

Princo, Patent Pools, and the Risk of Foreclosure: A Framework for Assessing Misuse

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ABSTRACT: This Note explores various theories of patent misuse as they relate to patent pools. Taking into account varying ideological underpinnings of misuse, this Note proposes a framework for rule of reason analysis of anticompetitive foreclosure of alternative technologies. The framework offers a phased analysis, borrowed from antitrust law, to focus the inquiry on the harms patent misuse seeks to deter in patent-pool licensing practices. The goal of the proposed framework is to increase operational clarity to modern, innovative firms and provide guidance to courts when applying rule of reason analysis to determine whether anticompetitive foreclosure could result from a challenged use of a patent pool.

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I. INTRODUCTION

Following the Bush Administration's enthusiastic pursuit of cartels, the Obama Administration intends to exercise greater scrutiny of alleged anticompetitive conduct and to "updat[e] antitrust for the digital age"¹ while simultaneously pledging to reinvigorate American innovation.² As President Obama recently commented, "There's nothing wrong with other people using our technologies. We just want to make sure that it's licensed and you're getting paid."³ With repeated calls for modernization of patent misuse theory to fit current modes of innovation,⁴ the *Princo* controversy⁵ offered the Federal Circuit an opportunity to demystify the licensing practice of patent pooling and to provide clear boundaries of competitive conduct for innovative, intellectual-property-oriented firms engaged in modern business practices.⁶

The *Princo* controversy centered on patent infringement by former licensees of patents relating to compact disc ("CD") technology. Over the past decade, CD technology pertaining to recording ("CD-R"), rewriting ("CD-RW"), and playback pervaded personal computer, software, and audio-system markets. With industry adoption of a standard occurring early on, consumers benefited because CD-R and CD-RW media (the discs) were interoperable with modern CD hardware (the drives and players). This industry standard, the Orange Book, arose out of intra-industry cooperation between Philips Corporation ("Philips"), Sony Corporation ("Sony"), and others, and it spared consumers the inconvenience and wasted expense of betting on another losing standard—e.g., HD-DVD, Laserdisc, or Betamax.

1. *Return of the Trustbusters*, ECONOMIST, Aug. 29–Sept. 4, 2009, at 53.

2. NAT'L ECON. COUNCIL OFFICE OF SCI. & TECH. POLICY, EXEC. OFFICE OF THE PRESIDENT, A STRATEGY FOR AMERICAN INNOVATION: DRIVING TOWARDS SUSTAINABLE GROWTH AND QUALITY JOBS 6 (2009) [hereinafter A STRATEGY FOR AMERICAN INNOVATION], available at http://www.whitehouse.gov/assets/documents/SEPT_20_Innovation_Whitepaper_FINAL.pdf.

3. President Barack Obama, Remarks During Town Hall Meeting in Elyria, Ohio (Jan. 22, 2010), available at <http://www.whitehouse.gov/the-press-office/remarks-president-during-town-hall-meeting-elyria-ohio>.

4. See Christina Bohannon, *IP Misuse as Foreclosure*, 96 IOWA L. REV. 475, 478 (2011) (advocating that misuse be refocused on foreclosure of "competition, future innovation or access to the public domain" in order to further the goals of intellectual property policy); Robin C. Feldman, *The Insufficiency of Antitrust Analysis for Patent Misuse*, 55 HASTINGS L.J. 399, 400–01 (2003) (arguing that because of the antitrust prerequisite of market power, applying antitrust rules to test for patent misuse may "blind [us] to significant concerns [of] patent policy" that "threaten[] the overall efficiency of the patent system").

5. *Princo Corp. v. Int'l Trade Comm'n*, 583 F.3d 1380 (Fed. Cir. 2009), *reh'g en banc*, No. 2007-1386, 2010 WL 3385953 (Fed. Cir. Aug. 30, 2010).

6. See generally Alan Murray, *The End of Management*, WALL ST. J., Aug. 21–22, 2010, at W3 (suggesting that rapidly diminishing transaction costs and the prospect of "disruptive innovation" encourage firms to engage in mass collaboration in order to adequately prepare for coming innovations).

Philips, the administrator of the patent pool covering the Orange Book, licensed that pool to many companies for the manufacture and sale of CD-R and CD-RW media—one of those companies being Princo Corporation. After Princo and several other licensees ceased paying royalties under the patent-pool license (and thus became patent infringers for continuing to make, sell, and import technologies covered by that license), Philips initiated actions in federal district court and before the United States International Trade Commission (“ITC”) for infringement of the Orange Book patents.

The seemingly endless patent-infringement litigation⁷ between Princo, Philips, and the ITC, among others, presented many interesting questions of competition and intellectual property law and policy. The Federal Circuit granted a petition for rehearing en banc to answer some of these questions, relevant when a patent pool potentially covers alternative products or standards.⁸ In their petitions for rehearing, Philips and the ITC raised essentially the same two issues: (1) how to “defin[e] . . . the relevant market in which the adverse effect on competition as a whole is to be shown,”⁹ and (2) where “on the continuum between ‘certainly would have been viable’ and ‘certainly could not have been viable’” does anticompetitive technology foreclosure—i.e., suppressing the emergence of a nascent technology—occur?¹⁰

7. For an exhausting but not exhaustive list, see Certain Recordable Compact Discs and Rewritable Compact Discs, 67 Fed. Reg. 48,948 (Int’l Trade Comm’n July 22, 2002) (initiation), *U.S. Philips Corp. v. International Trade Commission*, 424 F.3d 1179 (Fed. Cir. 2005), *U.S. Philips Corp. v. Princo Corp.*, 173 F. App’x 832 (Fed. Cir. 2006), *In re Princo Corp.*, 478 F.3d 1345 (Fed. Cir. 2007), *In re Princo Corp.*, 486 F.3d 1365 (Fed. Cir. 2007), *Princo Corp. v. International Trade Commission*, 563 F.3d 1301 (Fed. Cir.), *vacated*, 583 F.3d 1380 (Fed. Cir. 2009), and *Princo*, 2010 WL 3385953, at *4.

8. *Princo*, 583 F.3d at 1380–81 (granting the Philips and ITC petitions for rehearing and denying the Princo petition).

9. Combined Petition for Rehearing and Rehearing En Banc of Appellee International Trade Commission at 11–12, *Princo*, 583 F.3d 1380 (No. 2007-1386) [hereinafter Combined Petition], 2009 WL 1974578.

10. *Id.* at 12.

Upon rehearing en banc, the Federal Circuit took a step back from these questions, limiting patent-misuse claims to impermissibly “leveraged” patents asserted in infringement suits and finding that the requisite level of viability (whatever it may be) did not exist in this case.¹¹ This Note analyzes and attempts to answer these questions in light of the most recent *Princo* opinion and proposes a framework to guide the determination of whether such a patent-licensing arrangement will result in anticompetitive harm, or a likelihood thereof, through foreclosure.¹² By proposing a phased analysis¹³ and providing guidance for its application, this Note seeks to assist in delineating between reasonable and improper patent-pool licensing strategies considered by modern firms.¹⁴

Part II of this Note addresses the concept of patent misuse and introduces the two predominant theories raised in the *Princo* controversy. Part II.A presents the doctrinal foundations of patent misuse. Part II.B addresses tying, and alternative-technology foreclosure is discussed in Part II.C in the context of patent pools and standardization. With this theoretical basis laid, Part III summarizes the *Princo* dispute: Part III.A describes the relevant patents, Part III.B reviews the proceedings before the ITC and highlights the infringement action, and Part III.C discusses in greater depth the issues decided by the Federal Circuit, sitting en banc. Applying Part II to the controversy in Part III, Part IV proposes a rule of reason framework with which to assess alleged patent-pool misuse causing anticompetitive foreclosure of an alternative technology and applies the framework to the *Princo* controversy. Part IV.A describes characterization of the restraint, and Part IV.B assesses the likelihood of anticompetitive effects resulting from the challenged practice. Part IV.C discusses procompetitive justifications including the viability of the alternative technology, and Part IV.D introduces the requirement of sufficient market power in a properly determined relevant market. Part IV.E addresses potential arguments for this framework, while Part IV.F addresses potential arguments against such an approach and attempts to dismiss these arguments as contrary to the modern understanding of American intellectual-property and competition policy. Part V summarizes this Note and offers concluding remarks.

11. *Princo*, 2010 WL 3385953, at *10, *18.

12. This Note does not seek to answer question one. However, due to the relationship between the questions, question one is peripherally addressed to the extent necessary to answer question two.

13. See *infra* Part IV.

14. This guidance may prove especially important given the historic gap between law and business strategy and the tendency for firms to overlook legal implications when deciding matters of strategy. See Robert C. Bird, *Pathways of Legal Strategy*, 14 STAN. J.L. BUS. & FIN. 1, 4–5 (2008). “Managers and lawyers poorly understand one another. . . . More than simply improving performance, strategy requires actions that set a firm’s business apart in a fashion not easily replicated by rivals,” making them susceptible to competition concerns. *Id.*

II. PATENT MISUSE

The doctrine of patent misuse “is a schizophrenic doctrine that vacillates between IP and antitrust law.”¹⁵ Traditionally, practices such as fraudulent initiation of infringement proceedings¹⁶ and tying of patented goods to unpatented goods¹⁷ constituted misuse and resulted in unenforceability of the misused patent. With respect to tying, early courts believed that patent law permitted “the restriction of patented machines, by notice, to use with unpatented supplies necessary in the operation of them, but which are no part of them.”¹⁸ However, with the passing of the Clayton Act, which proscribes a tying arrangement tending to an anticompetitive abuse of market power,¹⁹ patent misuse and antitrust law became “intertwined” and courts have struggled to disentangle the two ever since.²⁰ With that groundwork laid, this Note revisits tying and introduces the foreclosure theory of patent misuse.

A. DOCTRINAL FOUNDATIONS OF PATENT MISUSE

It is important to properly characterize the nature of the harm that patent misuse seeks to deter in order to prevent exacerbating a tension that exists in only a minor subset of cases—licensing agreements, such as patent pools, being a member of that subset.²¹ Further, the harm cannot be solely characterized as anticompetitive or anti-innovative, but rather must balance these interests by “tak[ing] careful account of how these market

15. Bohannon, *supra* note 4, at 476.

16. Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 177 (1965).

17. Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488, 490 (1942), *overruled by* Ill. Tool Works v. Indep. Ink, Inc., 547 U.S. 28 (2006).

18. Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 514 (1917). The Court was discussing *Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co.*, 77 F. 288 (6th Cir. 1896), which is regarded as a seminal patent tying case.

19. See *Heaton-Peninsular Button-Fastener*, 77 F. at 292 (refusing to proscribe conduct such as enforcing the patent rights, refusal to deal or to license, and tying arrangements under certain circumstances); see also *Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004, 1015–16 (Fed. Cir. 2008) (springing patent on unsuspecting standards committee after violating duty to disclose relevant patents resulted in a remedy of unenforceability limited in scope to patents covering the standard).

20. *Ill. Tool Works*, 547 U.S. at 41; *Motion Picture Patents Co.*, 243 U.S. at 517 (noting that Congress, “the source of all rights under patents,” enacted the Clayton Act intending to reverse the holding in *Henry v. A.B. Dick Co.*, 224 U.S. 1 (1912), which found infringement for failure to conform with a license requiring the patented product to only be used with patentee’s unpatented ink).

21. HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* 276 (2005).

arrangements promote competition by working around flaws in the patent system,” whose purpose is to spur innovation.²²

Viewed from the perspective of patent law, misuse is an extension of the scope or duration (or both) of the intellectual property rights conferred by statutory grant, resulting in anticompetitive effects.²³ By engaging in such misuse, the intellectual property rightsholder violates the constitutional bargain²⁴ that grants a bundle of limited rights to the patentee in exchange for dissemination and disclosure of his innovation.²⁵ The classic example is tying, which involves a patent owner conditioning the sale of a patented product on the purchaser exclusively buying an unpatented accessory from the patent owner—e.g., a printer and the ink cartridge.

The other view of patent misuse originates in antitrust law.²⁶ “The concept of patent misuse arose to restrain practices that did not in

22. Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1994 (2007) (arguing that any reform must balance competitive concerns with innovation policy to avoid “distort[ion] or even dampen[ing of] innovation incentives”).

23. *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1001 (Fed. Cir. 1986) (characterizing patent misuse as “impermissibly broaden[ing] the ‘physical or temporal scope’ of the patent grant with anticompetitive effect”); *Princo Corp. v. Int’l Trade Comm’n*, No. 2007-1386, 2010 WL 3385953, at *13 (Fed. Cir. Aug. 30, 2010) (en banc) (declining to overrule the requirement that the patentee’s alleged misuse had anticompetitive effects); see also Thomas Cotter, *Misuse*, 44 HOUS. L. REV. 901, 901–02 (2007) (noting that in addition to scoping the bounds of intellectual property rights, “misuse shares some features with both the venerable equitable doctrine of unclean hands and with antitrust law”).

24. See *Graham v. John Deere Co.*, 383 U.S. 1, 5 (1966) (“At the outset it must be remembered that the federal patent power stems from a specific constitutional provision which authorizes the Congress ‘To promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries.’” (quoting the patent-specific portions of U.S. CONST. art. I, § 8, cl. 8)).

25. See Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095, 1123 (2003) (“[M]isuse serves a public interest function to safeguard the public policies undergirding patent and related areas of law. In this mode, misuse confines the exercise of patent rights to their statutory purposes, and to the constitutional purposes behind the statute.”). Professor Cotter also acknowledges the constitutional issue:

[W]here the scope of the IP grant is ambiguous, courts may conclude that the benefits (of construing [intellectual property rights] as broadly as the IP owner asserts those rights should be construed) do not outweigh the costs to free speech, even if courts would defer to an unambiguous statement of congressional intent to the contrary. Or perhaps courts should adopt a narrower construction of [intellectual property rights] in light of the long-standing policy of construing statutes so as to avoid difficult constitutional questions.

Cotter, *supra* note 23, at 941 n.177.

26. See 6 DONALD S. CHISUM, CHISUM ON PATENTS § 19.04[2] (2005). Chisum quotes Judge Posner’s statement in *USM Corp. v. SPS Technologies, Inc.*:

Outside those boundaries there is increasing convergence of patent-misuse analysis with standard antitrust analysis. . . . One still finds plenty of statements in judicial opinions that less evidence of anticompetitive effect is required in a misuse case than in an antitrust case. . . . But apart from the conventional applications of the doctrine we have found no cases where standards different from those of antitrust

themselves violate any law, but that drew anticompetitive strength from the patent right, and thus were deemed to be contrary to public policy.”²⁷ For example, the owner of a patent, who knows a patent to be invalid (because of its fraudulent procurement), sues a competitor in an attempt to enforce the invalid patent.²⁸

While the Patent Act mentions patent misuse, the statute defines patent misuse as what it is not, leaving much room for interpretation (and misinterpretation).²⁹ Courts and scholars have interpreted this statutory

law were actually applied to yield different results. . . . If misuse claims are not tested by conventional antitrust principles, by what principles shall they be tested? Our law is not rich in alternative concepts of monopolistic abuse; and it is rather late in the day to try to develop one without in the process subjecting the rights of patent holders to debilitating uncertainty.

Id. (quoting 694 F.2d 505, 511–12 (7th Cir. 1982)).

27. *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 704 (Fed. Cir. 1992) (“The policy purpose was to prevent a patentee from using the patent to obtain market benefit beyond that which inheres in the statutory patent right.”).

28. *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 174 (1965) (“[T]he enforcement of a patent procured by fraud on the Patent Office may be violative of § 2 of the Sherman Act provided the other elements necessary to a § 2 case are present.”).

29. Following the enactment of the Patent Misuse Reform Act of 1988, patent misuse appears in 35 U.S.C. § 271(d) (2006). The statute reads:

(d) No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following: (1) derived revenue from acts which if performed by another without his consent would constitute contributory infringement of the patent; (2) licensed or authorized another to perform acts which if performed without his consent would constitute contributory infringement of the patent; (3) sought to enforce his patent rights against infringement or contributory infringement; (4) refused to license or use any rights to the patent; or (5) conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product, unless, in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned.

Id. § 271(d); *see also* *U.S. Philips Corp. v. Int’l Trade Comm’n*, 424 F.3d 1179, 1185–86 (Fed. Cir. 2005) (noting that § 271(d) “merely provides a safe harbor against the charge of patent misuse for certain kinds of conduct by patentees”).

A review of the legislative history indicates that Congress refused to characterize patent misuse as strictly an antitrust violation. S. REP. No. 100-492, at 17–18 (1988); Bohannon, *supra* note 4, at 487 (“Congress considered and rejected legislation that would have explicitly limited misuse to antitrust principles.”); *see also* S. REP. No. 100-83, at 57 (1987) (proposing changes that would have limited misuse to conduct by the patent owner that “violate[s] the antitrust laws”). Congress refused this characterization in spite of persuasive arguments that patent misuse had been subsumed by modern antitrust law. In *USM*, Judge Posner expressed just such a view:

The doctrine arose before there was any significant body of federal antitrust law, and reached maturity long before that law (a product very largely of free interpretation of unclear statutory language) attained its present broad scope.

definition to mean that misuse, in comparison to analogous antitrust claims, may be established through a broader set of potential harms³⁰ and requires an intellectual property rightsholder to have a lesser level of market power (when it is a requirement)³¹ and a lesser potential for anticompetitive harm.³² But, “[b]ecause patent misuse is a judge-made doctrine that is in derogation of statutory patent rights against infringement, [the Federal Circuit] has not applied the doctrine of patent misuse expansively.”³³

Since the antitrust laws as currently interpreted reach every practice that could impair competition substantially, it is not easy to define a separate role for a doctrine also designed to prevent an anticompetitive practice—the abuse of a patent monopoly.

694 F.2d at 511.

30. Bohannon, *supra* note 4, at 477–78 (proposing that because “misuse is a creature of IP law . . . the question that IP law should really care about [is] whether an alleged act of misuse violates IP policies of encouraging innovation, promoting competition, or encouraging access to the public domain”).

31. *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 140 (1969) (holding that conditioning the grant of a patent license upon payment of royalties on unpatented products is misuse, but “it does not necessarily follow that the misuse embodies the ingredients of a violation of either §1 or §2 of the Sherman Act”); *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1372 (Fed. Cir. 1998) (stating misuse is “a broader wrong than antitrust violation because of the economic power that may be derived from the patentee’s right to exclude,” and that it “may arise when the conditions of [an] antitrust violation are not met”); *Mallinckrodt*, 976 F.2d at 704 (“The concept of patent misuse arose to restrain practices that did not in themselves violate any law, but that drew anticompetitive strength from the patent right, and thus were deemed to be contrary to public policy.”); *Cotter*, *supra* note 23, at 925.

32. Bohannon, *supra* note 4, at 478 (noting that assertions of tying misuse can be sustained on a lesser showing of anticompetitive harm than would be the case with respect to an analogous antitrust claim). Relevant to the debate over the proper treatment of patent misuse, copyright misuse is premised on the idea that a copyright grants to its owner a limited bundle of rights to his copyrighted work. *See generally* 17 U.S.C. § 106 (2006) (enumerating the bundle of rights granted to a copyright owner). For instance, courts have considered the following practices to be copyright misuse, even if not antitrust violations: (1) a license prohibiting the licensee from developing or marketing an equivalent software product for a period of 99 years, *Lasercomb Am., Inc. v. Reynolds*, 911 F.2d 970, 978 (4th Cir. 1990) (“The question is not whether the copyright is being used in a manner violative of antitrust law . . . but whether the copyright is being used in a manner violative of the public policy embodied in the grant of a copyright.”), and (2) a license requiring licensees of a licensor’s operating system to use it only on the licensor’s hardware, *Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 792–94 (5th Cir. 1999) (finding misuse in the absence of an antitrust violation). The copyright owner’s extension of the scope or duration of this grant may be deemed misuse even when it does not violate antitrust laws. *Assessment Techs., LLC v. WIREdata, Inc.*, 350 F.3d 640, 647 (7th Cir. 2003) (“The doctrine of misuse ‘prevents copyright holders from leveraging their limited monopoly to allow them control of areas outside the monopoly.’” (quoting *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1026–27 (9th Cir. 2001))).

33. *Princo Corp. v. Int’l Trade Comm’n*, No. 2007-1386, 2010 WL 3385953, at *9 (Fed. Cir. Aug. 30, 2010) (en banc) (“Congress enacted section 271(d) not to broaden the doctrine of patent misuse, but to cabin it.”).

Indeed, proof of an antitrust violation does not necessarily compel a finding of misuse.³⁴

Even though the harms that patent misuse is intended to deter may be broader than purely antitrust violations, courts apply antitrust law's rule of reason inquiry to patent-misuse claims. Broadly, a rule of reason inquiry requires courts to determine if alleged anticompetitive harms outweigh procompetitive justifications for the challenged practice.³⁵ As discussed in Part II.C,³⁶ patent-pooling arrangements challenged as misuse generally do not receive per se treatment—they are not adjudged patent misuse due to the very existence of the patent pool.

Regardless of its underlying doctrinal foundations, patent misuse operates as an equitable affirmative defense for defendants accused of patent infringement. Therefore, even in the absence of a finding of infringement, a court, when determining an appropriate remedy, may consider a patent-misuse claim.³⁷ A successful claim of patent misuse makes the misused patent unenforceable against all would-be infringers until the patent rightsholder ceases the misuse.³⁸ Because of the potential draconian result of a finding of misuse due to “relatively speculative threats to competition, in cases in which there is no corresponding social benefit,” advocates for reform of the doctrine of misuse believe its application should be “safe, legal, and rare.”³⁹

Package licensing of patents, such as the license strategy in *Princo*, has been evaluated under several established patent-misuse theories. Over the course of this dispute, *Princo* argued several patent-misuse theories, including tying and technology foreclosure. An introduction to each of these theories is provided below.

34. *Id.* at *8 (“While proof of an antitrust violation shows that the patentee has committed wrongful conduct having anticompetitive effects, that does not establish misuse of the patent in suit unless the conduct in question restricts the use of that patent and does so in one of the specific ways that have been held to be outside the otherwise broad scope of the patent grant.”).

35. David A. Heiner, *Assessing Tying Claims in the Context of Software Integration: A Suggested Framework for Applying the Rule of Reason Analysis*, 72 U. CHI. L. REV. 123, 138 (2005) (“In a tying case the focus of judicial inquiry is whether the challenged practice ‘foreclose[s] competition on the merits in a product market distinct from the market for the tying item.’” (alteration in original) (quoting *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 21 (1984))).

36. *See infra* Part II.C.

37. *Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004, 1019–26 (Fed. Cir. 2008).

38. *B.B. Chem. Co. v. Ellis*, 314 U.S. 495, 498 (1942) (“It will be appropriate to consider petitioner’s right to relief when it is able to show that it has fully abandoned its present method of restraining competition in the sale of unpatented articles and that the consequences of that practice have been fully dissipated.”).

39. *Cotter*, *supra* note 23, at 903; *see also* Bohannon, *supra* note 4, at 477 (positing that the doctrine of misuse primarily benefits infringers, “including infringers who have not been injured in any way by the misuse”).

B. TYING

Tying is a multi-product bundling arrangement involving the transfer of one product on the condition that the transferee takes a second product or service.⁴⁰ The issue of the legality of tying arrangements originally arose in the context of patent litigation where the accused patent infringer would challenge the tying arrangements as wrongful extensions of the patentee's limited "monopoly,"⁴¹ thus constituting patent misuse and resulting in the patent's unenforceability.⁴² Currently, the Patent Act considers a tying arrangement to constitute misuse of a patent only when "the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned."⁴³

Tying is not always anticompetitive, however.⁴⁴ Cases contesting tying arrangements have "rested on either an assumption or a showing that the defendant's position of power in the market for the tying product was being used to restrain competition in the market for the tied product."⁴⁵ An invalid tying arrangement's essential characteristic "lies in the seller's exploitation of its control over the tying product to force the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms."⁴⁶

In the middle of the twentieth century, courts and Congress became increasingly hostile towards licensing and sales practices where they perceived that the patentee was leveraging its presumed market power in the patented product to achieve anticompetitive ends in the market for an

40. HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* 397 (3d ed. 2005).

41. The term *monopoly* received historic use to define the bundle of rights granted to "the things which are worth to the public the embarrassment of an exclusive patent," as [Thomas] Jefferson put it." *Graham v. John Deere Co.*, 383 U.S. 1, 10-11 (1966).

42. One of the seminal cases is *Henry v. A.B. Dick Co.*, 224 U.S. 1, 25-26, 32 (1912), *overruled by* *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502 (1917), in which the court found contributory patent infringement in the sale of ink to a purchaser of a patented rotary mimeograph machine who was under license to use only ink purchased from the patentee. Although not the first instance of an infringement suit arising out of a license mandating tying, the case involved a license that tied a patented rotary mimeograph—the tying product—to (unpatented) ink supplied by the patentee. *Id.* Over the dissent's objection that such a result impermissibly increased the patent's scope, the patentee successfully sued for infringement after the licensee used ink acquired from a third party. *Id.* at 51-52.

43. 35 U.S.C. § 271(d)(5) (2006).

44. *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 45 (2006) ("Many tying arrangements, even those involving patents and requirements ties, are fully consistent with a free, competitive market.")

45. *Id.* at 34.

46. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 12 (1984) (involving the bundling of anesthesiology and medical services); *see also* *Tucker v. Apple Computer, Inc.*, 493 F. Supp. 2d 1090, 1097 (N.D. Cal. 2006) (claiming unlawful tying of the iPod to iTunes).

unpatented product.⁴⁷ Recently, however, this broad application of tying as a theory of patent misuse has been narrowed. After the Supreme Court's decision in *Illinois Tool Works Inc. v. Independent Ink, Inc.*, a defendant alleging patent misuse by tying no longer enjoys the presumption that a valid patent confers market power.⁴⁸

Moreover, for tying to be condemned as anticompetitive under any theory, the tied product must be part of a separate product market.⁴⁹ While courts and scholars initially assumed that a seller with a dominant market position in the primary tying product market could leverage a second dominant market position in the tied product, scholars currently note that “[t]he leverage theory of tying has largely been discredited in [academic] literature.”⁵⁰ This brief comment on the past treatment of tying practices and their interrelationship with patent misuse will help shape the concept of technology foreclosure as patent misuse.

C. FORECLOSURE AS A THEORY OF PATENT MISUSE

Broadly, foreclosure occurs when an artificial limitation on consumer choice, technological advance, or public access to an innovation shuts out competition, future innovation, or access to the public domain.⁵¹ Thus, the

47. The “heavy artillery of federal antitrust law” found frequent use on the intellectual-rights holders who tied their products to unprotected products during the mid-1900s. *Sheridan v. Marathon Petroleum Co.*, 530 F.3d 590, 595 (7th Cir. 2008); see *Int'l Salt Co. v. United States*, 332 U.S. 392, 395–96 (1947) (finding that the tying arrangement violated antitrust law), *overruled by Ill. Tool Works*, 547 U.S. 28; see also *United States v. Loew's, Inc.*, 371 U.S. 38, 45–46 (1962) (“The patentee is protected as to his invention, but may not use his patent rights to exact tribute for other articles.”), *overruled by Ill. Tool Works*, 547 U.S. 28; *Standard Oil Co. of Cal. v. United States*, 337 U.S. 293, 294, 305–06 (1949) (noting that “[t]ying agreements serve hardly any purpose beyond the suppression of competition”); *Mercoid Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 664–65 (1944) (“[T]his Court has consistently held that the owner of a patent may not employ it to secure a limited monopoly of an unpatented material used in applying the invention.”).

48. 547 U.S. at 46. At the height of the trust-busting era, a patent grant gave rise to the presumption that a patent automatically conferred market power. *Jefferson Parish*, 466 U.S. at 16 (“For example, if the Government has granted the seller a patent or similar monopoly over a product, it is fair to presume that the inability to buy the product elsewhere gives the seller market power.”). This presumption of market power made tying a patented product to an unpatented product per se misuse under patent law or per se illegal under antitrust law. *Id.* at 15–16 (regarding tying as per se illegal when “anticompetitive forcing” is likely to foreclose “a substantial volume of commerce” regardless of “actual market conditions”). Courts gradually narrowed the effect of this presumption when deciding tying cases and finally overruled it outright following Congress’s amendment to the Patent Act, which requires that market power be demonstrated when a defendant alleges patent misuse, including tying. *Ill. Tool Works*, 547 U.S. at 46 (“[I]n all cases involving a tying arrangement, the plaintiff must prove that the defendant has market power in the tying product.”).

49. *Ill. Tool Works*, 547 U.S. at 41.

50. Bohannon, *supra* note 4, at 491.

51. *Id.* at 478; see also *Princo Corp. v. Int'l Trade Comm'n*, No. 2007-1386, 2010 WL 3385953, at *16 (Fed. Cir. Aug. 30, 2010) (en banc) (discussing foreclosure of competition).

concept of foreclosure concerns both competition and intellectual property policy.

As theories of patent misuse continue to evolve, scholars have proposed foreclosure as both a justification for the continued viability of patent misuse as a doctrine apart from antitrust law and a new classification of harmful conduct constituting misuse.⁵² Recognition that foreclosure-based patent misuse initially arises out of innovation policy rather than competition policy allows foreclosure to focus primarily on protecting intellectual property policy goals while also promoting competition among innovators.⁵³ This altered focus becomes especially important when considering that “the patent system creates negative effects . . . includ[ing] the anticompetitive effects of increased prices and reduced supply . . . [and innovation barriers] such as encouraging wasteful and duplicative activities and creating disincentives to future inventors.”⁵⁴ The following two Subparts examine how patent misuse through foreclosure might arise in the common practices of modern, innovative firms—patent pools and standard-setting.

1. Package Licensing and Patent Pools

A package license is a license that covers two or more patents and is generally thought to be benign when all the patents are required

52. Bohannon, *supra* note 4, at 478 (arguing that “misuse should be focused on *foreclosure*” as a harm); Dana W. Hayter, *When a License Is Worse than a Refusal: A Comparative Competitive Effects Standard To Judge Restrictions in Intellectual Property Licenses*, 11 BERKELEY TECH. L.J. 281, 302–04 (1996) (discussing market foreclosure and foreclosure of access to the invention as elements necessary to determine whether anticompetitive effects will accrue from an intellectual property licensing agreement); Michael J. Meurer, *Vertical Restraints and Intellectual Property Law: Beyond Antitrust*, 87 MINN. L. REV. 1871, 1905 (2003) (noting that only in “rare packaging cases where the plaintiff demonstrates a foreclosure or collusion facilitating effect” is misuse likely to be found).

53. Bohannon, *supra* note 4, at 477.

54. Feldman, *supra* note 4, at 436. Feldman further notes that because “[l]imiting the time and scope of the patent grant serves to limit the detrimental effects of the patent system,” the test for patent misuse “must be designed to reflect the concerns embodied in these limits.” *Id.* “Antitrust rules are unlikely to detect many of [these] concerns . . .” *Id.* Addressing tying arrangements and not the concept of foreclosure, Robert Bork provides additional support for focusing antitrust law on those harms properly within its scope:

Such use of tie-ins is not, however, a concern of antitrust, and courts ought not to strike them down under the antitrust laws. Each body of law has its own purposes and its own scale of remedies and punishments. It is important to the integrity of the law that the wrongdoer not be convicted under any law that just happens to be handy, when his conduct does not in any way contravene the goals and rationale of that law.

ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 381 (The Free Press 1993) (1978).

(“essential”) to produce and market a patented good.⁵⁵ Package licensing reduces the transaction costs otherwise associated with separately licensing the individual patents and adds further value to a licensee (and to the end-customer) by minimizing the risk of blocking patents and patent holdup.⁵⁶ Thus, the licensee can be relatively sure that all essential patents are included in the package (minimizing blocking), and that its investment in commercializing the licensed patents will not be derailed by an injunction (minimizing patent holdup).⁵⁷

The practice, however, can raise patent misuse and antitrust concerns. When the patents are unavailable for individual licensing outside of the package bundle and the package contains competing patents,⁵⁸ or when the licensor conditions the license of the desired patents on the inclusion of undesired or non-essential patents in the package,⁵⁹ the package license may foreclose competition or innovation.⁶⁰

Patent pools, a form of package licensing, involve a bundle of patents “pooled”⁶¹ together through cross-licenses⁶² by distinct firms, usually for the

55. HOVENKAMP, *supra* note 40, at 250. Professor Hovenkamp provides the example of a stapler, covered by seven patents, whose manufacture by a third party would require a license that includes all seven patents. *Id.*

56. HERBERT HOVENKAMP, MARK D. JANIS & MARK A. LEMLEY, *IP AND ANTITRUST* § 34.4C (2002); see also J. Beckwith Burr, *Competition Policy and Intellectual Property in the Information Age*, 41 VILL. L. REV. 193, 197 n.11 (1996) (“The historical pace of technological innovation in various industries characterized by cumulative technology supports the theory that broad blocking patents may retard innovation and industry growth.”).

57. See generally Lemley & Shapiro, *supra* note 22, at 1993 (discussing patent holdup and blocking).

58. *Standard Oil Co. v. United States*, 283 U.S. 163, 174 (1931) (“Where domination exists, a pooling of competing process patents . . . is beyond the privileges conferred by the patents and constitutes a violation of the Sherman Act.”).

59. *Grid Sys. Corp. v. Tex. Instruments Inc.*, 771 F. Supp. 1033, 1038 (N.D. Cal. 1991) (recognizing a tying claim where the licensor forced the licensee to “purchase licenses that it would not have purchased from [Texas Instruments] under normal competitive market conditions” and noting that the harm to competition was that “having purchased one set of licenses from [Texas Instruments], Tandy may rationally decide that it is not economically desirable, or economically possible” to license a competing technology from a competitor).

60. *Princo Corp. v. Int’l Trade Comm’n*, 563 F.3d 1301, 1315 (Fed. Cir.) (“It is one thing to offer a pooled license to competing technologies; it is quite another to refuse to license the competing technologies on any other basis.” (footnote omitted)), *vacated*, 583 F.3d 1380 (Fed. Cir. 2009). *But cf.* *Apple, Inc. v. Psystar Corp.*, 673 F. Supp. 2d 931, 939 (N.D. Cal. 2009) (holding “Apple did not violate the public policy underlying copyright law or engage in copyright misuse” where “Apple [did] not prohibit[] others from independently developing and using their own operating systems”). Note, however, that this case centered on Apple’s unilateral licensing policies and not the multi-firm patent pool present in *Princo*.

61. HOVENKAMP, *supra* note 40, at 250–51. “The metaphor of the pool is taken from the oil industry, where multiple surface owners might have an interest in the same subterranean pool of oil. They could then profit and minimize conflict by drilling a single well and sharing the operating expenses and revenues.” *Id.* at 251.

62. Cross-licensing involves the exchange of patents through licenses between two or more firms. See HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 34.2a (“[A] cross-license is a mutual

purposes of research and development or sublicensing for commercialization.⁶³ In a well-known example of beneficial patent pooling, the federal government mandated that the Wright Brothers and the Herring-Curtiss Company—each owning patents necessary to the development and operation of aircraft—pool their patents and license them so that others could manufacture aircraft for use in World War I.⁶⁴

Even though “patents . . . have the attributes of personal property,”⁶⁵ the essence of which is the “right to exclude,”⁶⁶ courts generally agree that this right extends only to unilateral decisions (as opposed to the collaborative decisions made by members of a patent pool), taking into consideration prior conduct with respect to that patent.⁶⁷ But patent pools generally meet with judicial approval due to the enormous efficiencies they offer by promoting research and development,⁶⁸ clearing blocking patents, and reducing licensing transaction costs.⁶⁹ When challenged as misuse, patent pools typically undergo rule of reason scrutiny.⁷⁰ The list of procompetitive and anticompetitive factors provided in the *Antitrust Guidelines for the Licensing of Intellectual Property*, which was intended to aid in

exchange of licenses between unrelated parties . . . [and is] likely to have both vertical and horizontal components.”)

63. GreenLeaf Genetics, a joint venture between DuPont, Pioneer, and Syngenta “to out license corn and soybean genetics [patents] to U.S. and Canadian seed companies,” exemplifies a modern patent pool where each company makes its patents available to the joint venture. GREENLEAF GENETICS, <http://www.greenleafgenetics.com/index.html> (last visited Oct. 28, 2010). As the Federal Circuit has noted, “research joint ventures . . . can have significant procompetitive features, and it is now well settled that an agreement among joint ventures to pool their research efforts is analyzed under the rule of reason.” *Princo Corp. v. Int’l Trade Comm’n*, No. 2007-1386, 2010 WL 3385953, at *13 (Fed. Cir. Aug. 30, 2010) (en banc).

64. *Mfrs. Aircraft Ass’n v. United States*, 77 Ct. Cl. 481, 485 (1933) (noting the government report “recommending the formation of the Aircraft Manufacturers Association among all aircraft manufacturers and suggesting the details of a cross-license agreement among its members”); see also *Wright Co. v. Herring-Curtiss Co.*, 204 F. 597 (W.D.N.Y. 1913) (discussing the technology). The Wright patent covered warping or depressing the wings in opposite directions in order to maintain stability during flight by controlling roll—rotation of the aircraft along its longitudinal axis. *Id.* at 606. The Herring-Curtiss patent covered the use of ailerons (flaps) rather than moving the entire wing portions in opposition to each other. *Id.* at 607.

65. 35 U.S.C. § 261 (2006).

66. *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985).

67. *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 610–11 (1985) (inferring anticompetitive intent from irrational discontinuation of a joint-marketing agreement that required sacrificing “short-run benefits and consumer goodwill in exchange for a perceived long-run impact on [a] smaller rival”).

68. *Princo*, 2010 WL 3385953, at *13 (noting that “research joint ventures . . . can have significant procompetitive features”).

69. HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 34.2c.

70. HOVENKAMP, *supra* note 40, at 251; see also *Princo*, 2010 WL 3385953, at *29 (Dyk, J., dissenting) (“The Supreme Court recently confirmed that agreements between separate actors with respect to intellectual property licensing are invalid if they fail the rule of reason analysis.” (citing *Am. Needle, Inc. v. Nat’l Football League*, 130 S. Ct. 2201, 2206–07 (2010))).

the rule of reason determination of whether patent pools violate antitrust law, also assists courts in their evaluations of patent-misuse allegations.⁷¹

In the context of patent pools, restrictions on the exercise of licensed patent rights may foreclose competition or innovation and, thereby, constitute patent misuse.⁷² For example, the patent-pool administrator may attempt to prevent the licensees from creating a product covered by the licensed patent rights that will compete with existing patented products or with the patent-pool licensors in specified markets or fields of use.⁷³ Regardless of any harm to competition that would be addressed by the antitrust laws, harm to innovation may result due to this foreclosure of a nascent technology.

In particular, field-of-use restrictions on patents in the patent pool are potentially problematic because “[f]ield of use licensing permits a patent . . . owner to exploit the intellectual property fully in a manner that may maximize income or minimize competition.”⁷⁴ A patentee holding a patent that demonstrates applicability to several industries (e.g., an engine patent that may be used for lawnmowers, golf carts, automobiles, and snowmobiles) may want to license the patent in several of these fields to maximize its value. Since firms in one industry may not compete in another, a firm will pay, at most, a reasonable value accounting for only those industries in which it competes. The patentee, by granting a license for only these fields, remains free to capture additional licensing value in the remaining industries. However, “[b]ecause field of use licenses could be used to restrain competition unreasonably among normal competitors, the [anticompetitive] consequences of such a licensing arrangement must be considered” as well.⁷⁵

2. Standard-Setting Organizations

A standard is a technical specification that “provide[s] a common design for a product or process.”⁷⁶ Examples include the Java application

71. U.S. DEPT. OF JUSTICE & FED. TRADE COMM’N, ANITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY 18–24, 28 (1995), available at <http://www.usdoj.gov/atr/public/guidelines/0558.pdf>.

72. *Princo*, 2010 WL 3385953, at *12 (inquiring into the existence of restrictions “placed in patent licenses to require licensees to agree to anticompetitive terms going beyond the scope of the patent grant”).

73. See *Lasercomb Am., Inc. v. Reynolds*, 911 F.2d 970, 973 (4th Cir. 1990) (finding copyright misuse where the software license agreement forbade the licensee from developing competing software).

74. BRIAN G. BRUNSVOLD, DENNIS P. O’REILLEY & D. BRIAN KACEDON, DRAFTING PATENT LICENSE AGREEMENTS 45 (6th ed. 2008).

75. *Id.* at 46.

76. HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 35.1a.

programming interface,⁷⁷ the MP3 digital audio encoding format, and the 802.11 family of wireless networking protocols.⁷⁸ Such standards form in a variety of ways, including cooperation of firms in the industry, standard-setting organizations, government regulation, and the natural operation of the market (de facto standards).⁷⁹

In networked markets—markets where, initially, a product’s value to consumers increases as the number of product users increases⁸⁰—firms participate in standard-setting organizations in order to efficiently reach an agreement on a standard. The standard “serve[s] valuable pro-competitive purposes”⁸¹ by meeting consumers’ expectations of product interoperability, compatibility, networking, reliability, manufacturing efficiency, maintenance, quality, and safety.⁸² Firms also benefit from participating in standard-setting because “it avoids marketplace standards wars . . . [and] forestall[s] relinquishing a market that is about to tip to a de facto standard controlled by a dominant firm.”⁸³ To see the consequences resulting from a lack of intra-industry cooperation regarding standards, one need look no further than the current fight between Apple and Adobe Systems over Adobe’s Flash standard which enables web-based video playback. Apple has banned Flash from its handheld-computing devices, frustrating its consumers who expected to be able to watch web-based video.⁸⁴

But “the incorporation of a patented technology into a standard may give an unfair advantage to the patent holder or raise the difficult issue of licensing terms.”⁸⁵ Because a standard covered by intellectual property rights “is likely to confer durable market power,”⁸⁶ it is important that the

77. *United States v. Microsoft Corp.*, 253 F.3d 34, 53 (D.C. Cir. 2001) (en banc) (per curiam).

78. *See* Lemley & Shapiro, *supra* note 22, at 2028 (discussing the formation of the patent pool covering the 802.11 family of wireless-networking standards).

79. HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 35.2. Examples of standard-setting organizations include the International Organization for Standardization (“ISO”) and the Institute of Electrical and Electronics Engineers (“IEEE”).

80. HOVENKAMP, *supra* note 21, at 277.

81. HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 35.1a.

82. *Id.*; BENJAMIN S. BLANCHARD & WALTER J. FABRYCKY, *SYSTEMS ENGINEERING AND ANALYSIS* 437 (3d ed. 1998); Jonathan L. Rubin, *Patents, Antitrust, and Rivalry in Standard-Setting*, 38 RUTGERS L.J. 509, 509 (2006).

83. BLANCHARD & FABRYCKY, *supra* note 82, at 510 (emphasis omitted).

84. Yukari Iwatani Kane & Ben Worthen, *Steve Jobs Escalates Fight with Adobe*, WALL ST. J., Apr. 30, 2010, at B1. Especially interesting, this industry battle arises between a dominant device manufacturer who is infamous for “trying to control [its] ecosystem” and the owner of a well-established, but dated, standard who is seeking continued acceptance of that standard in the face of technological evolution. *Id.*

85. COMM. ON INTELLECTUAL PROP. RIGHTS & THE EMERGING INFO. INFRASTRUCTURE & COMPUTER SCI. & TELECOMM. BD., COMM’N ON PHYSICAL SCIS., MATHEMATICS & APPLICATIONS, NAT’L RESEARCH COUNCIL, *THE DIGITAL DILEMMA: INTELLECTUAL PROPERTY IN THE INFORMATION AGE* 75 (2000) [hereinafter *THE DIGITAL DILEMMA*].

86. HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 35.2c.

standard-setting organization encourages open participation and requires disclosure of intellectual property rights that are reasonably likely to be relevant to the decision-making process.⁸⁷

Thus, “[s]tandard organizations must . . . operate under certain expectations of openness of participation and information flow associated with antitrust law.”⁸⁸ The lack of a clearly defined policy governing disclosure of intellectual property rights may potentially “chill participation in open standard-setting bodies” since non-disclosure frustrates the objectives of the standard-setting organizations.⁸⁹ A standard-setting organization that invites all interested parties to participate protects itself from patent holdup by imposing a duty of disclosure on its members.⁹⁰ Moreover, standard-setting occurring through collaboration and “voluntary consensus” is “important for commercializing products that employ new technologies because technical compatibility standards are needed before new products . . . may be brought to market.”⁹¹ This collaborative effort efficiently “achiev[es] the level of technical agreement required for such compatibility.”⁹² Standard-setting allows companies to “collaborate with one another to ‘hack [their] way through [the patent thicket] in order to actually commercialize new technology.”⁹³ Failure to allow interested parties a seat at the standard-setting table may be indicative of intent to

87. *Rambus Inc. v. Infineon Techs. AG*, 318 F.3d 1081, 1100–02 (Fed. Cir. 2003) (“A policy that does not define clearly what, when, how, and to whom the members must disclose does not provide a firm basis for the disclosure duty necessary [to determine] fraud [on the standard-setting committee]. Without a clear policy, members form vaguely defined expectations as to what they believe the policy requires—whether the policy in fact so requires or not.”).

88. THE DIGITAL DILEMMA, *supra* note 85, at 75.

89. *Rambus*, 318 F.3d at 1100–02 (finding that, even though Rambus had a duty to disclose “claims in patents or applications that reasonably might be necessary to practice the standard,” it did not breach its duty when it withdrew from the standard-setting organization prior to filing divisional and continuation applications containing claims covering the standard); *see also* *Princo Corp. v. Int’l Trade Comm’n*, No. 2007-1386, 2010 WL 3385953, at *18 (Fed. Cir. Aug. 30, 2010) (en banc) (noting that “choices must be made as to which technologies to promote and which to suppress, those choices must be supported equally by all participants”).

90. *Compare* *Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004, 1015–16 (Fed. Cir. 2008) (applying equitable estoppel and holding patents unenforceable as against the standard where a member, under a contractual duty to do so, failed to disclose its patent interests), *with* *Rambus*, 318 F.3d at 1096–100 (refusing to imply a duty to disclose on preliminary participants in standard discussions who did not participate in formal consideration and determination of the standard).

91. Rubin, *supra* note 82, at 509.

92. *Id.*

93. *Id.* at 509–10 (alteration in original) (quoting Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in *INNOVATION POLICY AND THE ECONOMY* 119, 120 (Adam B. Jaffe et al. eds., 2001)).

foreclose competition or innovation—e.g., a group boycott or denial of an essential facility.⁹⁴

There are also anticompetitive risks inherent in standard-setting organizations.⁹⁵ Particularly, that rejection of an alternative standard serves anticompetitive ends.⁹⁶ For purposes of patent misuse, the danger to competition and innovation may be increased when the standard is covered by a patent pool. The value of a standard is in its ability to drive compatibility in networked markets. Network effects in these markets benefit the product's consumers and entrench the standard. If the standard was not a product of industry-wide collaboration, or if the patent-pool license restricts the licensed patent rights to prevent the use of alternative technology or the emergence of an alternative standard, a real danger of patent misuse through foreclosure exists.⁹⁷ This very situation arises in the *Princo* controversy which is discussed in the following Part.

III. THE *PRINCO* DISPUTE

The lengthy dispute between Philips and Princo demonstrates the extreme difficulty that litigants and courts face when attempting to properly classify and evaluate claimed patent misuse.⁹⁸

A. THE POOLED PATENTS

At the heart of the *Princo* controversy are two patent pools: one covering CD-R patents owned by Philips, Sony, and Taiyo Yuden and one covering CD-RW patents owned by Philips, Sony, and Ricoh. The companies created these pools in order to license manufacturers to produce and sell Orange

94. See *FTC v. Ind. Fed'n of Dentists*, 476 U.S. 447, 459 (1986) (inquiring into market power to determine if the exclusion was anticompetitive); *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 610–11 (1985) (finding anticompetitive intent in a unilateral termination of access to dominant firm's facilities).

95. *Am. Soc'y of Mech. Eng'rs, Inc. v. Hydrolevel Corp.*, 456 U.S. 556, 571 (1982) (stating that "a standard-setting organization like ASME can be rife with opportunities for anticompetitive activity," such as the opportunity to harm "competitors through manipulation of [the] codes").

96. HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 35.2d. However, in an industry characterized by rapid technological innovation leading to obsolescence, there may be less risk of foreclosure through standardization. See BRUNSVOLD, O'REILLEY & KACEDON, *supra* note 74, at 46–47 (noting that companies may forego litigation and opt for blanket cross-licenses where market forces cause the exclusionary value of the patent to be less than the statutory term).

97. See Robin Cooper Feldman, Essay, *Defensive Leveraging in Antitrust*, 87 GEO. L.J. 2079, 2093–94 (1999) (discussing why tactics used to prevent competition from next-generation technologies are particularly effective "in industries that exhibit network externalities").

98. *Princo Corp. v. Int'l Trade Comm'n*, 563 F.3d 1301, 1304 (Fed. Cir.) (arguing Philips misused its patent rights "through price fixing, price discrimination, and the use of mandatory package licensing to force manufacturers to take licenses to 'nonessential' pool patents in order to obtain licenses to pool patents that were in fact essential to the manufacture of CD-Rs or CD-RWs"), *vacated*, 583 F.3d 1380 (Fed. Cir. 2009). Over the course of litigation, the price-fixing theory was transformed into a foreclosure theory. *Id.* at 1306.

Book compliant discs.⁹⁹ The Orange Book, a technical standard jointly developed by Philips and Sony, is a de facto industry standard for reading and writing CD-R and CD-RW media.¹⁰⁰ Manufacturers of both blank media and devices utilizing the media (the players, the writers, etc.) rely on Orange Book compliance for media compatibility and interoperability.

The Orange Book patent pool teaches an analog absolute-timing method of determining the current location of the laser as it traverses the disc.¹⁰¹ Industry-wide adherence to this standard allows a consumer to insert a blank CD into a laptop CD/DVD drive, burn a playlist to the disc, and then play the disc in any CD player. Princo, however, asserted that the Orange Book standard is not the only method of absolute-time determination contained in the patent pool. Sony developed an alternative digital method that accomplishes essentially the same end but has not been commercialized. Sony's Lagadec patent claims this digital method, but it also contains one claim, claim 6, that lacks any digital limitation and that may cover the Orange Book's analog method, making it an essential patent. Properly interpreting claim 6 to determine whether it also covers the Orange Book standard is absolutely central to the dispute and controls the theory of misuse under which Princo must proceed. As the Federal Circuit noted, a determination that the claim is essential to practicing the Orange Book standard destroys Princo's tying claim and requires consideration of the foreclosure theory.¹⁰² However, if claim 6 does not cover the Orange Book standard, the Lagadec patent becomes nonessential, permitting assertion of patent misuse claims under both theories.

B. EVOLUTION OF PRINCO'S PATENT-MISUSE CLAIMS

After Princo and the other patent-pool licensees ceased paying royalties, Philips, as administrator of the patent pools, initiated two separate actions: one before the ITC and one in U.S. federal court. Philips brought a patent-infringement action in federal district court against Princo.¹⁰³ Princo initially did not raise a foreclosure theory of misuse¹⁰⁴ but, instead, claimed

99. Certain Recordable Compact Discs & Rewriteable Compact Discs, Inv. No. 337-TA-474, USITC Pub. 3686 (Mar. 11, 2004) (corrected notice of commission determination), available at 2004 WL 1435791.

100. *Princo*, 563 F.3d at 1303.

101. *Id.* at 1304. Timing is critical because it is used to determine the location of the CD device's laser (which has replaced the needles used by vinyl-record players) on the disc during reading and recording operations.

102. *Id.* at 1313-15 ("The essential nature of the Lagadec patent to the Orange Book standard cannot justify the refusal to allow it to be licensed for non-Orange Book purposes."). Princo characterized this claim as price fixing. *Id.* at 1315.

103. *U.S. Philips Corp. v. Princo Corp.*, 361 F. Supp. 2d 168, 183 (S.D.N.Y. 2005), *vacated*, 173 F. App'x 832 (Fed. Cir. 2006).

104. *Princo*, 563 F.3d at 1304 (reviewing Princo's initial non-infringement contentions and subsequent stipulation to infringement and assertion of patent misuse).

patent misuse under a tying theory. More precisely, Princo objected that the patents were only available for licensing as a pool and so a licensee must take both the essential patents (the tying product) and the nonessential patents (the tied product) in the pool.

The district court found that Princo had infringed Philips's patents covering CD-R and CD-RW technology¹⁰⁵ and dismissed Princo's claim of patent misuse through tying because Princo had failed to establish a tied product. The court presumed that the patent pool conferred market power on Philips but found that all of the patents were essential to commercialization of the technology.¹⁰⁶

On appeal, the Federal Circuit vacated the district court's conclusions regarding tying and remanded the case for further consideration in light of the Supreme Court's decision in *Illinois Tool Works*,¹⁰⁷ which discarded the presumption that patents confer market power in tying arrangements.¹⁰⁸ Subsequently, the Federal Circuit determined that Princo was entitled to a stay of the infringement proceedings (to determine damages) until resolution of the same issues pending before the ITC.¹⁰⁹

In its action before the ITC, Philips alleged that nineteen foreign companies violated section 337 of the Tariff Act of 1930¹¹⁰ by selling and importing CD-R and CD-RW media that infringed its patents.¹¹¹ In late 2003, the administrative law judge ("ALJ") issued an initial determination finding the asserted patent claims valid and that the accused products

105. *U.S. Philips Corp.*, 361 F. Supp. 2d at 183.

106. *Id.* (finding that Princo "failed to present evidence as to an essential element of their tying claim"—a separate tied product). Note, the federal district court is not bound by the ITC decisions recognizing misuse that are discussed *infra* in Part III.C.

107. *U.S. Philips Corp.*, 173 F. App'x at 835 (disagreeing with the district court's interpretation of 35 U.S.C. § 271(d)(5) as a comprehensive definition of patent misuse).

108. *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 46 (2006) (overruling the presumption that patents confer market power).

109. *In re Princo Corp.*, 478 F.3d 1345, 1356 (Fed. Cir. 2007).

110. 19 U.S.C. § 1337 (2006) (proscribing unfair practices in import trade). This includes importation or sale in the United States "of articles that . . . infringe a valid and enforceable United States patent". *Id.* § 1337(a)(B)(i).

111. Certain Recordable Compact Discs & Rewritable Compact Discs, Inv. No. 337-TA-474, USITC Pub. 3686 (Mar. 11, 2004) (corrected notice of commission determination), *available at* 2004 WL 1435791. Philips alleged that the imported media infringed certain claims of six U.S. patents (U.S. Patent No. 4,807,209 (filed May 31, 1983); U.S. Patent No. 4,962,493 (filed Oct. 25, 1988); U.S. Patent No. 4,999,825 (filed Nov. 1, 1988); U.S. Patent No. 4,972,401 (filed Jan. 17, 1989); U.S. Patent No. 5,023,856 (filed Mar. 28, 1990); U.S. Patent No. 5,418,764 (filed Mar. 31, 1993)). Philips did not name Princo among the nineteen respondents in the investigation in the complaint; however, Princo successfully intervened. Certain Recordable Compact Discs & Rewritable Compact Discs, Inv. No. 337-TA-474, USITC Pub. 3686 (Aug. 14, 2002) (initial determination granting motion to intervene (Order No. 2)), *available at* 2002 WL 1899891.

infringed those claims.¹¹² However, the ALJ found no violation of section 337 because of Philips's misuse of the asserted patents.¹¹³

The ITC, on appeal from the ALJ's initial determination, affirmed that Philips had employed an impermissible tying arrangement by forcing its licensees to accept a package containing both essential and non-essential patents. According to the ITC, this practice had "the anticompetitive effect of foreclosing competition in the alternative technology that competes with the technology covered by a nonessential patent that was included as a so-called 'essential' patent."¹¹⁴ The ITC also considered the procompetitive effects of the patent pool but ultimately affirmed the ALJ's determination that the pool had a net anticompetitive effect because "the convenience to manufacturers of a broad package of patents was outweighed by the anticompetitive effect on alternative technologies of packaging nonessential patents with essential patents."¹¹⁵

On appeal from the ITC's determination, the Federal Circuit reversed and remanded, finding, as it did in the patent-infringement action, that Princo's tying claim lacked a tied product whose constituent market suffered anticompetitive harm.¹¹⁶ The Federal Circuit also found that Princo's misuse theory (foreclosure of a competing alternative technology) failed under a rule of reason analysis.¹¹⁷ In reversing, the Federal Circuit determined that the ITC's rule of reason analysis suffered two fatal flaws.¹¹⁸ First, the ITC's ruling was "largely predicated on the anticompetitive effect on competitors offering alternatives to the . . . nonessential patents . . . [H]owever, there was no evidence . . . that any manufacturer had actually refused to consider alternatives to the technology covered by those patents or for that matter that any commercially viable alternative actually existed."¹¹⁹ Second, the Federal Circuit found that the ITC did not properly account for the economic efficiencies of package licensing (especially considering "the innovative character of the technology at hand") and did

112. Certain Recordable Compact Discs & Rewriteable Compact Discs, Inv. No. 337-TA-474, USITC Pub. 3686 (Oct. 24, 2003) (Commission Determination), *available at* 2003 WL 22988476.

113. *Id.* "[T]he CD-R/RW patent pools of Philips and its licensor-partners constitutes patent misuse because they unreasonably restrain trade in the U.S. market for licensing patented CD-R/RW technology. It does so under the rule of reason just as surely as it constitutes a *per se* violation of the antitrust laws." *Id.*

114. Certain Recordable Compact Discs & Rewritable Compact Discs, Inv. No. 337-TA-474, USITC Pub. 3686 (Apr. 8, 2004) (Commission Opinion).

115. *Id.*

116. U.S. Philips Corp. v. Int'l Trade Comm'n, 424 F.3d 1179, 1193-97 (Fed. Cir. 2005).

117. *Id.*

118. *Id.* at 1198.

119. *Id.*

not properly consider that technological change could, over time, change a prior essentiality determination.¹²⁰

The Federal Circuit noted that the pioneering nature of the technology and the uncertainties surrounding its commercialization justified erring on the side of overinclusion of patents in the pool to prevent potential disputes as the technology and its commercialization continued to evolve.¹²¹ However, in this early appeal, the Federal Circuit rejected the essentiality criterion.¹²² Professor Mark Lemley believes “[t]his was a mistake. Limiting a pool to essential patents serves the useful purpose of permitting competition where it is possible.”¹²³ Furthermore, allowing the inclusion of competing, or alternative, patents in the patent pool “could serve as a price-fixing mechanism” leading to foreclosure.¹²⁴

On remand to the ITC, Princo argued two theories of misuse of the Lagadec patent.¹²⁵ According to Princo, because the Lagadec patent should not be considered essential, Philips impermissibly tied Lagadec to the essential patents in the patent pool. Alternatively, Princo claimed that by including Lagadec in the patent pool with a field-of-use restriction, Philips “engaged in a form of price fixing” by foreclosing potential competition between rival technologies.¹²⁶ In its final determination, the ITC rejected all theories of misuse.¹²⁷

Princo again appealed and the Federal Circuit affirmed the ITC’s rejection of Princo’s theory that Philips had engaged in patent misuse by tying the essential Orange Book patents to the Lagadec patent.¹²⁸ The

120. *Id.* (discussing “the transaction costs associated with making individual patent-by-patent royalty determinations and monitoring possible infringement of patents that particular licensees chose not to license”). The Federal Circuit further declined to introduce “substantial uncertainty into the market and [refused to] displace settled commercial arrangements in favor of uncertainty that could only be resolved through expensive litigation.” *Id.*

121. *Id.* (“As noted, package license agreements in which the royalty was based on the number of units produced, not the number of patents used to produce them, can resolve in advance all potential patent disputes between the licensor and the licensee, whereas licensing patent rights on a patent-by-patent basis can result in continuing disputes over whether the licensee’s technology infringes certain ancillary patents owned by the licensor that are not part of the group elected by the licensee.”).

122. *Id.*

123. Mark A. Lemley & Christopher R. Leslie, *Categorical Analysis in Antitrust Jurisprudence*, 93 IOWA L. REV. 1207, 1243 n.174 (2008).

124. HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 34.4b (quoting Letter from Joel I. Klein, Assistant Attorney Gen., Antitrust Div., Dep’t of Justice, to Carey R. Ramos, Paul, Weiss, Rifkind, Wharton & Garrison (June 10, 1999), available at <http://www.justice.gov/atr/public/busreview/2485.pdf>).

125. Princo Corp. v. Int’l Trade Comm’n, 563 F.3d 1301, 1306 (Fed. Cir.), *vacated*, 583 F.3d 1380 (Fed. Cir. 2009).

126. *Id.*

127. Certain Recordable Compact Discs & Rewriteable Compact Discs, Inv. No. 337-TA-474, USITC Pub. 3686 (Feb. 5, 2007) (Commission Determination).

128. *Princo*, 563 F.3d at 1302.

Federal Circuit did, however, acknowledge Princo's "novel"¹²⁹ claim that Philips and Sony may have "improperly sequestered [an] alternative technolog[y]"¹³⁰ and remanded the case to consider whether Princo "could establish that [Philips and Sony] agreed to license [the Lagadec patent] in a way that would necessarily prevent it from ever becoming a commercially viable alternative technology."¹³¹

This remand left the district court to determine whether Philips and Sony had engaged in patent misuse by foreclosing innovation and competition from a nascent competing standard. The Federal Circuit recognized that a patent misuse claim based on "elimination of competition" might exist where members of the patent pool "agreed not to license [it] in a way that would allow a competitor 'to develop, use[,] or license the [constituent] technology to create a competing product.'"¹³² This includes the debated restriction that the Lagadec patent would only be licensed for uses complying with the Orange Book.

C. ON APPEAL (AGAIN)

Following the most recent remand from the Federal Circuit, all the parties involved realized that the contours of a patent-misuse claim based on foreclosure were not sufficiently elucidated "to develop 'the appropriate standard' for viability 'under the rule of reason.'"¹³³ As a result, all parties petitioned for a rehearing.

The ITC, in its petition, admitted that it had struggled with "insufficient instructions" to determine whether patent misuse through foreclosure had occurred.¹³⁴ The ITC, however, also claimed that it had fully considered whether the Lagadec technology could constitute a competing standard, and that Princo had failed to argue a foreclosure theory of misuse (such as claiming that Sony and Philips had agreed to prevent Lagadec's emergence as a competing standard).¹³⁵ To support its dismissal of the misuse claim, the ITC pointed to Federal Circuit Judge Bryson's dissent, which

129. *Misuse of a Patent Pool: En Banc Federal Circuit To Decide Whether CD-R/RW Patentees Improperly Sequestered Alternative Technologies*, PATENTLY-O BLOG (Oct. 19, 2009, 11:48 AM), <http://www.patentlyo.com/patent/2009/10/misuse-of-a-patent-pool-en-banc-federal-circuit-to-decide-whether-cd-r-rw-patentees-improperly-sequestered-alternative-techn.html>.

130. *Id.*

131. *Princo*, 563 F.3d at 1301-02.

132. *Id.* at 1313-14 (quoting Appellants' Reply Brief at 1, *Princo*, 563 F.3d 1301 (No. 2007-1386), 2008 WL 1995549).

133. *Princo*, 583 F.3d at 1380; Combined Petition, *supra* note 9, at 6-7 (quoting the Federal Circuit's instructions).

134. Combined Petition, *supra* note 9, at 11.

135. *Id.* at 5-7.

acknowledged the ITC finding that “the commercial viability of a method that is prone to errors, unreliable, and unworkable is doubtful.”¹³⁶

Philips, in its petition, agreed with the ITC and claimed that the Federal Circuit “depart[ed] from established misuse and antitrust law . . . and substantially expand[ed] the reach of patent misuse doctrine.”¹³⁷ Philips requested that on rehearing, the Federal Circuit narrowly define, or refuse to recognize, patent misuse through foreclosure of a potential competing standard.¹³⁸ If such a theory of patent misuse is found to exist, Philips asked that the resulting unenforceability from such misuse not apply to the pool but only to the patent covering the alternative standard.¹³⁹

Following a rehearing en banc, the Federal Circuit, in a split decision,¹⁴⁰ held that an alleged horizontal agreement between Sony and Philips to suppress Sony’s technology in favor of that of Philips did not impermissibly “leverage” an asserted patent in the infringement suit and thus did not fall within the ambit of patent misuse.¹⁴¹ “At bottom, Princo’s complaint is not that its license to the Raaymakers patents is unreasonably conditioned, but that the Lagadec patent has not been made available for non-Orange-Book uses. And that is not patent misuse under any court’s definition of the term.”¹⁴²

136. *Princo*, 563 F.3d at 1325 n.2 (Bryson, J., concurring in the result and dissenting in part).

137. Petition for Rehearing En Banc of Appellee U.S. Philips Corp. at 7–12, *Princo*, 583 F.3d 1380 (No. 2007-1386), 2009 WL 1974577.

138. *Id.* at 7–15. Philips presented two questions:

1. Whether a supposed agreement, between developers of new technology and a new product standard, to license one of the resulting patents only for use under that standard, thus foreclosing the possibility that it might be used to create a competing standard, could be held anticompetitive without (i) defining a relevant market in which the standards compete and (ii) proving that the agreement injured or was likely to injure competition in that market.

2. Whether such an agreement, even if deemed anticompetitive, would be a proper basis for invoking the doctrine of patent misuse to refuse enforcement of *different* patents used to practice the joint standard.

Id. at 1.

139. *Id.* at 7–15.

140. Judges Prost and Mayer concurred in the majority’s analysis of the foreclosure claim but refused to limit misuse claims to leveraging agreements pertaining to asserted patents, rather than the patent pool as a whole. *Princo Corp. v. Int’l Trade Comm’n*, No. 2007-1386, 2010 WL 3385953, at *18–19 (Fed. Cir. Aug. 30, 2010) (en banc) (Prost, J., concurring in part). Judges Dyk and Gajarsa dissented and advocated for the expansion of the misuse doctrine to include foreclosure of alternative technologies through agreements not to license outside of the patent pool. *Id.* at *23 (Dyk, J., dissenting).

141. *Id.* at *10–11 (majority opinion) (requiring misuse to be of the patent in suit and suggesting that an antitrust claim is more appropriate when the challenged agreement is between patent-pool participants and “the patent in suit [did not] itself significantly contribute to the practice under attack”).

142. *Id.* at *11.

Princo, in its foreclosure argument, failed to directly challenge the Orange Book standardization process and instead indirectly suggested that Sony and Philips had agreed to suppress competition between the Orange Book and the Lagadec technology.¹⁴³ In apparent anticipation of such a misuse claim involving a patent in suit, the majority proceeded to briefly address and dismiss Princo's foreclosure theory.¹⁴⁴ To succeed in showing that the patent-pool agreement anticompetitively foreclosed nascent technology, the court required that Princo demonstrate a "reasonable probability" that the Lagadec technology, if available for licensing, would have matured into a competitive force in the . . . [relevant] market."¹⁴⁵ The court determined that even if the alleged agreement impermissibly extended the patent's scope, it had no anticompetitive effect since there was no evidence that Sony or any of the licensees would have made the technology commercially or technically viable.¹⁴⁶ An in-depth analysis of a patent-pool foreclosure claim and a suggested framework to guide the misuse determination is presented below.

IV. A FRAMEWORK FOR A RULE OF REASON ANALYSIS IN CASES OF ALTERNATIVE-TECHNOLOGY FORECLOSURE

This Note proposes that when considering whether patent-pool restrictions placed on a patent in suit constitute misuse through foreclosure, courts should follow a rule of reason inquiry modeled after the antitrust framework Justice Breyer sets out in *California Dental Ass'n v. FTC*.¹⁴⁷ This framework does "not simply ask whether the restraints at issue are anticompetitive overall[, but] [r]ather . . . break[s] that question down into four classical, subsidiary antitrust questions."¹⁴⁸ These questions are: "(1) What is the specific restraint at issue? (2) What are its likely anticompetitive effects? (3) Are there offsetting procompetitive justifications? (4) Do the parties have sufficient market power to make a difference?"¹⁴⁹ Only after proceeding through these four questions does a court reach a stage at which "real balancing" of all potentially relevant factors must occur.¹⁵⁰

As with any rule of reason test, the efficacy of its analysis directly corresponds to the ease of its administration, and the relevance of the procompetitive factors balanced with the anticompetitive harm alleged. To

143. *Id.* at *15.

144. *Id.*

145. *Id.* at *17.

146. *Id.*

147. 526 U.S. 756 (1999).

148. *Id.* at 782 (Breyer, J., concurring in part and dissenting in part).

149. *Id.*; see also 7 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION 380-83 (2d ed. 2003) (offering a six-stage inquiry that examines market power in a separate stage).

150. AREEDA & HOVENKAMP, *supra* note 149, at 382.

be administrable, these factors must be capable of proof by quality, empirical evidence.¹⁵¹ In the end, the goal of such an analysis in a foreclosure case is to determine, without undue speculation, whether the patent-pool arrangement resulted in significant exclusion of a technology reasonably likely to be developed into a “competitive force.”¹⁵² In the parts that follow, this Note attempts to explicate how Justice Breyer’s phased rule of reason inquiry would be applied to a case of nascent-technology foreclosure.¹⁵³

A. IDENTIFYING THE SPECIFIC RESTRAINT AT ISSUE

The first phase, determining the specific restraint at issue, appears deceptively simple but is “[t]he most important question.”¹⁵⁴ Restraints include more than the mere literal agreement between the patent-pool parties and extend to a “set of restraints arising out of the way the [patent-pool parties] implemented [the agreement] in practice.”¹⁵⁵ The factors relevant to a determination of implementation in practice vary with the controversy¹⁵⁶ but generally include: licensing guidelines, enforcement policies, inclusion in the patent pool, determination of the royalty-sharing scheme, and consideration of the terms of the actual patent-pool licenses granted.¹⁵⁷ The motivation behind this phase of the analysis is to single out the actual restraints in order to determine whether “the challenged practice arguably threaten[s] either to reduce output or raise price.”¹⁵⁸ If the restraints do neither, the analysis may end and the restraint found valid; otherwise, the analysis continues on with the examination of the likely anticompetitive effects.¹⁵⁹

The Federal Circuit in *Princo* departed from this established understanding by limiting the focus on agreements between a patent-pool licensee and the patent-pool administrator with respect to only the patents

151. Lemley & Leslie, *supra* note 123, at 1267 (stating that “agreements should be categorized according to their empirically demonstrated pro-competitive or anticompetitive effects”).

152. *Princo Corp. v. Int’l Trade Comm’n*, No. 2007-1386, 2010 WL 3385953, at *17 (Fed. Cir. Aug. 30, 2010) (en banc).

153. See *United States v. Microsoft Corp.*, 147 F.3d 935, 948 (D.C. Cir. 1998) (“Antitrust scholars have long recognized the undesirability of having courts oversee product design, and any dampening of technological innovation would be at cross-purposes with antitrust law.”).

154. *Cal. Dental*, 526 U.S. at 782 (Breyer, J., concurring in part and dissenting in part).

155. *Id.*

156. *Id.* at 781 (majority opinion) (noting that “[w]hat is required . . . is an enquiry meet for the case”).

157. See *supra* Part II.B–C.

158. AREEDA & HOVENKAMP, *supra* note 149, at 380.

159. *Cal. Dental*, 526 U.S. at 784 (Breyer, J., concurring in part and dissenting in part); AREEDA & HOVENKAMP, *supra* note 149, at 382.

in suit.¹⁶⁰ However, this limited focus “seems to ignore that the challenged agreement could just as easily be framed as a [joint] decision to license some patents [(Orange Book)] and an affirmative refusal to license another (Lagadec).”¹⁶¹ The majority notes that the agreements between participants in a patent pool should be considered in context.¹⁶² But, as the dissent asserts, these agreements “were not separate or collateral agreements . . . but were part and parcel of the same course of conduct designed to protect the [Orange Book] patents from competition from the alternative Lagadec technology.”¹⁶³ Therefore, despite the majority in *Princo*, these patent-pool agreements should be considered restraints connecting the patents in suit to the alleged misconduct.¹⁶⁴

Princo suggested that Philips and Sony included the Lagadec patent in the Orange Book patent pool solely to preclude its use as a competing standard. However, the Federal Circuit found that including the Lagadec patent in the patent pool was valid because the Lagadec patent may reasonably be considered to be a blocking patent—a patent necessary to practice the Orange Book standard.¹⁶⁵

The patent-pool license provisions limiting the Lagadec patent’s field of use to analog implementations are more problematic.¹⁶⁶ This restriction, combined with the alleged understanding that Sony would “not . . . license the Lagadec patent for non-Orange Book purposes,”¹⁶⁷ and Philip’s actual implementation of Orange Book patent-pool licensing practices, require further analysis as potential patent misuse in the next phase.¹⁶⁸

160. *Princo Corp. v. Int’l Trade Comm’n*, No. 2007-1386, 2010 WL 3385953, at *11-12 (Fed. Cir. Aug. 30, 2010) (en banc) (suggesting that horizontal agreements between patent-pool participants are properly the subject of antitrust claims independent of the patent-misuse issue). *But see id.* at *19 (Prost, J., concurring in part) (opining that “antitrust considerations are [not] an entirely ‘different issue,’ separate and apart from . . . patent misuse”).

161. *Id.* at *19 (“[P]atents ‘grant no privilege to their owners of organizing the use of those patents to monopolize an industry through price control.’” (quoting *United States v. U.S. Gypsum Co.*, 333 U.S. 364 (1948))).

162. *Id.* at *14 (majority opinion).

163. *Id.* at *23 (Dyk, J., dissenting). This Note endorses the dissenting view that “licensing agreements [between patent-pool participants] that are designed to protect patented technologies from competition and thereby extend their monopoly” may constitute the sort of patent leveraging required to meet the majority’s definition of patent misuse. *Id.* at *24. However, had both the Orange Book patents and the Lagadec patent been in suit, the majority’s test could not have readily discarded the Lagadec patent.

164. *Id.* at *10 (majority opinion).

165. *U.S. Philips Corp. v. Int’l Trade Comm’n*, 424 F.3d 1179, 1196-97 (Fed. Cir. 2005).

166. *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997) (noting that the anticompetitive effects that field-of-use restrictions may cause are evaluated under the rule of reason).

167. *Princo Corp. v. Int’l Trade Comm’n*, 563 F.3d 1301, 1320 (Fed. Cir.), *vacated*, 583 F.3d 1380 (Fed. Cir. 2009).

168. *Princo*, 2010 WL 3385953, at *13 (noting that patent-pool agreements between firms involved in a joint venture are evaluated under the rule of reason).

B. DETERMINING LIKELY ANTICOMPETITIVE EFFECTS OF THE RESTRAINT

This second phase of analysis considers whether the “[challenged] licensing condition has the effect of impermissibly broadening the patent grant”¹⁶⁹ such that “the potential for genuine adverse effects on competition” or innovation exists.¹⁷⁰ Initially, the court must characterize the restraint as either a naked restraint (one lacking any procompetitive justification) or as a restraint, ancillary to the patent-pooling agreement, that has some rational, procompetitive justification.¹⁷¹ The former receives per se treatment and is adjudged illegal without further inquiry.¹⁷² The latter must be evaluated under the rule of reason, which includes a determination of the relevant market and a consideration of anticompetitive harm (or the likelihood thereof). As the Federal Circuit notes, claims of misuse surrounding patent pools, which contain the patents of a group of firms, as an alternative-product-foreclosure mechanism should be subject to the rule of reason.¹⁷³

Once the court characterizes the restraint, an allegation of an agreement between the patent-pool parties to not license a constituent patent outside of the pool should be required for the misuse inquiry to proceed. This agreement may be explicit or inferred from the actions of the parties.¹⁷⁴ For instance, *Princo* asserted that the terms of the Orange Book

169. *Id.* at *8.

170. *Cal. Dental Ass’n v. FTC*, 526 U.S. 756, 784 (1999) (Breyer, J., concurring in part and dissenting in part) (quoting *FTC v. Ind. Fed’n of Dentists*, 476 U.S. 447, 460 (1986)) (internal quotation marks omitted).

171. *See Princo*, 2010 WL 3385953, at *13 (noting that agreements between firms participating in standard-setting or research joint ventures are evaluated under the rule of reason). Further, “‘ancillary restraints’ that are often important to collaborative ventures, such as agreements between the collaborators not to compete against their joint venture, are also assessed under the rule of reason.” *Id.* at *14.

172. The Supreme Court has determined that “judicial inexperience with a particular arrangement counsels against extending the reach of per se rules,” especially where some sort of industry cooperation is “essential if the product is to be available at all.” *Nat’l Collegiate Athletic Ass’n v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85, 100 n.21, 101 (1984); *see also Broad. Music, Inc. v. CBS*, 441 U.S. 1, 9–10 (1979) (explaining that the anticompetitive likelihood of horizontal price and output restrictions justifies application of the per se rule without further inquiry); *United States v. Topco Assocs., Inc.*, 405 U.S. 596, 607–08 (1972) (applying the per se rule to geographic market division of joint venture’s private-label sales).

173. *Princo*, 2010 WL 3385953, at *14 (“Congress has recognized [the] procompetitive features [of standardization] and has directed that the activities of a ‘standards development organization while engaged in a standards development activity’ is subject to the rule of reason.” (citing Standards Development Organization Advancement Act of 2004, Pub. L. No. 108-237, § 104, 118 Stat. 661, 663 (codified as amended at 15 U.S.C. § 4302 (2006)))); *Addamax Corp. v. Open Software Found., Inc.*, 152 F.3d 48, 52 (1st Cir. 1998) (“In [the] context [of joint ventures], flinging around terms like ‘cartel’ and ‘boycott’ do not convert a rule of reason claim into a per se one.” Joint conduct in a standard-setting context will only “be condemned under section 1 if the balance of harms and benefits tipped in favor of harms”).

174. *Cal. Dental*, 526 U.S. at 782 (Breyer, J., concurring in part and dissenting in part).

patent pool evinced such an agreement between Philips and Sony, effectively resulting in an exclusive license grant of the Lagadec patent to the pool.¹⁷⁵

Exclusive licenses raise concerns of patent misuse through foreclosure of competition and innovation because intellectual property is different from traditional property in an important regard. Unlike traditional property, use of intellectual property does not deplete the intellectual property or interfere with others' ability to use it, because use or improvement upon intellectual property requires no physical or legal control.¹⁷⁶ Because of this nonrivalrous nature, exclusivity of intellectual property rights allows a rightsholder to more easily achieve supra-competitive profits.¹⁷⁷ This potential incentivizes innovation at the outset but can easily be leveraged towards anticompetitive or anti-innovative ends.¹⁷⁸ For this reason, courts prefer non-exclusive licenses.¹⁷⁹

Additionally, in the next phase of the analysis, it may be difficult to identify efficiencies present in exclusive licenses that their non-exclusive counterparts do not offer.¹⁸⁰ Obviously, efficiency exists where a single, capital-lacking firm grants an exclusive license to another firm possessing the requisite resources to commercialize the invention—the public receives the benefit of the innovation that would otherwise remain off the market. On the other end of the spectrum, in a standardized product scenario, efficiencies may be less likely to exist since the benefit of a standard (especially in a networked industry) lies in its proliferation. Exclusive licenses in this instance may aid firms in eliminating downstream royalty competition and foreclosing future, corollary innovation.¹⁸¹

For these reasons, if the court finds a non-exclusive license in the explicit language of the patent-pool agreement and the actual patent-pool

175. “[T]he agreement stated ‘we confirm with respect to the aforementioned Patent Rights on joint inventions that we will license such Patent Rights outside the jointly agreed upon system standards only in cases which can reasonably be considered exceptional.’” *Princo Corp. v. Int’l Trade Comm’n*, 563 F.3d 1301, 1320 (Fed. Cir.) (citation omitted), *vacated*, 583 F.3d 1380 (Fed. Cir. 2009).

176. Mark A. Lemley, *What’s Different About Intellectual Property?*, 83 TEX. L. REV. 1097, 1099 (2005).

177. *Id.*

178. *Moraine Prods. v. ICI Am., Inc.*, 538 F.2d 134, 145–46 (7th Cir. 1976) (applying rule of reason analysis to determine whether anticompetitive intent of the licensor and licensee could be inferred).

179. Lemley & Leslie, *supra* note 123, at 1267 (“[L]ong experience has taught that they are not unreasonable restraints of trade, and the grant of [such] a patent license is not itself problematic.”).

180. *Princo*, 563 F.3d at 1316.

181. *Princo Corp. v. Int’l Trade Comm’n*, No. 2007-1386, 2010 WL 3385953, at *15 (Fed. Cir. Aug. 30, 2010) (en banc) (discussing the relevance of a showing that “the pool licensors would have competed in the technology licensing market absent the pooling arrangement” to the determination of an anticompetitive effect).

licensing practices support this language, then the inquiry should end.¹⁸² However, the patent-misuse inquiry must continue to the next phase when the patent-pool agreement or its implementation suggests an exclusive license, as it did in *Princo*.¹⁸³

A more difficult question arises when future competition (and consumer choice) between a current technology and a nascent technology is restrained. In this case, the court must adjudge “where on the continuum between ‘certainly would have been viable’ and ‘certainly could not have been viable’” the nascent technology lies.¹⁸⁴ The party asserting misuse should be required to demonstrate a reasonable probability that the product or technology would become commercially viable or technically feasible in the absence of the challenged restraint.¹⁸⁵

A nascent technology, not the subject of unreasonable anticompetitive practices, which is not commercialized cannot possibly be wrongfully foreclosed.¹⁸⁶ As the Federal Circuit noted, “If there are no commercially practicable alternatives to the allegedly nonessential patents, packaging those patents together with so-called essential patents can have no anticompetitive effect in the marketplace, because no competition for a viable alternative product is foreclosed.”¹⁸⁷ Therefore, a court should determine whether in the absence of the restraint it is reasonably likely that the product would be brought to market within the window of commercial opportunity.¹⁸⁸

As part of this determination, the networked nature of the market warrants consideration. Because standardization creates network effects in

182. See *id.* at *16 (“*Princo* did not show that any potential disc manufacturer had ever been refused a license to the Lagadec patent for purposes of producing non-Orange-Book discs, or had even sought to explore that possibility.”).

183. See *id.* at *13–14 (assuming the existence of an agreement not to license in competition with the Orange Book and discussing the procompetitive efficiencies resulting from joint-venture standard setting).

184. *Princo*, 563 F.3d at 1319.

185. *Princo*, 2010 WL 3385953, at *15–17; see *Princo*, 563 F.3d at 1315 (discussing *Princo*’s allegations that the patent-pool agreement foreclosed the possibility that the alternative technology would ever be commercially viable and noting that *Princo* failed to satisfy its burden of proving the allegations).

186. See *Princo*, 2010 WL 3385953, at *15 (noting the Commission’s comment that “the commercial viability of a method that is prone to errors, unreliable, and unworkable is doubtful” (internal quotation marks omitted)).

187. *U.S. Philips Corp. v. Int’l Trade Comm’n*, 424 F.3d 1179, 1194 (Fed. Cir. 2005) (commenting further that finding misuse in such a situation “give[s] licensees a way of avoiding their obligations under the licensing agreements, with no corresponding benefit to competition in any real-world market”).

188. See *Princo*, 2010 WL 3385953, at *17 (“Because there was no evidence that Sony would have entered the CD-R/RW market with a system based on the Lagadec technology and no evidence that such a system would have become a significant competitive force in that market, the Commission held [the foreclosure] theory insufficient to support a finding of patent misuse.”).

which a product's value increases as its consumer market increases, the network effects also operate as an entry barrier, discouraging firms from offering a competing product that does not conform to the prevalent standard.¹⁸⁹ Yet, so long as the standardization process was not itself anticompetitive, this resulting barrier to entry is acceptable and significantly decreases the likelihood that any firm would attempt to introduce an alternative, non-conforming technology to market.¹⁹⁰

In cases where active competition exists in the market, the product life cycle¹⁹¹ also becomes an important factor, especially when evaluated in concert with the networked nature of the market. An abbreviated product lifecycle, typically present in a market characterized by rapid innovation, may indicate an increased likelihood of viability for a next-generation technology, but perhaps not for an alternative technology. This is especially the case in networked markets requiring interoperability, so long as interoperability includes backwards-compatibility.¹⁹² Furthermore, the pace of innovation is highly relevant because it can narrow the window of commercial opportunity that would cause a rational firm to bring a product to market.

In the context of the *Princo* controversy, Princo complains that the Orange Book patent pool foreclosed competition by denying its use of alternative technology.¹⁹³ Consideration of the relevant factors raises considerable doubts regarding foreclosure of a competing product. The Federal Circuit noted the lack of "evidence in the record that Sony would have entered and survived to become a significant competitive force in the CD-R/RW market with the Lagadec technology or that, absent the pooling arrangements, the pool licensors would have competed with the Orange Book technology."¹⁹⁴ Furthermore, it is even more unlikely that a downstream producer (Princo) of a product, standardized for interoperability in a networked market, would consider it rational to attempt to insert an alternative, non-conforming product into such a market.¹⁹⁵

189. HOVENKAMP, *supra* note 21, at 277-91.

190. *Princo*, 2010 WL 3385953, at *14 (discussing the "decidedly procompetitive effects" of the development of industry-wide standards).

191. George S. Day, *The Product Life Cycle: Analysis and Applications Issues*, 45 J. MARKETING 60, 62 (1981) (defining the product life cycle as the life of a product in the market with respect to business goals, commercial costs, and sales measures).

192. HOVENKAMP, *supra* note 21, at 274-76.

193. *Princo*, 2010 WL 3385953, at *15.

194. *Id.* at *16.

195. *Id.* (noting that "there was no evidence that any potential licensee might develop the Lagadec technology to compete with the Orange Book discs").

C. EVALUATING OFFSETTING PROCOMPETITIVE JUSTIFICATIONS

Once the court has identified the restraint at issue and determined its propensity for anticompetitive foreclosure, it must “ask whether, despite their anticompetitive tendencies, these restrictions might be justified by other procompetitive tendencies or redeeming virtues.”¹⁹⁶ The possible justifications depend greatly on the facts of the case but tend to be characterized as either reducing consumer costs or increasing quality.¹⁹⁷ Patent pools undoubtedly accomplish both because of the enormous efficiencies offered through reducing transaction costs, “clearing possible blocking patents, integrating complementary technology, and avoiding [infringement] litigation.”¹⁹⁸

Restraints justified on the grounds of consumer preference, however, tend to be found lacking when the restraint preempts market selection.¹⁹⁹ For instance, a restraint that presumes, a priori, to know consumer preferences but “has the effect of reducing the importance of consumer preference” is anticompetitive because it inhibits consumer choice.²⁰⁰ But a restraint that functions to protect consumers (as market participants) may be justifiable.²⁰¹ As the *Princo* court notes, many procompetitive justifications for the challenged patent-pool agreement resulting from the Philips and Sony joint venture exist.²⁰² Among these benefits are the positive network effects due to the networked nature of the product market, satisfying the consumer’s expectation of interoperability, and spurring innovation by establishing a technical baseline.²⁰³

Networks and interoperability are two faces of the same coin. Network industries are “typically . . . organized around an ubiquitous standard” that creates interoperability.²⁰⁴ Especially in network industries, standard-setting provides an extremely valuable consumer benefit because the products must

196. *Cal. Dental Ass’n v. FTC*, 526 U.S. 756, 787 (1999) (Breyer, J., concurring in part and dissenting in part).

197. *AREEDA & HOVENKAMP*, *supra* note 149, at 381–82.

198. *Princo*, 2010 WL 3385953, at *4.

199. *United States v. Microsoft Corp.*, 253 F.3d 34, 58 (D.C. Cir. 2001) (en banc) (per curiam) (noting a practice “must harm the competitive *process* and thereby harm consumers”).

200. *Nat’l Collegiate Athletic Ass’n v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85, 107 (1984).

201. *Cal. Dental*, 526 U.S. at 777–78 (acknowledging that a “countervailing, and at least equally plausible, suggestion that restricting difficult-to-verify claims about quality or patient comfort would have a procompetitive effect by preventing misleading or false claims that distort the market”).

202. *Princo*, 2010 WL 3385953, at *14 (mentioning the significant benefits that accrue from economies of scale and integration of complementary capacities).

203. *Id.*

204. Randal C. Picker, *Regulating Network Industries: A Look at Intel*, 23 HARV. J.L. & PUB. POLY 159, 161 (1999).

work together.²⁰⁵ Due to these characteristics, adoption of an alternative technology may not be rational, leading to the conclusion that anticompetitive foreclosure of competition or innovation is unlikely to have occurred—unless, of course, the standard-setting process is flawed.²⁰⁶ Here, again, a downstream producer may struggle to show that foreclosure of its opportunities to innovate in the abstract outweighs procompetitive benefits inuring from a standardized, interoperable market.

While the analysis in *Princo* ended at this phase (and the challenged restraints found not to constitute patent misuse),²⁰⁷ in order to offer a complete framework, a brief discussion of market power follows.

D. SUFFICIENT MARKET POWER IN A RELEVANT MARKET TO MAKE A DIFFERENCE

In a case of alleged foreclosure of a nascent technology, a court must consider whether the patent pool possesses sufficient market power in a properly defined relevant market for the patent-pool restriction to adversely affect prospective competition.²⁰⁸ Distinct from tying, which requires that the tied product be part of a separate product market,²⁰⁹ alternative-technology foreclosure necessarily requires that the technologies be part of the same market.²¹⁰ This does not mean that the markets have to be one and the same; rather, it should be enough that the markets cross over. Since patentees are not required to describe the invention as ultimately embodied in final commercial form,²¹¹ the potential for application in several distinct markets exists. Because the nature of the foreclosure argument presupposes that the prevailing product necessarily resides in the same relevant market as the potentially competing good, a relevant-market determination may require less attention than both a determination of harm and an evaluation of proffered procompetitive justifications.

In *Princo*, the market-power analysis and market definition arrived at by the ITC was not seriously challenged and was accepted by the Federal Circuit.²¹² As the Federal Circuit noted, Sony's Lagadec patent contained six

205. Lemley & Leslie, *supra* note 123, at 1232.

206. *Princo*, 2010 WL 3385953, at *15 (noting that *Princo* did not challenge the standard-setting process).

207. *Id.* at *18.

208. *Cal. Dental Ass'n v. FTC*, 526 U.S. 756, 788 (1999) (Breyer, J., concurring in part and dissenting in part) (asking “would [the restraint] likely have made a real difference in the marketplace”); see also *Princo*, 2010 WL 3385953, at *18 (finding that the nascent technology “lacked both the technical and the commercial prospects that would have made it a possible basis for a product that could compete . . . in the [relevant] market”).

209. *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 41 (2006).

210. *Princo*, 2010 WL 3385953, at *18; Bohannon, *supra* note 4, at 496 (offering *Lasercomb Am., Inc. v. Reynolds*, 911 F.2d 970 (4th Cir. 1990), as an example of innovation foreclosure in the same market).

211. See *Engel Indus., Inc. v. Lockformer Co.*, 946 F.2d 1528, 1533 (Fed. Cir. 1991).

212. *U.S. Philips Corp. v. Int'l Trade Comm'n*, 424 F.3d 1179, 1186 (Fed. Cir. 2005).

claims—six separate inventions—that could each lead to a different product or arguably a different market. The court, however, determined that because “Claim 6 of the Lagadec patent could be viewed as reasonably necessary to practice the Orange Book standard” the Lagadec patent “qualif[ied] as an essential Orange Book patent,” which justified its inclusion in the patent pool.²¹³ The court further explained that a “group of patents essential to practice a particular technology or standard generally may be viewed as a unified product,”²¹⁴ and thus part of the same market. Even though Philips possessed market power in the data storage market, the likelihood of anticompetitive harm did not outweigh the benefits offered by the Orange Book patent pool.²¹⁵ Therefore, the Orange Book patent-pool licensing should not constitute patent misuse.

E. ARGUMENTS FOR SUCH A FRAMEWORK

Many benefits accrue from adopting the proposed framework. First, courts developed rule of reason analysis because it could flexibly apply antitrust law to a plethora of factual scenarios while simultaneously weighing competition policy concerns. The proposed framework incorporates that same flexibility into evaluations of conduct challenged as patent misuse. Second, as noted in Part II.A above, courts typically apply rule of reason analysis to patent misuse, so the framework works with the existing system and does not attempt to impose a radical paradigmatic shift.

The real value of the proposed framework, however, is that it guides the rule of reason analysis in a phased application and emphasizes the important considerations at each phase. The framework asks a series of pruning questions, amenable to dispositive motions, based on a series of presumptions²¹⁶ that limit the possibility of proceeding towards prolonged (and costly) discovery and litigation. Context is necessary to fully appreciate this advantage. When patent law borrowed the rule of reason from antitrust law, it also meant that patent law adopted the rule of reason’s proclivity for complex litigation, involving full-blown discovery complete with economic and statistical modeling. As Professor Herbert Hovenkamp notes, “[T]he rule of reason has been excessively cumbersome[and u]nder it, parties have launched into wide-ranging discovery . . . often without a good idea of the underlying theory of the complaint.”²¹⁷ Currently, courts may struggle to focus a party’s chimeric theories of patent misuse, when that party loses sight of the endgame, and succumb to a traditional “kitchen sink” rule of reason

213. *Princo Corp. v. Int’l Trade Comm’n*, 563 F.3d 1301, 1310 (Fed. Cir.), *vacated*, 583 F.3d 1380 (Fed. Cir. 2009).

214. *Id.* at 1308.

215. *Princo*, 2010 WL 3385953, at *18.

216. *See* HOVENKAMP, *supra* note 21, at 309.

217. *Id.* “Antitrust suits [involving rule of reason analysis] are often complex, frequently more complex than they need to be.” *Id.* at 77.

inquiry.²¹⁸ This framework guides those courts as the litigation proceeds and attempts to prevent the unnecessary expenditure of resources along the way.

F. *POTENTIAL ARGUMENTS AGAINST SUCH A FRAMEWORK*

Courts have sometimes expressed distaste for “totality of the circumstances’ tests”²¹⁹ due to their inherent uncertainty. However, the proposed framework comports with the trend away from per se competition violations and towards directed analysis. Furthermore, the rule of reason, as a balancing test, requires case-by-case application. A framework that identifies factors to consider and guidelines for their consideration reduces the uncertainty of rule of reason analysis and allows courts to achieve a balance between the distinct economic concerns of intellectual property and antitrust law—innovation and competition.²²⁰

It may also be argued that this framework sets the viability bar too high for alternative standards. However, the interoperability concerns present in emerging networked markets necessitate intra-industry cooperation,²²¹ which will inevitably lead to winners and losers. Furthermore, because of the high switching costs inherent in a networked market with entrenched standards, emergence of highly innovative products tends to be lumpy—widespread but infrequent.²²² Even in cases of intra-industry standard-setting, this lumpiness may be a case of market self-selection: firms, realizing customers may be hesitant to pay the high switching costs, will refuse to invest in an incrementally innovative product for which there may be little chance of recouping their research and development costs.²²³

Finally, it may be argued that this framework ignores the fact that Princo and most of the other accused infringers operate almost exclusively as manufacturers and are currently not positioned (and, indeed, are unlikely to ever be positioned) to innovate with respect to emerging media formats. Thus, companies similarly situated to Princo may escape paying royalties by asserting patent misuse against a patentee even when they have no interest

218. *Id.* at 309. “The rule of reason is not an open-ended inquiry into ‘reasonableness’ [and should allow for] the benefit of any of the shortcuts that common sense indicates.” *Id.*

219. *Burnham v. Superior Court*, 495 U.S. 604, 626 (1990); *see also Wal-Mart Stores, Inc. v. Samara Bros., Inc.*, 529 U.S. 205, 214 (2000) (dismissing application of the overly complicated *Seabrook* test for determining the inherent distinctiveness of product design because “[s]uch a test would rarely provide the basis for summary disposition of an anticompetitive strike suit”).

220. HOVENKAMP, *supra* note 21, at 254 (“At a high enough level of abstraction one can always find a conflict between antitrust and the IP laws. They balance economic growth in two different ways: through competition and innovation.”).

221. HOVENKAMP, JANIS & LEMLEY, *supra* note 56, § 35.2d.

222. *See Lemley & Shapiro, supra* note 22, at 2016 (explaining that “if multiple manufacturers have begun selling products that comply with the initial standard, possibly including various complementary products associated with the standard, switching to a noninfringing design can be extremely costly and commercially infeasible”).

223. *Id.*

in pursuing the opportunity restricted by the patent-pool license. This concern, arguably valid, falls outside of the scope of this Note and is contrary to established patent-misuse precedent.²²⁴

V. CONCLUSION

The framework proposed in this Note provides a phased analysis, borrowed from antitrust law, to guide courts when applying the rule of reason to patent-pool licensing practices to determine if they foreclose competition from potential alternative products. The underlying theme is that, absent patent-pool practices that are substantially likely to foreclose otherwise commercially viable alternatives, market-based factors—the primary force dictating a rational firm’s strategy towards innovation—should be the focus of the inquiry, because “historical experience in this country and others clearly indicates that governments who try to pick winners and drive growth too often end up wasting resources and stifling rather than promoting innovation.”²²⁵ The framework, with its phased analysis and guidelines for implementation, relies upon antitrust law’s significant experience with rule of reason inquiries. In the end, the goal is to provide clear considerations and “make sure individuals and businesses have the tools and support to take risks and innovate, but . . . not [to] dictate what risks they take.”²²⁶ Excessive, unguided speculation into the realm of what could have been muddies the waters for courts and innovators alike.

224. *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488, 493–94 (1942) (noting that patent misuse may be asserted by parties not in competition with the patentee), *overruled by* *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006).

225. A STRATEGY FOR AMERICAN INNOVATION, *supra* note 2, at 6. Also, see Justice Breyer’s comments in *MGM v. Grokster, Ltd.*:

Judges have no specialized technical ability to answer questions about present or future technological feasibility or commercial viability where technology professionals, engineers, and venture capitalists themselves may radically disagree and where answers may differ depending upon whether one focuses upon the time of product development or the time of distribution.

545 U.S. 913, 958 (2005) (Breyer, J., concurring separately).

226. A STRATEGY FOR AMERICAN INNOVATION, *supra* note 2, at 7.