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Patent Pools, RAND Commitments, and the Problematics of Price Discrimination

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PATENT POOLS, RAND COMMITMENTS, AND THE PROBLEMATICS OF PRICE DISCRIMINATION

DANIEL A. CRANE*

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I. Introduction

The social welfare problematics of patent pooling by competitors are well known. Competitor patent pooling has the potential to create powerful efficiencies by eliminating holdout problems and blocking positions and reducing transactions costs from licensing negotiations.¹ At the same time, competitors can use patent pools to cartelize in a variety of ways, for example by fixing prices, entrenching patents of

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¹ See Robert P. Merges, *Institutions for Intellectual Property Transactions: The Case of Patent Pools*, in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY 123–66 (Rochelle Dreyfuss, Diane L. Zimmerman & Harry First eds., 2001); Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, in 1 INNOVATION POLICY AND THE ECONOMY (Adam B. Jaffe, Josh Lerner & Scott Stern eds., 2001).

dubious validity, and discouraging rivalry for innovation.² Determining legal norms capable of capturing the efficiencies without enabling cartels has not proven easy.

Perhaps because of the practical difficulty of separating pro-competitive from anticompetitive pools, antitrust scrutiny has swung from extreme to extreme. An early period of antitrust laxity where arguably anticompetitive pools were permitted gave way to a middle period of antitrust strictness where arguably benign pools were prohibited.³ Today, US antitrust law has emerged into a more mature period of cautious tolerance of patent pools bounded by increasingly well-defined antitrust norms.⁴

Just as antitrust is catching up to the problematics of patent pooling in its simplest forms, patent pooling is becoming more complex. In particular, pools are increasingly being used as devices to facilitate the implementation of technological standards specified by standard setting organizations (SSOs). Here, again, are great potential efficiencies and great potential for cartelization. SSOs are valuable tools for solving coordination problems and facilitating interconnectivity. At the same time, the widespread adoption of a standard reading on a particular patent can confer enhanced market power on the patentee. When the standard setters own multiple patents, they may horse-trade specifications to ensure that the standard reads on many of their patents and then pool their patents to offer a single consolidated license to firms wishing to practice the standard. The potential for collusive inflation of the price to practice the standard is obvious. What's worse, the horse-trading necessary to secure approval of the standard may result in suboptimal specifications (think of the effect of legislative horse-trading on the quality of legislation), leading to a high-priced and low-quality end product.

The courts have only begun to address the antitrust problems arising at the intersection of patent pooling and standard-setting. As often happens, however, an informal system of antitrust norms is arising out of the interaction between antitrust counseling of SSO participants and those participants' engagement with the US antitrust enforcement agencies, which have issued several business review letters and more general guidelines, reports, and speeches on patent pools and SSOs. In order to head off antitrust problems, SSO participants have begun voluntarily to

² See generally 2 HERBERT HOVENKAMP, MARK D. JANIS & MARK A. LEMLEY, *IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW* § 34.4a-c (2002 & Supp. 2006).

³ See Richard J. Gilbert, *Antitrust for Patent Pools: A Century of Policy Evolution*, 2004 STAN. TECH. L. REV. 3, 6–12 (2004).

⁴ The US antitrust enforcement agencies issued enforcement guidelines in 1995 and a joint report in 2007 outlining the agencies' views on patent pools. See U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, *ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY* § 5.5 (1995), available at <<http://www.usdoj.gov/atr/public/guidelines/0558.pdf>>; U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, *ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION* (2007), available at <<http://www.ftc.gov/reports/innovation/P040101PromotingInnovationandCompetitionrpt0704.pdf>> (hereinafter 'Promoting Innovation').

adopt *ex ante* antitrust fixes. At the heart of these fixes is a commitment on the part of SSO members to license their patents that are necessary to implement the SSO's standard on reasonable and nondiscriminatory (RAND) norms. In theory, the 'reasonable' in the RAND commitment eliminates the potential for monopoly overcharges⁵ in the royalty rate, and the 'nondiscriminatory' eliminates the possibility that the SSO participants will use their patents to stifle competition downstream.

This chapter considers the sufficiency of these voluntary RAND commitments to minimize the anticompetitive harms that may arise from the use of patent pools to implement standards adopted by SSOs. More specifically, it advances two normative observations about the sufficiency of RAND commitments. First, the 'nondiscriminatory' prong of the RAND commitment 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. Second, the sufficiency of RAND commitments to eliminate competitive harms depends heavily on the institutional and procedural context in which RAND adjudications take place. Among other things, unless strangers to the SSO and pool are accorded third-party beneficiary status to enforce the RAND commitment, the arbitrators or other experts designated to adjudicate RAND disputes are sufficiently independent and subject to some judicial oversight, and the burden of proving the reasonableness and nondiscriminatoriness of the licensing terms is placed on the patentees, the 'fix' may turn out to be illusory.⁶

Part I of this chapter briefly summarizes the legal context from which RAND commitments for SSO-linked patent pools arise. It provides a taxonomy of antitrust fixes (including the RAND commitment) that have been voluntarily adopted by SSOs and illustrates the operation of these fixes with reference to the 6C and 3C DVD patent pools. Part II focuses on the 'nondiscriminatory' prong of the RAND commitment. It argues that this commitment has positive value if considered as an obligation not to foreclose competition downstream, but that it should not be read to prevent other forms of discriminatory pricing. Part III focuses on the institutional context of adjudications over pools' RAND commitments. It argues that liberal contractual third-party beneficiary rules, independent and properly motivated

⁵ Overcharges, in this context, would be prices above whatever supra-competitive price an individual patent could command on its own. It would be inappropriate to require patentees participating in a patent pool to give up whatever market power they had before entering the pool, since that would strongly disincentivize participation in pools.

⁶ In referring to third-party standing and the burden of proof as 'procedural,' I do not mean to make any larger legal-taxonomical statement. For instance, it is well recognized that burdens of proof have a 'substantive' aspect. See *Garrett v. Moore-McCormack Co.*, 317 U.S. 239, 249 (1942) (classifying burdens of proof as 'substantive' for certain purposes of federal court jurisdiction); *Cities Serv. Oil Co. v. Dunlap*, 308 U.S. 208, 210–12 (1939) (same). In referring to burdens of proof as 'procedural,' I merely mean that it is not sufficient to ascertain a substantively correct liability norm without considering the rules that will govern its implementation in the adjudications that will inevitably arise over its application.

arbitrators, and burden shifting to the SSO are necessary conditions for the success of the antitrust fix.

II. SSOs, Patent Pools, and Voluntary Antitrust Remedies

Patent pooling arrangements have been frequently tested under the US antitrust laws, and the Supreme Court has weighed in on a number of occasions.⁷ There is a voluminous, and growing, academic literature on patent pools,⁸ as there is on standard-setting.⁹ However, there is relatively little literature on the unique issues that arise when SSOs employ patent pools to implement the standard.¹⁰ This Part briefly summarizes the key antitrust concerns that arise in simple standard setting, considers how these concerns are affected by the use of patent pools in the SSO context, and discusses the voluntary antitrust ‘fixes’ that a number of SSOs and pools have adopted in order to stave off antitrust liability.

A. Pools without standards

Patent pools undoubtedly have many procompetitive effects. As Carl Shapiro has observed, ‘today, most basic and applied researchers are effectively standing on top of a huge pyramid’ of technologies built—and patented—by others.¹¹ This patent thicket has the tendency to choke off innovation by creating a vast ‘anticommons’¹² in which each patentee has a powerful holdout position against market deployment of the new technology. Transactions costs inhibit individual negotiations of

⁷ The most significant cases are collected in Gilbert, n. 3 above.

⁸ See Gilbert, n. 1 above; Hovenkamp, Janis & Lemley, n. 2 above; Shapiro, n. 1 above; Atsushi Kato, *Patent Pool Enhances Market Competition*, 24 INT’L REV. L. & ECON. 255 (2004); Daniel P. Homiller, *Patent Misuse in Patent Pool Licensing: From National Harrow to the ‘The Nine No-Nos’ to Not Likely*, 2006 DUKE L. & TECH. REV. 7; Frances Marshall, *Patent Pools: Perspectives on Enforcement*, 867 PLI/PAT 367 (2006).

⁹ See Hovenkamp, Janis & Lemley, n. 2 above § 35; Herbert Hovenkamp, *Standards Ownership and Competition Policy*, 48 B.C. L. REV. 87 (2007); Robert A. Skitol, *Concerted Buying Power: Its Potential for Addressing the Patent Holdup Problem in Standard Setting*, 72 ANTITRUST L. J. 727 (2005); Kraig A. Jacobson, *Revising Standard-Setting Organizations’ Patent Policies*, 3 NW. J. TECH. & INTELL. PROP. 43 (2004); Christopher L. Sagers, *Antitrust Immunity and Standard Setting Organizations: A Case Study in the Public-Private Distinction*, 25 CARDOZO L. REV. 1393 (2004); David J. Teece & Edward F. Sherry, *Standards Setting and Antitrust*, 87 MINN. L. REV. 1913 (2003); Daniel J. Gifford, *Developing Models for a Coherent Treatment of Standard-Setting Issues Under the Patent, Copyright, and Antitrust Laws*, 43 IDEA 331 (2003); Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889 (2002).

¹⁰ See, eg, Dorothy Gill Raymond, *Benefits and Risks of Patent Pooling for Standard-Setting Organizations*, 16-SUM ANTITRUST 41 (2002).

¹¹ Shapiro, n. 1 above, at 120.

¹² See Michael Heller, *The Tragedy of the Anticommons: Property in Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998). Merges, n. 1 above, at 126–27, discusses the application of ‘anticommons’ theory to patent pools.

licensing rights, infringement litigation costs stifle and slow the determination of the relevant property rights, and technological progress slows.

Patent pools are a form of intra-industry social contract permitting the emergence from this Hobbesian war of each against all.¹³ The patentees settle their actual or potential infringement disputes, conduct a single round of negotiations over licensing terms, and create a one-stop shop for outside firms wishing to license the technology. Blocking positions are cleared, litigations settled, transactions costs minimized, and output increased. By licensing jointly, the patentees can also eliminate ‘double marginalization’—the successive monopoly mark-ups that arise when multiple monopolists separately price complementary or vertically related products.¹⁴

The primary detraction from this idyllic vision is the possibility that members of the pool will be able to extract more than a competitive royalty rate for their patents by collectively fixing the prices the pool will charge. Commentators have argued that the way to ensure that the patent pool does not become a concealed cartel is to allow the pooling of complementary, but not substitute, patents.¹⁵ Since the pool will only contain patents that do not compete with other patents in the pool, the patentees will have no incentive to agree to supracompetitive royalty rates, and the pool price should not be able to exceed the sum of the prices of the substitutes for each of the patents in the pool, which substitutes will still be available on the open market.

Alas, even the commitment not to pool substitutes is no guarantee that the pool will not price as a cartel. Pool negotiations often involve discussion between patentees with suites of patents, some substitutes and some complements. Suppose that Acme has patents $x1$ and $y1$ and Beta has patents $x2$, which competes with $x1$, and $z1$, which does not compete with any other patent proposed for the pool. Following the assumed antitrust principle of ‘complements only,’ the pool will not be able to include both $x1$ and $x2$, so Acme and Beta will have to agree which one comes in and which one stays out. Since both firms will want their own patent included, they will look for some quid pro quo for agreeing to allow the other’s patent in—perhaps some ‘adjustment’ in the royalty rate of $y1$ or $z1$. Further, the negotiated rate of $x1$ or $x2$ could easily become a benchmark for the extra-pool licensing of whichever patent was not included in the pool. Indeed, even if Acme and Beta negotiate over the royalties of only complementary patents, those

¹³ See THOMAS HOBBS, *LEVIATHAN* 100 (Michael Oakshott ed., 1962) (1651) ([‘D]uring the time men live without a common power to keep them all in awe, they are in that condition which is called war; and such a war, as is of every man, against every man.’).

¹⁴ See AUGUSTIN COURNOT, *RESEARCH INTO THE MATHEMATICAL PRINCIPLES OF THE THEORY OF WEALTH* (Nathaniel T. Bacon trans., 1927) (1838).

¹⁵ See, eg, Shapiro, n. 1 above, at 119 (arguing that a ‘few relatively simple principles, such as the desirability [of] package licensing for *complementary* patents but not for *substitute* patents, can go a long way toward insuring that antitrust will help solve the problems caused by the patent thicket and by holdup rather than exacerbating them’).

conversations may facilitate interdependent pricing by Acme and Beta of their competitive patents.

From an antitrust perspective, then, patent pools are both alluring (because they create obvious efficiencies) and suspicion-inspiring (because they create obvious temptations to collude).

B. Pools with standards

When it comes to patent pooling in the standard-setting context, these temptations to collusion are only compounded. We start with the problem of specifying the standard. In principle, the goal of an SSO should be to specify the 'best' standard, given technological constraints and cost. But the participants in the standard-setting process are not disinterested technocrats. Many of them are patentees and the standard is likely to take a path through a thicket that includes some of their patents. The SSO participants have an obvious interest in steering the standard through their own patents.

One issue of concern is disclosure. A patentee who can quietly steer the standard through his undisclosed patents will later enjoy a powerful holdout (ie, monopoly) position. For this reason, the antitrust enforcement agencies have taken a dim view of SSO participation by firms with undisclosed patents later adopted into the standard,¹⁶ and some SSOs explicitly require participants to disclose their patents upfront.¹⁷

Antitrust disclosure obligations and contractual enforcement by SSOs may guarantee that the royalties and other licensing terms will be bargained for upfront, but this merely replaces the potential for unilateral monopoly holdouts with the potential for cartelization. As the Department of Justice and Federal Trade Commission recognized in their recent report on intellectual property, *ex ante* negotiations over licensing terms create a serious potential for both naked price-fixing (ie, agreeing on downstream prices or using standard-setting as a sham to cover a price-fixing agreement on royalties) and the joint exercise of market power by members of the standard-setting body.¹⁸

In addition, there is a concern that the SSO process could degenerate into horse-trading between patentees, each willing to support gerrymandering in favor of other

¹⁶ The *Rambus* case, which raises such issues, is discussed below. The other major enforcement action involving an undisclosed patent is *In re Dell Computer Corp.*, No. 931-0097, 1995 FTC LEXIS 466, at *10 (F.T.C. Oct. 20, 1995) (consent decree under which Dell agreed not to assert patent rights when disclaiming the existence of such patents during the standard-setting process).

¹⁷ See Lemley, n. 9 above.

¹⁸ Promoting Innovation, n. 4 above, at 50–52. Curiously, the agencies' report refers to the potential for anticompetitive exercise of group market power as one of monopsony—buying power—as though, outside of naked collusion, the primary antitrust concern is that the SSO would artificially suppress the price of patent inputs by collective bargaining with patentees. To me, it seems that the much larger risk is one of group cartelization on the *selling* side, as patentee-participants in the standard setting and patent pooling process horse-trade favors.

patentees in exchange for some gerrymandering in favor of his own patents. For example, suppose that the optimal path for the standard is X-Y-Z, which reads on no patents and employs the best available technology. One can imagine that three patentees, each with one patent (A, B, or C), could agree to support an A-B-C standard. In this scenario, standard-setting collusion is doubly harmful, first because it reads on patents when it shouldn't and second because it employs a technologically inferior path.

One response to this concern is that the SSO stakeholders have a collective interest in implementing a standard that employs the best (cost-adjusted) technology, since that will maximize the stakeholders' collective profits. Under this assumption, the stakeholders may behave collectively like a monopolist—raising prices to the monopoly profit-maximizing point—but will be disinclined to sacrifice the technological quality of the standard.

This observation assumes a number of coordination conditions that may not always hold. If the SSO stakeholders have asymmetric information or opinions about technological quality, interested patentees may be able to gerrymander the standard to read on their patents. Additionally, influential patentees with inferior technology will have to be compensated in some way to abandon efforts at gerrymandering. Explicit side payments are probably impossible for legal reasons and it is not clear that SSOs have other appealing options to induce all stakeholders to agree on the optimal path.

Empirical evidence on the behavior of SSOs suggests that while the SSO process does sometimes result in the choice of optimal technologies, it sometimes descends into horse-trading or—perhaps worse—impasses between competing intellectual property owners. Case studies by a team at the Harvard Business School on the development of mobile Internet standards by the Institute of Electrical and Electronics Engineers (IEEE) and the development of DSL standards reached a number of troubling conclusions about the performance of SSOs.¹⁹ SSOs often have supermajority requirements for approving new technologies, which can lead to lengthy delays in standard-setting as stakeholders fight for preferred positions.²⁰ Rules that open participation in the standard-setting process to any member facilitate packing of the standard-setting committees by corporate interests that want to ensure that their technologies receive preferential treatment.²¹ Finally, '[i]n some cases, the rules of standard-setting bodies may be successfully exploited by firms with a stake in existing or alternative technologies to block the adoption of a new standard . . .'²² Given the difficulty in coordinating the large number of differing interests represented in

¹⁹ See Brian DeLacey et al., *Strategic Behavior in Standard-Setting Organizations* (Harvard Business School Negotiation, Organizations and Markets Unit, Working Paper No. 903214, 2006), available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=903214>.

²⁰ *Ibid.* at 35.

²¹ *Ibid.*

²² *Ibid.*

SSOs, it would not be surprising if technological gerrymandering, resulting in the specification of suboptimal standards, occasionally occurs.

And this is all *before* we come to the further step that an SSO may take to pool the patents necessary to practice the standard. Whatever conversations over licensing terms that were left incomplete during the creation of the standard will now need to be continued, given that the patent poolers have become joint venturers in offering a package license for the standard's essential patents. To the extent there is uncertainty over what patents are necessary to practice the standard, the pooling process will allow the interested parties to resolve those issues as well. And the pool creates a commonality of interest among the patentees in enforcing their now interdependent intellectual property rights. It is easy for the pool to become the unifying force of the interests behind the standard-setting process—homogenizing terms, negotiating with third parties, and policing cheating on any implicit terms of the deal.

Even the ordinary antitrust principle that patent pools should include only complements and not substitutes loses traction when applied to patent pools formed to implement standards. In the simple patent pool case, demand for the patents is exogenous to the patent pool, so it is sensible to talk about what patents are complements or substitutes from the perspective of licensees. In the SSO context, however, the patentees themselves decide what patents are imbedded in the standard, thus creating the demand for the patents in the pool. The patentees can make complements of two patents that otherwise would have been unrelated by drawing the standard to include both technologies. Hence, some of the antitrust principles that apply to patent pools unconnected to SSOs require modification when applied to patent pools formed to implement standards.

C. A taxonomy of voluntary remedies

Antitrust lawyers are good at devising *ex ante* antitrust fixes—commitments to behave pro-competitively. Given the powerful efficiencies of standard-setting and patent pooling, antitrust lawyers can confidently counsel their clients that the courts and enforcement agencies will be inclined to uphold these arrangements so long as the antitrust fix is as good as it can be, even if it allows some aggregation of market power. In the patent-pooling/standard-setting context, 'antitrust state of the art' is probably good enough.

The basic antitrust fixes are typically a series of commitments along the following lines: The pool will consist of only patents essential to practicing the standard, which definitionally (although not necessarily practically) excludes the possibility that the pool will contain substitutes. Some 'neutral' method is devised to ascertain what patents are essential and thus belong in the pool. The license granted the pool is nonexclusive—each patentee can continue to license all of its patents on whatever terms it chooses outside the pool. Finally, and perhaps most significantly, the members of the pool commit to licensing on 'reasonable and nondiscriminatory' terms.

DVD technology provides a representative example of a voluntarily adopted antitrust fix to a standard-setting/patent pooling arrangement. In 1995, a number of the leading consumer electronics products manufacturers and video content creators founded the DVD Forum to set standards for the recording, production, replication, and use of DVDs and DVD equipment.²³ The participants in the Forum then entered into negotiations about pooling their essential patents to offer package licensing to firms interested in implementing the standard. When the patentees failed to agree on licensing terms, they split into two groups which became known as the 6C²⁴ and 3C pools.

In 1998 and 1999, both pools received business review letters²⁵ from the Department of Justice tentatively clearing the pooling arrangements.²⁶ The essential features of the two pools were similar and tracked the taxonomy of voluntary remedies described above. The two pools differed somewhat in the way they allocated royalties to the patentee—the 3C pool did so on a negotiated basis that was not contingent on the number of patents committed to the pool whereas the 6C pool did so on a per-patent basis with some adjustments for the age of the patent.

Initially, both pools also contained similar mechanisms for ascertaining which patents were essential to practicing the standard—the licensors retained independent patent experts to make the decision. A recent modification of the terms of the 6C pool adds a further interesting twist to the essentiality question. Under the original form licensing agreement addressed in the Justice Department's business review letter Toshiba (on behalf of the pool) licensed all the essential patents owned by the pool. The independent expert then created a list of the pooled patents that, in his or her judgment, were essential to practicing the standard. In effect, the pool then offered licensees a predetermined set of patents, albeit predetermined by someone without a financial interest in forcing the licensees to take nonessential patents.

As of January 1, 2005, the 6C pool adopted a new form of licensing agreement. The new agreement retains the core essentiality concept that theoretically prevents the pool from including competitive patents in the pool (and, therefore, price fixing):

The license conferred pursuant to Article 2.1 extends only to the structure, features and functions of a DVD Product used to practice those DVD Standard Specifications applicable to

²³ The history of the DVD Forum is recounted in *Matsushita Elec. Indus. Co. v. Cinram Int'l, Inc.*, 299 F. Supp. 2d 370, 373–74 (D. Del. 2004).

²⁴ The '6C' designation reflects the fact that there were six original members of the pool—two Mitsubishi companies, Hitachi, Toshiba, JVC, and AOL-Time Warner—although IBM later joined as well. See 299 F. Supp. 2d at 374 n.2.

²⁵ See 28 C.F.R. § 50.6 for the Department's business review letter procedures.

²⁶ See Business Review Letter from Joel I. Klein, Assistant Att'y Gen., U.S. Dep't of Justice, to Garrard R. Beeney, Esq. (Dec. 16, 1998), available at <<http://www.usdoj.gov/atr/public/busreview/2121.pdf>> [hereinafter 3C Business Review Letter], for the 3C pool, and Business Review Letter from Joel I. Klein, Assistant Att'y Gen., U.S. Dep't of Justice, to Carey R. Ramos, Esq. (Jun. 10, 1999), available at <<http://www.usdoj.gov/atr/public/busreview/2485.pdf>> [hereinafter 6C Business Review Letter], for the 6C pool.

that DVD Product, and for which the DVD patents are Essential, and said license does not extend to any structure, features or functions of a DVD Product not used to practice those DVD Standard Specifications.²⁷

The license agreement then defines 'Essential' as patents that would be 'necessarily infringed' in implementing the Standard.²⁸ It does not, however, provide a list of what patents are 'Essential.' Although the pool still has an independent expert create a list of patents, which in his or her judgment are essential, and the list is made publicly available, the license itself does not invoke the expert's list as the contractually licensed patents. In other words, the licensees are never formally licensed anything other than those 'essential' patents within the pool without patent-by-patent identification of what patents are included.

This formulation of the licensing agreement ingeniously solves the potential problem that the pool could be accused of engaging in illegal tying. Under US anti-trust law, a claim of illegal tying requires showing that the defendant forced the customer to buy two separate products.²⁹ Whether or not two products are separate in the relevant sense depends on whether there is separate demand for the two products.³⁰ Under the 2005 6C licensing agreement, it is technically impossible for a licensee to complain that he has been forced to take two products for which there is separate demand. Since the license only extends to use of the patents for purposes of implementing the standard, there will never be demand for one essential patent but not another. At the same time, a licensee should never be able to argue that the pool is forcing him to take non-essential patents. The answer will be that, if the licensee is right that the patent is non-essential, then it's definitionally not licensed.

While such a formulation of the scope of licensed rights may formally solve the tying problem, it does little to answer deeper questions about the inclusion and pricing of patents in a pool. As noted earlier, the primary problem is not one of tying (and, hence, of 'forcing' the licensee to take an undesired patent), but of collusion. Mechanisms that permit a licensee to challenge the inclusion of certain patents in the pool generally have no effect on the price of the package licenses offered by the pool. Under the old 6C pool, for example, even if a licensee prevailed in arguing that a patent was non-essential and therefore should not be included in the rights licensed, there would be no change in the royalty charged by the pool for the package of licenses, which was set contractually at a flat rate between the pool members.³¹ Under the new formulation, it is also not clear why a licensee would ever have an incentive to argue that a particular patent was not included in the pool, since

²⁷ DVD 6C Multiformat License V3.0 ¶ 2.1.2, in use beginning Jan. 1, 2005 (on file with author).

²⁸ *Ibid.* Exhibit 2 ¶ 1.4.

²⁹ See, eg, *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 20–21 (1984).

³⁰ *Ibid.*

³¹ See 6C Business Review Letter, n. 26 above, at 6 (specifying a royalty rate of \$0.075 per DVD disc and 4% of the net sale price of DVD players and DVD decoders, with a minimum of \$4.00 per player or decoder, regardless of the number of patents included in the pool).

the royalty rate would not change.³² Similarly, in the *Philips* compact disc patent misuse litigation, the Federal Circuit rejected a patent-misuse-by-tying claim, observing that the price for the package of patents would not be any less if non-essential patents were removed from the package.³³

The price of a package of license royalties is not merely the sum of the individual market values of the included patents. The patent-by-patent focus of the assumed ‘essentiality’ requirement is somewhat misguided in the SSO context. Patentees participating in an SSO usually do not think in terms of the value of any particular patent but about suites of patents corresponding to particular technological implementations. The important question in analyzing patent pools adjacent to SSOs is whether the royalties the pool charges to practice the standard reflect the reasonable *ex ante* value of technology suites offered to implement the standard or, instead, whether the pool members have collusively inflated the price. And that question brings us to the sufficiency of RAND commitments to police collusive royalty inflation *ex post*.

III. Why Nondiscrimination Obligations?

It is not difficult to understand why promising to license on ‘reasonable’³⁴ terms is an important commitment for SSO members pooling their patents.³⁵ If the antitrust problem is the market power that arises from specifying standards and then jointly pricing the inputs necessary to practicing the standard, then agreeing not to exercise that market power by charging supracompetitive prices (over and above what any of the patents could have commanded in the market before it was placed in the standard and pooled with other patents) is a critical remedy.

The exact structure of RAND commitments will vary by context, but the essential principle is that the patentee’s reasonable pricing commitment must run all the way from the pre-standardization moment—when the choice of technologies is still open—until the moment an end user accepts a license to implement the standard. Conceptually, this could occur through a single set of SSO rules or through a succession of RAND commitments by patentees along the way. For example, during the course of the standard-setting negotiations, members of the SSO might commit

³² It is possible that a firm with a patent competitive to one in the pool might wish to assert that a particular patent was not included the pool, since this would force any pool licensee to seek a license from either the pool member or the competitor firm.

³³ See *U.S. Philips Corp. v. Int’l Trade Comm’n*, 424 F.3d 1179, 1189 (Fed. Cir. 2005) (‘There is no evidence that GigaStorage had any basis for its expectation that a smaller patent package might result in a lower royalty rate.’).

³⁴ Some pools commit to licensing on ‘fair and reasonable’ terms, although ‘fair’ seems to add nothing to ‘reasonable.’

³⁵ However, whether such commitments can be effectively enforced by arbitrators or courts is another matter. See discussion below in Part III.

to one another that if their individual patent technologies are selected, they will charge only a reasonable royalty to any licensee seeking to implement the standard. If the SSO then creates a patent pool in order to minimize transactions costs in licensing, then the patentees might make an additional commitment to license to the pool on RAND terms and the pool itself would then assume an obligation to license to third parties on RAND terms.

So much for the reasonable pricing commitment. But why the commitment to not price discriminate? The answer depends in large part on how broad the nondiscrimination commitment is. At a minimum, the commitment should be understood as an assurance that the pool will not use discriminatory licensing to extend the patentees' power downstream from the patents to the standardized product. But should the commitment be read more broadly as a sort of common carrier obligation to license to all comers on uniform and nondiscriminatory terms, regardless of the competitive impact of charging differential rates based on the demand elasticities of the licensees? That question requires entry into a thicket of contested views on the welfare effects of imperfect price discrimination by firms with market power.

A. Discrimination with competitive injury

In late 2004, Wuxi Multimedia and Orient Power, two related Hong Kongese and Chinese manufacturers of DVD players, brought an antitrust case against the members of the 3C DVD patent pool.³⁶ Among other things, Wuxi and Orient claimed that the 3C pool members engaged in price discrimination against licensees who would compete with the 3C members in the manufacture of DVD players. In particular, Wuxi and Orient argued that the 3C pool discriminated by charging a royalty rate based on a percentage of the licensees' revenues and by waiving the license fee for the manufacturing arms of the 3C pool's own members, and that this price discrimination enabled the 3C members to obtain market power in the downstream DVD player market.³⁷

Although the district court dismissed Wuxi and Orient's claim,³⁸ it is possible that patent pools use this kind of anticompetitive price discrimination to enhance their market power downstream. Perhaps the patentees could collectively agree to license on terms that disadvantaged their competitors downstream, thus allowing the pool members to exploit the market power they created by steering the standard toward their own patents and then agreeing among themselves on the royalties that others would have to pay to license their patents. In a moment, I shall consider how a court could go about determining whether anticompetitive price discrimination

³⁶ See *Wuxi Multimedia, Ltd. v. Koninklijke Philips Electronics, N.V.*, 2006 U.S. Dist. LEXIS 9160 (S.D. Cal. 2006).

³⁷ *Ibid.*

³⁸ *Ibid.*

has occurred. But first, a word about whether allegations of such anticompetitive price discrimination are even plausible.

1. Does the pool have bad incentives?

Would it advantage the patent pool members to control not only the market for the essential patented inputs into the standardized product but also the product itself? The obvious answer might seem to be yes—two monopolies are better than one—but that conclusion does not always follow. The now-familiar ‘one monopoly’ argument calls into question the incentive of a firm to leverage its monopoly power in one market into a second, complementary or vertically related market.³⁹ Perhaps the dominant firm cannot expand its profits by obtaining a second monopoly in the downstream or complementary market, since the price increase in the second market will lead to a decrease in the demand for the monopoly product. Thus, for example, if the patent pool is already charging the monopoly price for the package of patents, if it also monopolizes the DVD market and charges a monopoly price there also, it is possible that it will diminish the demand for its patents and, consequently, experience no net increase in profits from the monopolization of the DVD market. In this view, the patentees should be happy to extract the full monopoly profit from licensing the patents themselves and then license to whatever firms can produce the standardized product most efficiently (ie, at the lowest possible cost), thus increasing the use of the patents and the royalties to the pool.

Although the ‘one monopoly’ argument has merit in some contexts, it is not a persuasive reason to think that patentees participating in an SSO-linked patent pool will not try to use price discrimination to extend their monopoly power downstream. The patents licensed by a pool are often a relatively small portion of the incremental cost of producing the standardized product. In the Wuxi and Orient situation, the 3C DVD royalty rate was 3.5% of the net selling price of each DVD player with a minimum of \$5 per unit.⁴⁰ If the 3C pool were able to employ discriminatory royalty licensing to gain a competitive advantage in the sale of DVD players, it could potentially obtain monopoly profits from a far larger (by revenue) market than the patent-input market.

Further, the ‘one monopoly’ argument assumes that the patentee is able to charge the full monopoly price in the upstream (here, the patent) market. But that may not be so in the patent pooling context. Because of price-fixing concerns about patent pools and the ‘reasonable pricing’ commitment such concerns force the pool to make, the ordinary assumption may be inapplicable. Members of the patent pool

³⁹ See, eg, 3A PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 756b2, at 13 (2d ed. 2002); ROBERT H. BORK, *THE ANTITRUST PARADOX* 229, 239 (1978); Aaron Director & Edward Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281 (1956); Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 YALE L.J. 19, 20–21 (1957).

⁴⁰ See 3C Business Review Letter, n. 26 above, at 6. The per-unit minimum was originally \$7, but dropped to \$5 as of January 1, 2000.

may be reluctant, for antitrust reasons, directly to exercise their newfound market power by charging monopoly royalty rates. Instead, patent pools may be analogous to rate-regulated industries that cannot obtain monopoly profits in a primary market because of regulatory constraints and therefore use strategic practices (such as tying) to obtain monopoly power in an adjacent, unregulated market.⁴¹ Given these assumptions, anticompetitive price discrimination by the pool is quite plausible.

2. *How to identify anticompetitive price discrimination*

One might think it would be easy to determine whether the patent pool has engaged in price discrimination against competitors in the manufacture of the standardized production, but it is not. The difficulty arises because the patent pool often does not formally charge its members a royalty for using the patent. This does not mean, however, that the patentees are using the patents cost free. They incurred substantial costs to develop the patents, which outside licensees did not. The pool members simply are not engaging in the sort of transaction accounting that makes it easy to compare the royalty rate charged by the pool to third-party licensees and the cost that they effectively ‘charge’ themselves.

Responding to this difficulty, Daniel Swanson and Will Baumol propose a test to determine whether a patent pool has engaged in anticompetitive price discrimination.⁴² Swanson and Baumol propose that courts follow the ‘efficient component pricing rule’ or ‘parity principle’ in determining whether the pool has engaged in anticompetitive price discrimination.⁴³ To determine whether the pool has charged a discriminatory royalty rate to outsiders, a court must ascertain the price that the pool charges itself. That price ‘equals the price the firm charges customers for a final product using that IP, minus the incremental cost to the IP-holding firm of all other inputs, including capital, used to produce the final product.’⁴⁴ To illustrate, in order to make out a claim of discriminatory pricing against the 3C pool members, Wuxi and Orient would have to show that the price that the 3C pool members charged customers for their DVD players minus the incremental costs of producing the DVD player was less than the royalty the pool offered to Wuxi and Orient.⁴⁵

⁴¹ See Thomas G. Krattenmaker & Steven C. Salop, *Analyzing Anticompetitive Exclusion*, 56 ANTITRUST L.J. 71, 85 (1987).

⁴² Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1 (2005).

⁴³ *Ibid.* at 29.

⁴⁴ *Ibid.* at 30.

⁴⁵ This sort of theory is similar to a ‘price squeeze’ claim, which the Supreme Court rejected as a basis for liability in *Pac. Bell Tel. Co. v. LinkLine Communications, Inc.*, 129 S.Ct. 1109 (2009). The *LinkLine* decision does not pre-empt an interpretation of RAND commitments that would disallow price squeezes by patentees participating in SSOs. Key to the *LinkLine* decision was a baseline principle that monopolists who acquire market power lawfully are free to charge whatever prices they want: 129 S.Ct. at 1122. However, a RAND commitment is by definition an obligation *not* to exploit monopoly power acquired through the SSO process by charging an excessive price. Hence, in the SSO or patent pool context, the baseline principle is completely different than in the general antitrust case.

While this test sounds conceptually correct, it is easier articulated than applied. Figuring out the incremental cost of producing a widget is a notoriously difficult undertaking in an adjudicatory context.⁴⁶ It is particularly difficult in the high technology context, given that many of the inputs into the final product will be other patents (patents that are not essential to practicing the standard, of course). If the inputs to the final product are both essential and nonessential patents—both of which the patentee does not ‘charge’ itself for in a formal accounting sense—it may be possible to determine the price the patentee charges itself for all patents but next to impossible to determine the implied internal cost of just the patents licensed by the pool.⁴⁷

There is a further difficulty. Swanson and Baumol have in mind a situation where a single patentee licenses competitors its patents. In that case, it is theoretically possible to determine the fee the firm is implicitly charging itself. Similarly, if all members are charging themselves a lower implied rate than the pool’s royalty rate to third party licensees, then ‘the pool’ is price discriminating in a potentially anti-competitive manner. But what if the pool has many members who charge themselves different implied rates as determined by Swanson and Baumol’s parity principle? What if some charge less and others more than the third party royalty rate? In that case, there is no principled basis for saying that ‘the pool’ is price discriminating since the pool is not making a collective decision as to the price of each member’s finished product. Nonetheless, such differentiated downstream pricing could have exclusionary effects on non-member rivals.

The practical difficulties of showing price discrimination in the patent pooling context are not insurmountable. As discussed in Part III, one way to alleviate competitive concerns in these sorts of cases is to place the burden of justifying the royalty on the licensor, which incentivizes the pool participants to devise transparent and objectively justifiable licensing structures. For now, it is sufficient to observe that discriminatory pricing in a way that produces downstream market power is a serious concern—indeed, the paradigmatic concern motivating the ‘nondiscriminatory’ prong of the RAND commitment.

⁴⁶ A good example of this is the fact that Baumol devoted an entire article to exploring the economic meaning of the Areeda-Turner average variable cost test after courts had been struggling to apply it for more than 20 years. William J. Baumol, *Predation and the Logic of the Average Variable Cost Test*, 39 J.L. & ECON. 39 (1996) (interpreting the test proposed in Phillip Areeda & Donald Turner, *Predatory Pricing and Related Practices under Section 2 of the Sherman Act*, 88 HARV. L. REV. 637 (1975)). On the difficulty of undertaking cost-revenue comparisons in litigation, see generally Daniel A. Crane, *The Paradox of Predatory Pricing*, 91 CORNELL L. REV. 1, 43–44 (2005).

⁴⁷ Requiring the patent pool to charge its members a royalty for use of the pool’s patents would do nothing to alleviate this problem. So long as the pool proceeds are properly allocated among the pool members, the pool members should be indifferent to the rate charged, since (putting aside administrative costs) they would withdraw from the pool as profits every dollar paid into the pool as a royalty. Formal intra-pool accounting will not account for the economic cost of the patents when incorporated into the pool members’ end products.

B. Discrimination without competitive injury

Baumol and Swanson's efficient component pricing rule is not intended to eliminate all price discrimination, but only that which could cause competitive injury downstream.⁴⁸ If the pool is licensing patents for use in products that the pool members do not make and that do not compete with products that the pool members make, there is no possibility of competitive injury in the sense that Baumol and Swanson contemplate. But should competitive injury be a necessary condition for a discriminatory licensing term to violate a RAND commitment? Answering this question requires examining the contested issue of whether non-exclusionary price discrimination—price discrimination that does not have the effect of enhancing market power—generally has positive, negative, neutral, or indeterminate social welfare effects.

There was a time when antitrust scholars associated with the 'Chicago School' of law and economics made the broad assertion that price discrimination is welfare enhancing and, accordingly, should not be discouraged.⁴⁹ The simple logic of this proposition was that a monopolist that priced at each customer's reservation price would make a sale to every customer willing to pay at or above the good's marginal cost of production. Hence, price discrimination would expand output to the fullest possible degree.

If this view of price discrimination were correct, and assuming that the goal of antitrust policy is to maximize total social welfare,⁵⁰ then it would be wrong to read a RAND commitment as forbidding anything other than anticompetitive price discrimination leading to downstream market power. Other forms of price discrimination, such as charging different royalty rates to different downstream producers based on the price elasticity of the consumers of the final products, should be permitted on the view that such price discrimination would tend to increase output.⁵¹ Such price discrimination may even benefit all consumers (and not only those with elastic demand) if the price discrimination causes an expansion of output that allows the producer to reach new economies of scale.⁵²

⁴⁸ Swanson & Baumol, n. 42 above, at 23–26 (noting that price discrimination can be socially beneficial, particularly when it follows the Ramsey formula, and noting that the authors 'would not expect that "reasonable" royalties would invariably be uniform and identical across all fields of use, territories, and customers').

⁴⁹ See, eg, Bork, n. 38 above, at 396–98. To be fair, the Chicago School never described price discrimination as an unqualified good. See eg, RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 127–28 (1st ed. 1972) (describing welfare consequences of imperfect price discrimination as indeterminate or potentially negative).

⁵⁰ This is an important caveat in the price discrimination context, since perfect price discrimination expands output but also produces substantial wealth transfers from consumers to producers.

⁵¹ See Benjamin Klein & John Shepard Wiley, Jr., *Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal*, 70 *ANTITRUST L.J.* 599 (2003).

⁵² See Jerry A. Hausman & Jeffrey K. MacKie-Mason, *Price Discrimination and Patent Policy*, 19 *RAND J. ECON.* 253 (1988).

Alas, the story is never so simple. The Chicago School's embrace of price discrimination is coming under increasing criticism by scholars who claim that even non-exclusionary uses of price discrimination by firms with dominant intellectual property rights can be socially harmful. For example, two recent amicus curiae briefs by prominent economists and law professors warned the Supreme Court that tie-in contracts used as metering devices to facilitate price discrimination were likely to have negative social welfare effects.⁵³ One brief, in particular, stressed that the negative social welfare result did not depend on the price discrimination resulting in the leverage of market power from a patented product into a complementary market or the defense of the monopoly in the patented product.⁵⁴ Rather, the authors argued flatly that 'there is no reason to believe that price discrimination is efficient,' given that only first-degree or perfect price discrimination is demonstrably welfare enhancing, whereas the price discrimination observed in actual practice is virtually always imperfect and usually welfare reducing.⁵⁵

So to whom should the court listen in determining the meaning of a RAND obligation? Should they read a competitive injury requirement into the RAND undertaking or hold that 'nondiscriminatory' forbids price discrimination—period—as an antidote to the exercise of monopoly power by the pool? As a general proposition, courts should only find that a patent pool has violated a nondiscrimination obligation if it has licensed its patents in a way that is likely to create downstream market power. Although the interpretation of a RAND commitment may be a contractual rather than antitrust exercise (more on this in Part III), courts should not assume that the patent pool would have created an antitrust fix that prohibited even non-anticompetitive price discrimination.

There are simply not enough strong reasons to believe that non-exclusionary price discrimination of the kind likely to be practiced by a patent pool is socially harmful enough to warrant a more expansive reading of the nondiscrimination commitment. Indeed, there are likely to be relatively few opportunities for the pool to engage in non-exclusionary price discrimination. One of the most common ways that a patentee could engage in price discrimination is by engaging in mixed bundling—offering to license a package of licenses at a lower collective rate than the sum of the royalties charged for the patents individually.⁵⁶ Mixed bundling can

⁵³ See Brief Amicus Curiae of F.M. Scherer in Support of Respondent, 2005 WL 2427642 (Sept. 28, 2005), and Brief of Barry Nalebuff, Ian Ayres & Lawrence Sullivan as Amici Curiae in Support of Respondent, 2005 WL 2427646 (Sept. 28, 2005), *Illinois Tool Works, Inc. v. Independent Ink, Inc.*, 547 U.S. 28 (2006).

⁵⁴ See Brief of Barry Nalebuff, n. 53 above, at 12–13 (noting that it was unlikely that the tie-contract would lead to monopolization but nonetheless warning that the price discrimination itself would be socially costly).

⁵⁵ See Brief of Barry Nalebuff, n. 53 above, at 19–20.

⁵⁶ See Hal Varian, *Price Discrimination*, in I HANDBOOK OF INDUSTRIAL ORGANIZATION 626 (Richard Schmalensee & Robert Willig, eds. 1989); William James Adams & Janet L. Yellen, *Commodity Bundling and the Burden of Monopoly*, 90 Q.J. ECON. 475, 476 (1976); R. Preston McAfee, John McMillan & Michael D. Whinston, *Multiproduct Monopoly, Commodity Bundling, and the Correlation*

only occur, however, when two or more goods are packaged together.⁵⁷ When patents that are essential to practicing a standard are packaged together and licensed only for use in practicing the standard, there is no real sense in which the licensed patents are separate products. They are a single necessary input to producing a downstream product and can only be used for that purpose. Thus, the package licensing of pooled patents in the SSO context is unlikely to serve the ordinary price discrimination function of mixed bundling.

When a pool does seek to engage in price discrimination, it will generally be third-degree price discrimination⁵⁸—charging different royalty rates to different classes of licensees based on the kind of standardized product the licensee intends to make. The pool may follow such a strategy to promote the sale of particular applications of the standardized technology that may increase demand for other applications and hence, in the long run, maximize the value of the patents imbedded in the standard. For example, suppose that an SSO created a specification for patent-razorblade interconnections that read on several patents that were then pooled and licensed to both razorblade and razor manufacturers. In order to follow the proverbial path of giving away the razor to sell the razorblade, the pool might decide to license the patents to razor manufacturers for virtually nothing and charge a much higher rate to the razorblade manufacturers. Such offering of differential licensing terms would be ‘discriminatory’ in a lay sense, but is at least as likely to be welfare enhancing as welfare reducing and therefore should not be construed to violate the RAND commitment.

The legal treatment of price discrimination is at a crossroads in the United States. Even as post-Chicago School scholars are pushing back on the Chicago School’s undifferentiated embrace of price discrimination, other forces are working to abolish the remaining legal norms that create liability for non-exclusionary price discrimination.⁵⁹ Until there is a clear consensus on the welfare effects of non-exclusionary price discrimination in the patent pooling context, the tie-breaker should go to non-liability if for no other reason than that litigation is expensive and courts are well advised to follow the venerable principle ‘first, do no harm.’

of Values, 104 Q.J. ECON. 371, 371 (1989); Richard Schmalensee, *Gaussian Demand and Commodity Bundling*, 57 J. BUS. S211, S211 (1984).

⁵⁷ See Varian, n. 56 above, at 626.

⁵⁸ See ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 387–88 (6th ed. 2005).

⁵⁹ Two recent occurrences are of particular importance. In *Volvo Trucks N. Am., Inc. v. Reeder-Simco GMC, Inc.*, 126 S.Ct. 860 (2006), the Supreme Court appeared to read a competitive injury requirement into the Robinson-Patman Act, asserting that it ‘would resist interpretation [of the Robinson-Patman Act] geared more to the protection of existing competitors than to the stimulation of competition.’ *Ibid.* at 872. Then, the Congressionally appointed Antitrust Modernization Commission recommended repeal of the entire Robinson-Patman Act, the US statute that prohibits certain forms of price discrimination. Report and Recommendation of Antitrust Modernization Commission (April 2007), available at <http://www.amc.gov/commission_documents.htm>.

IV. The Institutional Context of RAND Adjudication

In 2007, the Department of Justice and Federal Trade Commission released a report on antitrust enforcement and intellectual property rights. In this Report the Agencies indicated that a number of experts who testified at the Agencies' hearings felt that RAND commitments were close to useless as remedies for the abuses that may arise from SSOs.⁶⁰ That assessment, if accurate, is sobering given that most of the other voluntary antitrust commitments made by patent pools (such as the essentiality commitment) have little power to solve the relevant antitrust concerns.

Much of the skepticism appears to be that 'reasonable and nondiscriminatory' are empty concepts.⁶¹ That's true enough as a hermeneutic statement—what's abstractly 'reasonable' is surely in the eye of beholder⁶²—but it would be a mistake to pre-emptively doom RAND commitments to failure based on the vacuousness of the word 'reasonable.' Every litigator knows that the words of a contract, statute, regulation or other writing matter far less than the choice of adjudicatory body and its institutional rules. Common law courts in the Anglo-American system *will* give the words concrete meaning over time,⁶³ just as the courts have poured meaning into the reasonable pricing commitments of the ASCAP and BMI consent decrees.⁶⁴ The important question is how the rules of the adjudicatory process will shape the words' meaning. RAND commitments are only as robust as the institutional structures and procedures that police them. In this final section, I advance three procedural constructs that, if read into RAND commitments, could increase the chances that RAND commitments will be viable antitrust remedies.

A. RAND commitment as contract

Who will enforce the RAND commitments? Obviously, the parties to a patent pool themselves, and probably other participants in an SSO to which the pool is adjacent,

⁶⁰ Promoting Innovation, n. 4 above, at 46–47.

⁶¹ *Ibid.* at 47 and n. 74 below.

⁶² Conveniently, 'nondiscriminatory' is defined in Part II.

⁶³ Skepticism about the success of RAND commitments seems premature given that courts have done almost no work in this area. A search of the Westlaw database reveals only 14 cases that even mention the words 'reasonable and nondiscriminatory' and 'patent' in the same paragraph, and very few of these engage in any effort to give content to a RAND commitment.

⁶⁴ Despite a general view that courts do not make good rate regulators, courts do frequently involve themselves in deciding whether prices or fees are reasonable. For example, the US Supreme Court has just granted certiorari to resolve a circuit split over whether the Investment Company Act, 15 U.S.C. § 80a-1 et seq., limits mutual fund advisers to a fee bearing a 'reasonable relationship' to the services provided. *Jones v. Harris Assoc. L.P.*, 537 F.3d 728 (7th Cir. 2008), *cert. granted*, 129 S.Ct. 1579. Interestingly, in the Seventh Circuit, the two leading 'Chicago School' jurists took opposite positions on this question. Judge Easterbrook held that no such reasonable fee obligation exists, whereas Judge Posner believed that it might. Cf. *Jones v. Harris Assoc. L.P.*, 527 F.3d 627 (2008) (Easterbrook, J.), with *Jones*, 537 F.3d 728 (2008) (Posner, J., dissenting from denial of rehearing *en banc*).

have enforcement rights as parties to the network of contracts embodying the pool and SSO. But RAND commitments without a right of legal enforcement by strangers—Wuxi and Orient in our earlier example—are a weak obstacle to patent pool cartelization or monopolistic exclusion of potential rivals. Unless the government assumes a vigorous monitoring and enforcement role, effective enforcement of RAND obligations requires that all persons seeking a license be treated as third party beneficiaries of the RAND commitment.⁶⁵ In this regime, enforcement of the RAND obligation occurs as a matter of contract by any affected party.

Conceiving of the RAND commitment as an enforceable contract greatly simplifies third party challenges to the pool's proposed licensing terms. Absent third party beneficiary status, potential licensees would need to prove a complex antitrust case—ie, define a relevant market, show market power, prove anticompetitive effects, etc. This is what the FTC effectively did in *In re: Negotiated Data Solutions, Inc.*,⁶⁶ which resulted in a January, 2008 consent decree. The FTC alleged that N-Data reneged on a prior licensing agreement to an SSO and thereby was able to raise the royalty on its patents for Ethernet technology. In 1994, N-Data's predecessor in interest, National Semiconductor, committed to the Institute of Electrical and Electronics Engineers that, if the National's NWay technology were chosen for the standard, National would license NWay to any requesting party for a one-time license fee of \$1,000. In 2002, after NWay had become irrevocably locked into the standard in the wake of the dot com bust, a successor to National attempted to renege on the 1994 agreement and sought millions of dollars of licensing royalties. Both the three-member FTC majority and the two dissenting commissioners treated this as an issue of antitrust law rather than of contract, which perhaps created greater complexities than needed. Treating the patentees' RAND commitment as an enforceable promise to simplify future adjudications over the lawfulness of challenged licensing terms, by dispensing with antitrust complexities and allowing the tribunal to focus on the fairness of the proffered terms, would cut through antitrust's Gordian knot.

To be sure, even a contractual dispute over the meaning of a RAND commitment will need to invoke some antitrust principles as background to understanding the words of the contract. For example, I suggested earlier that the word 'nondiscriminatory' should be read to mean 'nondiscriminatory as against downstream rivals of the patent pool members,' effectively importing a competitive injury requirement into discrimination adjudications. Requiring the licensee to prove a full case of competitive injury in an antitrust sense, however, would require many of the complexities that the RAND commitment should avoid—defining the downstream market, proving the existence of entry barriers, etc. Courts could alleviate these

⁶⁵ See RESTATEMENT (SECOND) OF CONTRACTS § 302 (1981). To be a third-party beneficiary, the third party must be a creditor or intended donee of the promisor.

⁶⁶ FTC File No. 0510094 (Jan. 23, 2008), available at <<http://www.ftc.gov/opa/2008/01/ethernet.shtm>>.

complexities by reading the competitive injury requirement into the RAND commitment to the extent of requiring the licensee to show that it was the downstream competitor of the patent pool and was offered discriminatory licensing terms, but requiring nothing more than that showing to make out a violation of the RAND obligation. In that sense, the contractual adjudication would borrow from antitrust law to the extent necessary to construe the meaning of the patentee's promissory undertaking but not require proof of a full antitrust case.

B. Inversion of burden of proof

Much of the skepticism over the effectiveness of RAND obligations has to do with the difficulty of proving what a 'reasonable' royalty rate is. In principle, a royalty for a pool license will be reasonable if it is no greater than the *ex ante* market value of the sum of the patents included in the pool.⁶⁷ But how is the licensee supposed to prove that *ex ante* market value? Once the standard has been set and the patents pooled, the proverbial horse is out of the barn and recovering the *ex ante* world may be very difficult. Further, to the extent that the patent pool is working with new technologies and previously blocking patents, there may be no *ex ante* world on which to draw in proving the reasonable rate.

To see the difficulty, consider the Federal Trade Commission's recent enforcement action against Rambus. In 2006, the Commission found that Rambus monopolized the market for four technologies incorporated into a standard adopted by the Joint Electron Device Engineering Council (JEDEC) by failing to disclose the existence of certain patents or patent applications.⁶⁸ Once the standard was adopted, Rambus had a powerful holdout position with respect to its previously undisclosed patents. Having found Rambus liable, the Commission was then faced with the difficult matter of specifying a future-oriented remedy that would prevent Rambus from charging a higher royalty rate than it could have negotiated if it has disclosed its patents during the standard-setting process. Understandably, the Commission found that '[t]here [was] no direct evidence as to what royalty rate would have resulted from *ex ante* SDRAM negotiations among the parties had Rambus not engaged in the unlawful conduct.'⁶⁹ So the Commission considered the range of royalties that Rambus might have been able to negotiate in the but-for world and entered an injunction prohibiting Rambus from charging a royalty rate higher than prescribed rates at the lower end of the assumed range.⁷⁰ This effectively forced

⁶⁷ That is to say, *ex ante* the adoption of the standard and the formation of the pool.

⁶⁸ Rambus, Inc., Docket No. 9302 (Fed. Trade Comm'n Aug. 2, 2006), available at <<http://www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf>>.

⁶⁹ Rambus, Inc., Docket No. 9302 (Fed. Trade Comm'n Feb. 5, 2007) (final order), at 17, available at <<http://www.ftc.gov/os/adjpro/d9302/070205opinion.pdf>>.

⁷⁰ *Ibid.* at 22.

Rambus to internalize the costs of the uncertainty that it created by failing to disclose the patents.⁷¹

This is a common and sensible fix. The party who created the uncertainty should bear the burden of proving the hard-to-prove fact. In Rambus's case, there is a somewhat punitive aspect to this rule—other SSO participants will be deterred from failing to disclose essential patents by the knowledge that this could prevent them from charging anything more than the lowest number in the range of royalties that could plausibly result from an *ex ante* auction. In the case of SSOs and patent pools, the justification for placing the burden of proof on the pool is not punitive but practical. The pool will be in a better position to justify the licensing terms it offers than the licensees will be to attack them. Such an inversion of the burden of proof should also incentivize the pool to document its royalty decisions and create a sufficient record for future evaluation during the formation of the pool.

Inverting the burden of proof—requiring the licensor to justify the proffered terms rather than requiring the licensee to prove them unreasonable—is actually a familiar remedy in the intellectual property-antitrust intersection context. Under the ASCAP and BMI consent decrees, the licensors bear the burden of proving the reasonableness of the fee requested.⁷² If the licensor and licensee cannot agree on the rate, it is set by a court with doubts construed against the licensor. It is only sensible to require the parties whose conduct creates the uncertainty as to the reasonableness of the licensing terms to bear the burden of sustaining their reasonableness.

C. Meaningful judicial review

The effectiveness of the first two proposed procedural rules depends critically on the integrity of the adjudicatory bodies that decide disputes concerning RAND obligations. Many patent pools that commit to RAND obligations specify that any dispute concerning the RAND commitment will be resolved by some neutral expert.⁷³ In reviewing the DVD patent pools, the Justice Department expressed

⁷¹ The FTC's choice of remedy was never reviewed in court because the United States Court of Appeals for the D.C. Circuit subsequently rejected the FTC's underlying theory of liability and the US Supreme Court denied certiorari, thus mooted the remedy question. See *Rambus, Inc. v. Fed. Trade Comm'n*, 522 F.3d 456 (D.C. Cir. 2008), *cert. denied*, 129 S.Ct. 1318 (2009). The European Commission has issued a Statement of Objections against Rambus concerning the same facts, and the proceedings there are ongoing. See *Antitrust: Commission Confirms Sending a Statement of Objections to Rambus*, EUROPA, Aug. 23, 2007, available at <<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/07/330&form=>>.

⁷² See, eg, *United States v. Broadcast Music, Inc.*, 426 F.3d 91, 95 (2d Cir. 2005).

⁷³ For example, the current 6C license agreement contains an arbitration clause calling for arbitration of claims between licensors and licensees to occur under the auspices of the American Arbitration Association under the International Arbitration Rules of the International Centre for Dispute Resolution. DVD 6C Multiformat License, n. 27 above, at ¶ 6.4. Separately, the agreement calls for any dispute between licensors and licensees as to the determination of RAND terms and conditions 'to be determined by an expert jointly appointed and paid by Licensee and Licensor or the other member of the

deep skepticism that experts retained and paid for by the pool to determine which patents were essential would be truly ‘neutral.’⁷⁴ The same could be said for arbitrators retained by the parties to resolve RAND disputes. Persons with technological expertise in the relevant field—the most likely candidates to be selected as neutral experts or arbitrators—have much to lose by displeasing the dominant patentees in the field, who may be the experts’ most likely source of repeat business. Thus, there is some legitimate concern that even experts or arbitrators selected jointly by the licensor and licensee may tend to err in the direction of the pool.

What is the licensee’s remedy in the event that the neutral expert or arbitrator undertakes a less than robust review of the terms offered by the pool? Very little. The Federal Arbitration Act makes arbitrator decisions final, except in cases of fairly severe misconduct by the arbitrators—evident partiality, exceeding delegated authority, etc.⁷⁵ There is no appeal from an arbitrator’s decision.

Nonetheless, there is one strong check against systematic pro-pool bias by the adjudicatory apparatus established by the pools. Third-party licensees can always bring a direct antitrust suit against the pool or assert an antitrust counterclaim or patent misuse defense in an infringement action brought by the patentee.⁷⁶ Although the US Supreme Court has held that antitrust cases are subject to arbitration,⁷⁷ an arbitration clause would only be binding on members of the patent pool. A potential licensee who is not a member of the pool or the SSO cannot be forced to arbitrate under an arbitration agreement to which it is not a party. This is the flexibility created by third-party beneficiary status. The potential licensee can invoke the contractual mechanisms, taking with it the good (direct RAND suit; no need to prove a full antitrust claim) and the bad (potentially biased arbitration), or else it can simply proceed directly to the antitrust claim.

The shadow of antitrust liability should be a sufficiently strong background condition to keep the pools—and their appointed arbitrators and neutral experts—honest. And, of course, exercise of monopoly power by the pools is always subject to attack by the antitrust enforcement agencies and state attorneys general, which are not subject to restrictive standing rules or arbitration provisions. So long as the judicial corridors remain open for some meaningful review of the licensing terms offered by the pools, RAND commitments have the potential to be effective antitrust remedies.

Group.’ *Ibid.* at ¶ 3.2. This apparently creates a two-stage dispute resolution process with an initial informal mediation by an industry expert and then the possibility of escalation to formal arbitration.

⁷⁴ 3C Business Review Letter, n. 26 above, at 12.

⁷⁵ 9 U.S.C. §§ 1–307.

⁷⁶ Third party licensees have followed both paths. *Cinram*, n. 23 above, was an antitrust counterclaim to a patent infringement action brought by Matsushita Electrical. *Wuxi* and *Orient* were antitrust actions in federal court initiated by the licensees. *Wuxi*, n. 36 above.

⁷⁷ See *Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*, 473 U.S. 614 (1985).

V. Conclusion

Given the importance of the RAND commitment as an antitrust fix to the SSO-patent pooling problem, it is surprising that there has not been more attention given to the meaning of the nondiscrimination prong. If RAND commitments are to be a successful fix, the ‘nondiscrimination’ prong will need to be better understood and articulated. And even a precise and well explained definition of the RAND commitment will be next to worthless unless the institutional apparatus for its implementation is properly structured. SSOs and patent pools offer great promise for technological advancement, but they require a robust set of antitrust remedies to ensure that their benefits trickle down—indeed, pour down—to consumers.