over what the next best alternative technology could generate.¹²²

Ex ante disclosure of licensing terms is a proposal that is gaining a lot of support.¹²³ One major SSO now mandates the disclosure of all IP holders’

¹⁰⁹ See Anne Layne-Farrar, Gerard Llobet, & A. Jorge Padilla, *Preventing Patent Hold Up: An Economic Assessment of Ex Ante Licensing Negotiations in Standard Setting*, 37 AIPLA Q.J. 445, (2009).

¹¹⁰ Standardization Admin. of The People’s Republic of China, *Letter about Seeking Opinions on the Regulations for the Administration of the Formulation and Revision of Patent-Involving National Standards (Interim) (Exposure Draft)*, IP PROSPECTIVE (Nov. 2, 2009) http://www.ipprospective.com/wp-content/uploads/2009/11/091118chinastandard_e1.pdf.

¹¹¹ See Swanson & Baumol, *supra* note 4, at 57 (explaining that an “auction-like model” solution should be defined and implemented by reference to *ex ante* competition).

¹¹² See Robert A. Skitol, *Concerted Buying Power: Its Potential for Addressing the Patent Holdup Problem in Standards Setting*, 72 ANTITRUST L.J. 727, 729 (2005) (explaining a jointly negotiated licensing term solution wherein a standards setting organization would “require, or at least affirmatively encourage, ‘ex ante’ disclosure of intended license terms prior to [agreeing upon a standard], with a related mechanism for collective negotiation of the license agreement”).

¹¹³ See Lichtman, *supra* note 6, at 1032.

¹¹⁴ See Skitol & Vorrasi, *supra* note 86, at 30.

¹¹⁵ See Layne-Farrar, *supra* note 71, at 819.

¹¹⁶ See Layne-Farrar, Llobet & Padilla, *supra* note 109, at 447.

¹¹⁷ *Id.* at 475.

¹¹⁸ See, e.g., M. Howard Morse, *Cross Licensing and Patent Pools: Legal Framework and Practical Issues*, 3 A.B.A. SEC. ANTITRUST & INTEL. PROP. 42, 48–49 (2002).

¹¹⁹ *Id.* at 49.

¹²⁰ *Id.*

¹²¹ Layne-Farrar, Llobet & Padilla, *supra* note 109, at 457.

¹²² *Id.*

¹²³ See Layne-Farrar, Llobet & Padilla, *supra* note 109, at 446; see, e.g., *Ex Ante Disclosures of Licensing Terms*, ETSI, available at <http://www.etsi.org/WebSite/AboutETSI/IPRsInETSI/Ex-ante.aspx> (last visited Dec. 12, 2012).

maximum rates and most restrictive licensing terms.¹²⁴ The policy deploys a “disclose it or lose it” mandate, stating that any member that fails to disclose either patents or maximum rates will have to license any patents deemed essential for the standard on a royalty free basis.¹²⁵ Another major SSO adopts a similar policy but is far less demanding: it merely gives patent-holding members opportunities to voluntarily disclose their desired licensing terms and conditions with no mandatory disclosure requirement to push members to publish their licensing terms.¹²⁶ Other SSOs have been experimenting with other changes. For example, VITA recently required *ex ante* disclosures of maximum royalties and default license terms, while IEEE has moved toward a voluntary approach to address those same ends.¹²⁷ But VITA and IEEE are not going to be the only experimenters. The DOJ has invited SSOs to consider using *ex ante* joint negotiations for actual licensing terms.¹²⁸ “The report emphasizes that a negotiation process of this sort can be ‘procompetitive’ in its protection against holdup outcomes,” but cautions SSOs to consider how to manage the antitrust risks in joint negotiations.¹²⁹

V. ANALYSIS

Signing a RAND commitment is basically saying, “I agree now to agree later.” But does a RAND commitment really mean “I agree now to let the courts decide?” Either way this arrangement has inherent problems; there are no specific limitations in place and there is no way to gauge the royalties in advance.¹³⁰ The arrangement may induce lawsuits and “force[] courts to take a more active role when it comes to pricing patents.”¹³¹ Even if parties can agree on what “reasonable” means, this meaning will nevertheless be influenced by what each party expected a court to do if an agreement was not reached.¹³² To make matters worse, these expectations become more unpredictable “where the value of any one patent has to be judged in light of hundreds or even thousands of other necessary patent rights.”¹³³

One fundamental question is whether it is even possible to pinpoint a royalty that satisfies RAND. Recall that Lemley and Shapiro describe a royalty rate that depends on the “threat points” along with the bargaining skill of the patent holder, which suggests that there is a wide range of economically feasible reasonable

¹²⁴ See Layne-Farrar, Padilla & Schmalensee, *supra* note 94, at 679.

¹²⁵ See *id.*

¹²⁶ See *id.*

¹²⁷ See Skitol & Vorrasi, *supra* note 86, at 30.

¹²⁸ See *id.*

¹²⁹ See *id.*

¹³⁰ See, e.g., Herman, *supra* note 5.

¹³¹ See Lichtman, *supra* note 6, at 1030.

¹³² See *id.* at 1038. Not only do parties consider the uncertainty with a court assigned royalty, parties also consider the uncertainty surrounding patents in general. See, e.g., Lemley & Shapiro, *supra* note 104, at 2018–19. In fact, only 1.5% of patents actually being litigated over and 0.1% of patents disputes going to trial. *Id.* Of those patent disputes that do go to trial, it is estimated that about half are declared invalid, even many of significant value. See, e.g., *id.*

¹³³ See Lichtman, *supra* note 6, at 1030.

royalties rather than one specific reasonable royalty value.¹³⁴ In fact, Schankerman and Scotchmer show the prevailing legal doctrine for damages (i.e., liability rule) “leads to an indeterminacy in permissible damages.”¹³⁵ Schankerman and Scotchmer may suggest that as long as courts find a license value range anywhere on the interval between zero to the additional value the patent confers in producing the final product, it should be considered reasonable.¹³⁶ Even assuming a reasonable license value can be pinpointed, none of current economic models appear to give definitive guidance on estimating reasonable royalties, at least in different scenarios.¹³⁷ Nonetheless, while each model has its advantages and shortcomings, the best “choice of a model depends on the nature of the dispute at hand.”¹³⁸

A second fundamental problem is the possibility that some royalties are being set to satisfy the ND term while other royalties are being set to satisfy the R term. Remember, a single royalty must be determined to satisfy both prongs. Therefore, when a court sets a royalty price to satisfy a RAND commitment, every license is in one of the two following scenarios: (1) the price is initially set at a reasonable one, and then that price is checked to see if it is discriminatory, or (2) the price is initially set at a non-discriminatory one, and then that price is checked to see if it is reasonable.

While the difference between the ND and the R term is not clear when negotiating a license, the difference between R and ND is clearer from the courts *ex post* point of view. For ND, courts simply look to the rates actually charged to the different licensees.¹³⁹ Even though identifying royalty discrimination may not be easy, this is a regular issue courts are already well-equipped to deal with.¹⁴⁰ Determining what rates are not reasonable, however, is far more complicated, controversial, and subjective than comparing rates actually charged when assessing discrimination.¹⁴¹ Therefore, removing uncertainty in court pricing of patent licenses may require focusing in on the R term, and less on the ND term.

VI. PROPOSAL AND CONCLUSION

Nothing is inherently wrong with RAND commitments. At its basic level, a RAND commitment is trying to solve an insolvable problem— getting people to agree *ex post* on a commitment made *ex ante*. Any solution to this problem will be imperfect. Assuming no substitute for this *ex post* negotiation exists (i.e., because

¹³⁴ See Lemley & Shapiro, *supra* note 104, at 1995–96.

¹³⁵ See, e.g., Mark Schankerman & Suzanne Scotchmer, *Damages and Injunctions in Protecting Intellectual Property*, 32 RAND J. ECON. 199, 204 (2001) (The study examined these implications.).

¹³⁶ See, e.g., *id.* at 209.

¹³⁷ For a critique of the Cooperative Game Theory model, see J. Gregory Sidak, *Holdup, Royalty Stacking, and the Presumption of Injunctive Relief for Patent Infringement: A Reply to Lemley and Shapiro*, 92 MINN. L. REV. 714, 714 (2008). For a critique of the ECRP, see Layne-Farrar, Llobet & Padilla, *supra* note 109. The main issue for ECRP is that it does not offer a solution to divide rents among IP owners when multiple patents are required to produce a final product. See *id.*

¹³⁸ Singer & Smith, *supra* note 59, at 21.

¹³⁹ See Layne-Farrar, *supra* note 71; see also *In re Rambus*, 2006 WL 2330117.

¹⁴⁰ See Layne-Farrar, *supra* note 71; see also *In re Rambus*, 2006 WL 2330117.

¹⁴¹ See Layne-Farrar, *supra* note 71.

standards setting must not be bogged down by these legal issues), firms choose RAND commitments because they want to delay pricing negotiations without inadvertently skewing the outcome of those later deals. Therefore, alternative proposals to RAND commitments do not seem as practical as finding better ways to price patent licenses.

The main problem surrounding RAND commitments is the uncertainty of court awards. Thus, the current test should be replaced by a more predictable test. Each of the three proposed pricing rules—the Efficient Component Pricing, the Cooperative Game Theory Model, and the Threat Point Royalty Model—would reduce the uncertainty as compared to the *Georgia Pacific* test because parties will not be influenced by what they expect a court to do if an agreement was not reached.¹⁴² That is, unlike the current *Georgia Pacific* test, parties will have some quantifiable measure for pricing a license. Even if the pricing estimate over prices the license, or if it is not as fair, precise, or equally predictable in all circumstances, all three pricing schemes are more predictable than the current test. Recall the problem with interpreting a RAND commitment starts because RAND clauses do not elaborate even as to how to start interpreting it, with both R and ND terms.¹⁴³ The problem should end there. If parties had some indication on how courts interpret what it means for a license to be reasonable and nondiscriminatory, they would act according to these more precise expectations than on the loose expectations in the current system. Therefore, I propose a way that may compel courts to use a model for pricing patent licenses other than the *Georgia Pacific* model.

RAND commitments should add two terms. First, the RAND commitment should strictly reject the *Georgia Pacific* factors test, which may compel courts to adopt one of the proposed tests.¹⁴⁴ Second, RAND commitments should clear up any ambiguities with how nondiscrimination in the agreement should be interpreted by explicitly stating it should be interpreted as an MFN clause, which may compel courts to adopt or overrule its use. By adding these two clauses to RAND commitments, courts may be more inclined to modify how patents are priced in the standards setting context.

¹⁴² See *id.* at 1038. Not only do parties consider the uncertainty with a court assigned royalty, parties also consider the uncertainty surrounding patents in general. See, e.g., Lemley & Shapiro, *supra* note 104, at 2018–19. In fact, only 1.5% of patents actually being litigated over and 0.1% of patents disputes going to trial. Of those patent disputes that do go to trial, it is estimated that about half are declared invalid, even many of significant value. See, e.g., *id.*

¹⁴³ See Lemley, *supra* note 7, at 1906 (“While ‘reasonable and nondiscriminatory licensing’ thus appears to be the majority rule . . . relatively few SSOs gave much explanation of what those terms mean . . .”).

¹⁴⁴ See Lichtman, *supra* note 6, at 1032 (“And one can easily imagine a future RAND clause that reads, say . . . ‘reasonable and nondiscriminatory, by which we mean to endorse patent law’s traditional *Georgia Pacific* factors.’”).