PATENT MISUSE AND INNOVATION

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I. Introduction

Economists often make the distinction between innovation and invention. Innovation involves a multifaceted effort: the discovery, development, improvement and commercialization of new processes and products. Innovation therefore differs from invention. It includes not only the initial discovery or the creation of potential new products or processes, but also their subsequent development and commercialization. Since Schumpeter, the consensus among economists is that innovation is the most important factor in the growth of the economy. The patent system, whose principal purpose is to promote innovation by giving incentives to inventors, is a prominent method that society utilizes to encourage innovation.

This policy goal is rooted in the original Constitutional language that provides for legislation “[t]o promote the Progress of Science and the useful Arts, by securing for limited times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” In this way, the Constitution does

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2. See id. This distinction is attributed to Joseph Schumpeter. Id at 39-40.
3. See generally Nelson & Winter supra note 1, at 263 (discussing innovation as factor in economic growth).
more than empower Congress to grant patents, it grants that power specifically to promote the progress of science. When viewed from its 150 year existence, the goal expressed in the Constitutional provision has come to fruition. Despite a dearth of empirical support for the patent system, the consensus remains that in certain industries, it has played a positive role in the evolution of the United States becoming the paramount technological innovator in the world.

Today, however, the patent system is viewed with increasing skepticism and scholarly literature is unsparring in pointing out its deficiencies. Many commentators view the patent system as a hindrance rather than a stimulus to innovation. The criticism follows a familiar pattern. An increase in patent applications and weakened standards for examining patents has led to a dramatic increase in the number of patents granted in the U.S., roughly tripling between 1983 and 2002. During this same period, the Court of Appeals for the

5. See id.
10. See ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT 6, 50 (2004) see also BESSEN & MEURER, supra note 9, at 5 9. “By the late 1990’s, the costs that patents imposed on public firms outweighed the benefits.” Id.
Federal Circuit (CAFC) made it easier to enforce the rights conferred by the acquisition of a patent and has extended those rights by doctrines such as the doctrine of equivalents. It is hardly surprising that patent litigation has swelled, nurtured by a progressive escalation in monetary awards. Single company acquisition of a dense web of overlapping patents—patent thickets—may create a seemingly impenetrable web which a company must hack its way through in order to commercialize new technology. As the number of issued patents skyrocket, companies more frequently enter into arrangements with competitors “not only to recover their investment from creating patented products but also to avoid the patent landmines that line the path of innovation.” Companies strategically use patent litigation as a means to protect their competitive position. Even though a company might believe that it is not infringing, it is often better to settle than fight. The risk of liability is

13. See Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17, 21 (1997). Under the doctrine of equivalents, “a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is “equivalence” between the elements of the accused product or process and the claimed elements of the patented invention. See id. at 21 (citing Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 609 (1950)).


16. See id.


particularly harsh on small firms who are forced to accept license agreements and pay compensation for past royalties because they are unable to finance litigation.20

The omnipresent threat of litigation may result in agreements suspect in their effect on competition and their harmony with patent policy.21 Armed with the imprimatur of the patent grant, patentees are adept at imposing various forms of licensing agreements on third parties as well as forming arrangements between competing patentees through patent pools. 22 These arrangements often serve a pro-competitive purpose, but in some instances may hamper competition and reduce optimal investment in R&D.23 One may conclude that these post-grant activities in litigation and licensing suggest that the current patent system too often reduces incentives to innovate, while encouraging wasteful duplication of effort. 24

In sum, the patent system creates obstacles for those who would otherwise contribute to subsequent phases in technological development.25 In areas of science such as biotechnology and digital technologies, where innovation is often evolutionary, incremental, and collaborative, overlapping patents and threats of litigation impede innovation.26 Thus, the broad rights granted to those who contribute to the initial phases of

20. See id.
21. See McFeely, supra note 18, at 290.
23. Id. at 609-10.
24. See McFeely, supra note 18, at 306 (noting that fear of litigation may result in businesses using resources to ensure that products are litigation proof instead of using that money toward innovation).
25. See Bessen & Meurer, supra note 9, at 2-5.
invention can obstruct the advancement of subsequent phases of technological inquiry, thereby reducing the benefits to society as a basis for future innovation.27

Comprehensive patent reform provides the solution to the perverse consequences of the current patent system.28 As a principal mode of reform, there seems to be a general agreement that, above all, patent quality must be improved.29 In effect, patents should be more difficult to obtain, resulting in the issuance of patents that are truly novel and nonobvious.30 Unfortunately, we have a one-size-fits-all patent system irrespective of the technology involved, leading some to suggest that we modify our patent laws to accommodate the different fields of technological inquiry.31 Proper administration, among other steps, will necessitate a significant increase in the funds allocated to the Patent Office.32 In addition, enhanced post-grant procedures to weed out “bad” patents would be an excellent accompaniment to enhanced examination procedures.33

Unfortunately, beneficial patent reform in the current context will probably not take place in the near future. In the meantime, is there a way to level the judicial playing field? Can we tailor rules so that they create optimal incentives to inventors while also tempering side effects of the system which is more

27. See id at 40-42 (deeming the pattern of sequential innovation to be a risk for infringement litigation).
29. See id. at 123 (suggesting that the improvement of patent quality would increase the efficiency of the court process).
30. See id. (proposing an administrative opposition system whereby the number of “bad” parents surviving without challenge would be reduced).
32. See BESSEN & MEURER, supra note 9, at 223-24.
33. See BESSEN & MEURER, supra note 9, at 223-25.
crucial in today’s technological environment? For this purpose, I propose a reconsideration of the doctrine of patent misuse, a defense to patent infringement, in which the patentee has attempted to enforce his patent contrary to proper contours of patent policy.

II. What is Patent Misuse?

The origin of patent misuse lies in the equitable doctrine of unclean hands, “whereby a court of equity will not lend its support to enforcement of a patent that has been misused.”34 The misuse doctrine is designed to curb practices that generate “anticompetitive effect” from the patent grant.35 Through the years, courts have found patent misuse in a relatively limited number of specific acts of the patent owner, often in the context of patent licensing.36 As the CAFC has stated, the fundamental inquiry is whether, by imposing a challenged condition, the patent owner has improperly expanded the physical or temporal scope of the patent grant with anticompetitive effect.37 If the alleged infringer can demonstrate that the patent owner engaged in prohibited conduct, the patent is rendered unenforceable despite its validity.38 In this respect, patent misuse is similar to the doctrine of inequitable conduct, which also results in making the patent unenforceable.39 A defendant claiming patent misuse is not required to show that he/she was personally harmed by the misuse.40 This broad interpretation of standing to assert patent misuse allows any person harmed by the practice to use

34. B. Braun Med., Inc. v. Abbot Laboratories, 124 F.3d 1419, 1427 (Fed. Cir. 1997).
35. See, e.g., Windsurfing Int'l Inc. v. AMF, Inc., 782 F.2d 995, 1001 (Fed. Cir. 1986).
36. See, e.g., id. at 995.
37. See id. at 1001 n.8 (citing Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation, 402 U.S. 313 (1971)).
38. See id. at 1001-02.
the defense, even despite that person’s past transactions with the patentee. In contrast with contract-based defenses such as equitable estoppel and implied license, the patent misuse defense is not restricted to those who had negotiated with the patentee.

Patent misuse is an elusive doctrine that has waxed and waned through the years while viewed favorably by some and reviled by others. Despite its checkered history, the doctrine has been applied as a means to restrain a patent owner’s abuse of a broad patent grant deemed contrary to patent policy. In applying patent misuse, the courts have focused on the anticompetitive effect resulting from the practice. In so doing, they have naturally gravitated to antitrust law to determine when the misuse doctrine should be applied. As explained below, I argue that patent misuse should transcend the contours of traditional antitrust law and should concern itself with policy of patent law and the effect on innovation. Before I discuss the interplay of patent misuse and antitrust I would like to provide a brief historical overview of the doctrine.

III. Patent Misuse: A Ninety Year History

Patent misuse is a court-made doctrine that first appeared in the 1917 Supreme Court decision known as the Motion Picture Patents case. In that case, the plaintiff owned a patent on a mechanism for threading film into a movie projector. The patentee licensed the patent covering this mechanism on the condition that all movie projectors contain a notice precluding the use of any film not manufactured by the patentee. The

41. Id at 1924.
42. Id.
43. See discussion infra Part III.
48. Id at 505.
49. Id at 506-07.
Court held that the restriction violated patent policy, by imposing a license restriction falling outside the scope of the patent.\textsuperscript{50} Despite the pro-competitive focus of the case, the Court based its decision on the principles of patent policy, nowhere mentioning the following antitrust law:

\begin{quote}
A restriction which would give to the plaintiff such a potential power for evil over an industry, which must be recognized as an important element in the amusement life of the nation, under the conclusions we have stated in this opinion, is plainly void, because [it is] wholly without the scope and purpose of our patent laws . . .\textsuperscript{51}
\end{quote}

The Motion Picture Patents case not only established the misuse doctrine as a fixture of patent policy, but it also set the stage for the doctrine’s preoccupation with “extension” of the patent monopoly in general and tying in particular.\textsuperscript{52} Through the 1940’s the Court made abundant use of the patent misuse doctrine, striking down a variety of restrictive license agreements, particularly those that involved tying agreements, that is linking the sales of one product to another.\textsuperscript{53} Allegations of patent misuse usually involved either licensing or sale practices by the patent holder.\textsuperscript{54} The expansion of the patent misuse doctrine occurred mostly before the 1970’s, a time when the courts held a more critical view of monopolies in general, and of the rights accrued to inventors in particular.\textsuperscript{55} This has led some scholars to contend that the doctrine is an “anachronism” that can only be explained by the particular jurisprudential

\begin{thebibliography}{99}
\bibitem{50} \textit{Id.} at 516.
\bibitem{51} \textit{Id.} at 519.
\bibitem{52} \textit{Id.} at 516-18.
\bibitem{53} See J. Dianne Brinson, \textit{Patent Misuse: Time for a Change}, 16 \textsc{Rutgers Computer \\& Tech. L.J.} 357, 365-66 (1990) (discussing the patent’s bar’s surprised reaction to the Supreme Court denying a patentee relief for infringement based on the patentee’s use of tying restrictions).
\bibitem{54} \textit{Id} at 365-66.
\bibitem{55} \textit{Id.} at 367-69.
\end{thebibliography}
setting in which it arose, at a time that antitrust was in its formative years.56

The heyday of patent misuse began to wane in the 1980's and the doctrine was almost terminated in late 1988 by legislation which prohibited a finding of patent misuse unless the patentee's practices violated the antitrust laws.57 The ultimate version of this legislation produced a compromise amendment to the patent law.58 The Patent Misuse Reform Act incorporated the rule of reason analysis for misuse when the patentee refuses to license a patent or conditions the license of the patent on the licensee's purchase of another product.59 With this amendment, drafted in response to persistent criticism of this judge-made equitable defense to patent infringement, the very existence of the doctrine of patent misuse—indeed of antitrust law—was viewed as being of questionable validity.60

Even before the passage of the 1988 amendments, the creation of the CAFC in 1982 diminished the importance of the patent misuse doctrine. In a series of cases, the CAFC cut back on the scope of patent misuse, imposing new hurdles on defendants

56. Id. at 360.
59. See id. § 271(d)(4)-(5). Section 271(d) states: (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 . . . (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.
asserting misuse. The CAFC limited findings of misuse to conduct that also had anticompetitive effects. The Federal Circuit has found misuse on only one occasion, while rejecting the defense in a number of others. Whittled away by the CAFC and directly modified by amendment, the patent misuse doctrine seemed of dubious validity by the end of the 1980’s. Still, the patent misuse doctrine has been affirmed more than twelve times by the Supreme Court. Although there has been a general drift away from the doctrine during the last thirty years, the Supreme Court has never addressed the Federal Circuit’s ambiguously hostile, yet inconsistent, pronouncements on the doctrine of patent misuse. Even the Federal Circuit has progressively backed away from its initial negative attitude toward the defense.


62. Mallinckrodt, 976 F.2d at 708; Windsurfing, 782 F.2d at 1001-02. Anticompetitive effects are not “per se violations” but are evaluated according to the “rule of reason.” Mallinckrodt, 976 F.2d at 708.

63. Senza-Gel Corp. v. Seiffhart, 803 F.2d 661, 664-65 (Fed. Cir. 1986) (finding patent misuse where plaintiff tied licenses on its patented method to leases of its unpatented machinery).

64. See, e.g., In re Independent, 203 F.3d at 1328; Virginia Panel, 133 F.3d at 869; B. Braun Med., 124 F.3d at 1427; Windsurfing, 782 F.2d at 1002.


66. See, e.g., Windsurfing, 782 F.2d at 1001-02. The court in Windsurfing, held that “to sustain a misuse defense involving a licensing arrangement not held to have been per se anticompetitive by the Supreme Court, a factual determination must reveal that the overall effect of the license tends to restrain competition unlawfully in an appropriately defined market.” Id. Since Windsurfing, the CAFC seems to have backed off its draconian statement; more recent Federal Circuit cases appear to suggest that the rule of reason analysis must also include considerations of the policies underlying the patent system.
The main point of controversy is the relationship between patent misuse and antitrust law. The doctrine of patent misuse arose at a time when antitrust principles were in their relative infancy. Today, by comparison, our understanding of competition and the role of antitrust is much elaborated, and the question arises: Is there a continuing need for a misuse doctrine that, in many ways, overlaps antitrust law? Despite the obvious overlap between patent misuse and antitrust, I maintain that the doctrine of patent misuse serves policy goals that differ from antitrust.

IV. How Misuse Differs from Antitrust

Whether patent misuse should exist independently from the antitrust inquiry is a question of vigorous debate. As the above discussion demonstrates, this issue has been enthusiastically debated on both sides, where Congress and particularly the Federal Circuit have called into question the misuse doctrine’s independent existence. I take the position that there is a strong rationale to maintain the separate defense of patent misuse as an alternative to antitrust for reasons of sound patent law policy. This justification is more pronounced in the litigation-charged environment in which we live. First, I would like to briefly outline the certain essential differences.

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See Mallinckrodt, 976 F.2d at 700, 708 (stating "[t]he appropriate criterion is whether Mallinckrodt's restriction is reasonably within the patent grant"); see also B. Braun Med., 124 F.3d at 1426 (stating "[t]he key inquiry [is whether] the patentee has 'impermissibly broadened the 'physical or temporal scope' of the patent grant with anticompetitive effect" (quoting Windsurfing, 782 F.2d at 1001-02)); Virginia Panel, 133 F.3d at 869 (implying that the rule of reason analysis should include factors beyond such a strictly antitrust analysis); C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1373 (Fed. Cir. 1998). “[P]atent misuse is viewed as a broader wrong than antitrust violation because of the economic power that may be derived from the patentee’s right to exclude.” Id.

between the antitrust law and the patent misuse doctrine and the policies underlying each.

At its broadest level, antitrust law seeks to protect competition and prevent the improper use and creation of monopolies which result in anticompetitive effects in the marketplace. The fundamental antitrust test is a balancing test known as the rule of reason that centers on one issue: the impact on competition. In the practical application of the rule of reason, the antitrust court looks for market power, anticompetitive effects, and proof that the anticompetitive effects outweigh the pro-competitive benefits. These elements, particularly that of market power, are often so difficult to establish that some have called the rule of reason a euphemism for non-liability. In addition, the rule of reason does not adequately consider how licensing and other practices affect innovation.

By contrast, the patent misuse doctrine has several attributes that differentiate it from antitrust laws. First, patent misuse is only available as an affirmative defense to patent infringement or breach of a license agreement, while federal antitrust constitutes a federal cause of action. Second, a defendant asserting patent misuse has a significantly less strict

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69. See HOLMES, supra note 68, at § 2:10.

70. See HOLMES, supra note 68, at § 2:10.

71. See HOLMES, supra note 68, at § 2:10.

72. ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 902 (8th ed. 2009). The successful assertion of patent misuse as a defense requires that the alleged infringer show that the patentee has impermissibly broadened the physical or temporal scope of the patent grant with anticompetitive effect. Id.
standing requirement than antitrust. Alternatively, an antitrust plaintiff must prove antitrust injury to sustain a cause of action. Third, the remedy for patent misuse is essentially equitable in nature. Antitrust and patent misuses differ significantly regarding the nature of available remedies. On finding patent misuse, a court will not enforce the patent against the alleged infringer. Antitrust laws grant treble damages and attorney’s fees in addition to injunctive relief whereas only injunctive, not monetary, relief is available for the equitable defense of patent misuse.

As stated above, the patent misuse doctrine has received harsh criticism from both commentators and industry groups which call for its abolishment or argue that it should simply be folded into antitrust law and deprived of independent doctrinal significance. Because the misuse doctrine is based on indistinct principles that overlap antitrust law, it is argued that the misuse doctrine reduces the incentive to innovate while discouraging pro-competitive licensing practices that disseminate patented technology. The view that patent misuse be made coextensive

73. Id. at 902.
74. HOLMES, supra note 68, at § 9:8. “‘Antitrust injury’ . . . must be of a type that the antitrust laws were meant to discourage . . . [a]nd . . . the plaintiff’s injury must have been proximately caused by the defendant’s antitrust violation . . . .” HOLMES, supra note 68, at § 9:8.
75. HARMON, supra note 72, at 902.
76. HARMON, supra note 72, at 902.
77. HARMON, supra note 72, at 902.
with antitrust law has a logical appeal, given that antitrust law is a larger and more fully developed body of law than patent misuse.81 “Applying antitrust rules could provide greater clarity in patent misuse doctrine and eliminate a source of confusion at the junction of patent and antitrust law.”82 The thinking is that antitrust has evolved a “precise” methodology for determining when improper market leverage is being used by a patentee. In comparison, the relatively imprecise “equitable” doctrine of misuse only adds confusion and uncertainty.83 This sentiment was expressed by Judge Posner who stated that “[i]f 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 develop one without in the process subjecting the rights of patent holders to debilitating uncertainty.”84

V. Why Patent Misuse Should Not Be Coextensive with Antitrust Law

Those who advocate for the convergence of patent misuse and antitrust point out that the courts, in applying misuse, have invariably implicated antitrust principles. But this dependence has not always been the case, and at its inception misuse did not take its cue from antitrust.85 For example, Robert Merges asserts that an equitable doctrine preventing unfair extensions of patents, such as the misuse doctrine, offsets other pro-patentee doctrines that effectively extend patents, such as the doctrine of equivalents.86 In other words, a doctrine such as patent misuse is

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81. Feldman, supra note 68, at 400.
82. Feldman, supra note 68, at 400.
84. USM Corp. v. SPS Tech., Inc., 694 F.2d 505, 512 (7th Cir. 1982), cert. denied, 462 U.S. 1107 (1983).
85. See Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488, 493-94 (1942) (holding license provision that tied purchase of unpatented salt tablets to lease of a patented machine that used tablets is unenforceable).
86. See Merges, supra note 83, at 793.
needed to mitigate the inherent tendency of patent owners for unduly extending the boundaries of their highly exclusionary governmental grant and would provide a modest means to leveling the litigation playing field currently skewed in favor of the patentee.

There are good reasons why patent misuse should not be made coextensive with antitrust law. Antitrust law is “designed to address only particular types of harm and it cannot reach everything that patent policy addresses.” Displacing patent misuse by antitrust would not take into account fundamental concerns of patent policy. As a basic proposition, patent policy allows the grant of exclusive rights only under certain circumstances and only within a limited scope. Thus, patent policy is violated when the patentee attempts to expand that scope and circumvent the limitations of patent law through the coercive use of a government granted legal right.

Antitrust law, however, does not as a matter of course focus on questions that specifically affect these patent policy considerations. Rather, antitrust law concentrates on measuring the acquisition and use of market power. The rationale is that lacking market power, a firm is hard put to raise prices or limit supply, which results in the kind of competitive harm recognized under antitrust law. Thus, where no market power exists, antitrust is generally unconcerned by other forms of firm behavior. This is particularly true for the rule of reason, which invariably necessitates the finding of market power.

87. Feldman, supra note 68, at 400.
88. See Feldman, supra note 68, at 400.
89. See Feldman, supra note 69, at 400 (discussing alteration of limits on time and scope of patents upsets balance of patent system).
90. 1 HEBERT HOVENKAMP, MARK D. JANIS & MARK A. LEMLEY, IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW § 3-2b (Supp.2008).
91. Id. at §3.2c.
92. Id.
93. Id. at §3.3a.
94. Id.
The patent misuse doctrine with its greater scope and flexibility may produce benefits by providing for increased judicial scrutiny of patent practices.\textsuperscript{99} Of course equitable doctrines, like patent misuse, are messy by their very nature.\textsuperscript{100} However, they do allow for a needed flexibility for judicial determination.\textsuperscript{101} Even if a patent owner does enjoy market power, antitrust still may be inadequate to encompass the broad array of patent policy concerns.\textsuperscript{102} Patent policy is involved with expansions of patent rights that impede system-wide innovation; even if those expansions do not create the kind of consequences that the antitrust law takes into account.\textsuperscript{103} The basic problem is that antitrust focuses on competition in defined markets and in so doing tends to disregard, and may even be blind to, activities that undermine the overall effectiveness of the patent system.\textsuperscript{104}

\textsuperscript{95} Id.
\textsuperscript{96} Merges, supra note 83, at 793.
\textsuperscript{97} HOVENKAMP ET AL., supra note 90, at § 3.3b.
\textsuperscript{98} HOVENKAMP ET AL., supra note 90, at § 3.3a.
\textsuperscript{99} See HOVENKAMP ET AL., supra note 90, at § 3.3a (comparing cases to show the need for flexibility during judicial scrutiny of patent practices).
\textsuperscript{100} HOVENKAMP ET AL., supra note 90, at § 3.3a.
\textsuperscript{101} HOVENKAMP ET AL., supra note 90, at § 3.3a.
\textsuperscript{102} HOVENKAMP ET AL., supra note 90, at § 3.3a.
\textsuperscript{103} HOVENKAMP ET AL., supra note 90, at § 3.3a.
\textsuperscript{104} See Carrier, supra note 17, at 1048. Michael Carrier conceptualizes the tension between patents and antitrust as the patent antitrust paradox. Carrier, supra note 17, at 1048. “The patent and antitrust systems promote welfare in different, often conflicting, ways: the patent system is based on exclusion, while antitrust law focuses on competition.” Carrier, supra note 17, at 1048.
In contrast to antitrust, patent misuse is not limited by taking into account what might constitute optimal incentives for innovation. Requiring parties to show antitrust injury would dramatically restrict judicial inspection of patent practices. “Arguments about innovation are, by necessity, more concerned with competitor’s future actions than with the traditional indicia of competition—price, output, and quality—because there are often no products yet to evaluate in considering how a patent restriction affects innovation.” Robin Feldman has summarized these non-antitrust concerns as: first, prevention of the economic loss that occurs in defensive research activities in circumventing a patent; second, a concern with the burden on innovation caused by an excess of patent rights; and third, the impediments to innovation resulting from awarding the patent grant to early-stage inventors to the detriment of late-stage inventors. This list of concerns is not exhaustive, but the effect on innovation should be the focus of patent policy. Antitrust has engaged in analysis of innovation markets but has not had a particularly good track record in its application. It is not hard to see why. Innovation market definition is a speculative venture that often defies precision where one is forced to define relevant assets and close substitutes with limited information.

It is my conclusion that antitrust law has become too permissive, enabling those who abuse licensing practices to escape liability. The reason is that it is exceptionally difficult, if

“Since exclusion-based acts often restrict competition, courts are left to reconcile two systems for promoting welfare without any compass to guide them.”

Carrier, supra note 17, at 1048.
105. See Feldman, supra note 68, at 400.
106. See Feldman, supra note 68, at 400.
108. See Feldman, supra note 68, at 400.
109. See Feldman, supra note 68, at 400.
110. See Feldman, supra note 68, at 401-02.
111. See Alvin R. Chin, The Misapplication of Innovation Market Analysis to Biotechnology Mergers, 3 B.U. Sci. & Tech. L. 6, 28 (1997) (discussing how defining an innovation market is difficult because of lack of information).
not impossible, to prove that a patent holder possesses market power at an early stage in the evolution of a market that the holder is nonetheless destined ultimately to control.\textsuperscript{112} In addition, antitrust is not sensitive to situations where a patent holder has leveraged its power into neighboring markets and where those acts would not constitute an antitrust violation, such as attempted monopolization.\textsuperscript{113}

So what standard should be applied in determining whether patent misuse has occurred; that is in assessing an undue extension of patent rights in order to discourage the strategic, anticompetitive uses for which patents were not intended? One might begin with the question of whether the licensing condition or a practice involving use of a patent on the balance enhances or suppresses innovation by expanding the scope and temporal aspects of a patent. Most often such practices will involve the imposition of licensing terms, but also may encompass various strategic uses of patents that have a detrimental effect on innovation.\textsuperscript{114} Once patent misuse has been proven, the burden should shift to the patent owner to demonstrate a business justification for having insisted on the restrictive licensing practice, or as the case may be, a strategic use of the patent grant exceeding its scope and contrary to patent policy.\textsuperscript{115}

With these principles in mind I will now discuss the three situations in which application of the patent misuse doctrine would be appropriate. My focus on grant-back licenses, package licensing, and use of patents in standard settings is a very short list involving attempts of the patent owners to maximize their profits. The list is hardly exhaustive but is used to illustrate the

\begin{itemize}
  \item \textsuperscript{112} Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 459 (1993).
  \item \textsuperscript{113} See, e.g., id at 459-60 (holding intent to monopolize not sufficient to justify finding of “dangerous probability of success” without showing of defendant’s economic power in that market).
  \item \textsuperscript{114} See George Gordon and Robert J. Hoerner, Chapter 1: Overview and Historical Development of the Misuse Doctrine, in INTELLECTUAL PROPERTY MISUSE: LICENSING AND LITIGATION 29–30 (ABA Sec. of Antitrust Law, 2000).
  \item \textsuperscript{115} Id.
\end{itemize}
kind of issues that merit scrutiny under the doctrine of patent misuse, a doctrine that should evolve over time to take into account the ever changing technological landscape as mediated by the patent system and the efforts of patentees to manipulate that landscape in their favor.

VI. Grant-Backs, Package Licenses, and Standard Setting

A. Grand-back Clauses

As a condition to a license agreement, a patentee will sometimes require the licensee to grant it rights to any “improvement” patents or other new technology that the licensee develops while using the patented technology. The imposition of such a licensing restriction is called a “grant-back.” Grant-backs may have, depending on the circumstances, both pro-competitive and anticompetitive consequences. As to their pro-competitive effects, grant-backs may allow the licensor and licensee to share the risks and rewards of subsequent innovation. In markets in which standardization is important, grant-back clauses can increase competition by ensuring that all licensees of the original patent get the benefit of improvements, and therefore that the standard is not split by incompatible changes in subsequent product generations.

“Grant-backs can have pro-competitive effects, especially if they are nonexclusive.”

117. Id. at 2.
118. Id.
120. See Choi, supra note 116, at 2 (demonstrating how consideration of future competition distorts licensing relationship and how grant-back clause can mitigate this distortion).
means for the licensee and the licensor to share risks and reward” of their investment in innovation.\textsuperscript{122} They also encourage the licensor to make further innovation based on the licensed technology.\textsuperscript{123} In sum, grant-backs may promote innovation and its dissemination.

Grant-back clauses, however, may adversely affect competition. For one, they may reduce the licensee’s incentive to engage in research and development thereby limiting rivalry in innovation markets.\textsuperscript{124} A licensee who is unable to recoup the research and development expenses required in developing the new invention will lose his competitive advantage in the marketplace.\textsuperscript{125} Why should an inventor invest in research and development if he is insulated by the patent grant to recover those expenses against those who could free ride on the invention? Here, I would propose that grant-back licenses should be scrutinized in their effect on innovation, particularly those that impose exclusive grant-back licenses.

The exclusivity of a license agreement, particularly a pattern of exclusive licenses in patent-pooling arrangements undermines the incentive to innovate even for non-licensees as well as potential innovators in the same technological field.\textsuperscript{126} It may discourage non-licensees from remaining in the technological field, much less their continued investment in

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\item mandatory assignment of improvements did not violate antitrust laws, but did constitute patent misuse), \textit{aff’d}, 594 F.2d 979 (4th Cir. 1979).
\item \textsuperscript{122} Antitrust Guidelines, \textit{supra} note 119, at 30.
\item \textsuperscript{123} See Antitrust Guidelines, \textit{supra} note 119, at 30.
\item \textsuperscript{124} See Antitrust Guidelines, \textit{supra} note 119, at 30. Grant-back clauses will be evaluated “under the rule of reason,” focusing on “whether the licensor has market power in a relevant technology or innovation market,” whether the grant-back provision “is likely to reduce significantly licensees’ incentives to invest in improving the licensed technology,” and “the extent to which the grant-back provision has offsetting pro-competitive effects.” \textit{See id.}
\item \textsuperscript{125} See Antitrust Guidelines, \textit{supra} note 119, at 30.
\end{itemize}
innovation. This occurs with greater force when the number of patents in a pool increases. Facing an accumulated set of pooled patents, and bolstered by exclusive grant-back agreements, the cost of remaining outside the pool increases with the omnipresent threat of litigation. In sum, grant-backs in a patent pool context not only create disincentives to innovate by licensees, they may equally have a negative impact on third parties in the same technological field and both active participants and potential innovators who experience increased barriers to entry.

For this reason, grant-back clauses bear directly on patent policy and its scrutiny under the doctrine of patent misuse. Grant-back clauses are often found in the context of patent and are joined with various other provisions that allow third parties to join the pool, such as package licensing agreements. Package grant-backs can both have pro-competitive and anticompetitive results, sometimes encouraging or suppressing incentives to innovate. As such, package licensing agreements are appropriate for scrutiny under the doctrine of patent misuse.

B. Coercive Package Licensing that Raise Rivals Costs

A firm with a large patent portfolio can offer to license patents in a single package, either by requiring a group purchase or by devising a royalty stream that is not metered by the use of

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127. See Antitrust Guidelines, supra note 119, at 29.
128. See Antitrust Guidelines supra note 119, at 29.
129. See Carlson, supra note 126 at 386-87.
130. See Carlson, supra note 126, at 369-72.
131. See Carlson, supra note 126, at 369-72.
133. See Webb & Locke, supra note 60, at 265.
each patent.\textsuperscript{135} Package patent licensing can produce efficiencies that could not be achieved through licensing of individual patents.\textsuperscript{136} Alternatively, package licenses may well have anticompetitive effects and from the perspective of patent policy may well harm incentives to innovate.\textsuperscript{137} A prospective licensee may not have a need for a license that includes the entire package, what might be termed a bundle of essential and non-essential patents, some of which may be of dubious validity.\textsuperscript{138} “If the patent holder refuses to license, the competition is faced with the choice of litigating and/or designing around all of the patents.”\textsuperscript{139} The economic literature has shown that the patent holder will be able to obtain a license fee for the package that is greater than it could obtain from licensing patents individually.\textsuperscript{140} And, of course, the very risks of litigation may command a license fee that does not otherwise accurately reflect the value of individual patents in the portfolio.\textsuperscript{141} A firm with a large patent portfolio enveloping a competitor’s key technologies—one that could be termed a “patent thicket”—has the potential to use it to suppress competition in the ultimate goods market.\textsuperscript{142} As stated above, patent thickets may encompass patents of dubious merit.\textsuperscript{143} Unfortunately, it is costly to innovate around assertions of infringement.\textsuperscript{144} This creates a situation in which the costs of innovation are increased simply when the owner of the patent thicket threatens to assert their patent rights against the competitor’s products or against his customers.\textsuperscript{145}

\begin{thebibliography}{9}
\bibitem{135} See id. at 89.
\bibitem{136} See id. at 90.
\bibitem{137} See id. at 90-91.
\bibitem{138} See id. at 88.
\bibitem{139} Id. at 88.
\bibitem{140} See Daniel L. Rubinfeld & Robert Maness, \textit{The Strategic Use of Patents: Implications for Antitrust}, (2004), in \textit{Antitrust, Patents and Copyright: EU and US Perspectives}, at 90 (Francois Leveque & Howard Shelanski eds., Edward Elgar Publishing Ltd. (2005), archived at http://www.webcitation.org/5fWeubExU.
\bibitem{141} See id. at 89.
\bibitem{142} See id. at 88.
\bibitem{143} See id.
\bibitem{144} See id.
\bibitem{145} See Daniel L. Rubinfeld & Robert Maness, \textit{The Strategic Use of Patents:}
The Supreme Court has held that mandatory package licensing may constitute patent misuse.\textsuperscript{146} One important consideration in the case law is whether the licensee voluntarily entered into the agreement as a “convenient means for measuring the value of the license” or whether the licensee has been coerced.\textsuperscript{147} In its most recent treatment of the issue, the Federal Circuit, in \textit{U.S. Philips Corp. v. International Trade Commission},\textsuperscript{148} reversed an International Trade Commission (ITC) decision, applying an approach of \textit{per se} illegality to package licensing.\textsuperscript{149} In \textit{Phillips}, the patentee offered non-exclusive licenses for a package of patents reading on the CD-R and CD-RW standards, even if the package included patents that were essential and non-essential to the practice of those standards.\textsuperscript{150} The Federal Circuit held that the ITC’s ruling was not factually supported because the evidence did not show that there were commercially viable alternatives to the “non-essential” patents in the package.\textsuperscript{151} Thus, it included those patents that had no anticompetitive effect of foreclosing competition.\textsuperscript{152} In addition, the ITC failed to acknowledge the pro-competitive efficiencies that package licensing may produce including the reduction of transaction costs in making individual patent royalty determinations and resolving in advance all potential patent disputes between the licensor and licensee.\textsuperscript{153}

The decision suggests that, in most circumstances, package licenses will not be invalidated simply because one or


\textsuperscript{147} Engel Indus. v. Lockformer, 96 F.3d 1398, 1408 (Fed. Cir. 1996).
\textsuperscript{148} 424 F.3d 1179, 1193 (Fed. Cir. 2005).
\textsuperscript{149} \textit{id}.
\textsuperscript{150} \textit{id} at 1182.
\textsuperscript{151} \textit{id} at 1198.
\textsuperscript{152} \textit{id}.
\textsuperscript{153} \textit{id}.
more of the patents included in a package is non-essential.154 But I do not think that the challenger must show that alternatives to the non-essential patent exist and that licensees were actually deterred from using those alternatives.155 What is pertinent is whether, on the whole, the package license would tend to have a negative effect on the incentive to innovate on the part of competitors.156 Here, in applying patent misuse principles, the court must take into account both market structure and effect.157 This would require a showing of some degree of effective market power in the use of those essential patents that make up the package.158

C. Standard Setting

My third example where the doctrine of patent misuse is pertinent occurs in the realm of standard setting arrangements. Technical standards, such as interface protocols or file formats, are extremely important in software and other “network industries.”159 In the end, consumer market standards that ensure the interoperability of products facilitate the sharing of information among purchasers of products from competing manufacturers, thereby enhancing the utility of all products.160 Thus, patent law policy should encourage the development of reliable open standards while retaining incentives for innovation.161

When parties in standard setting organizations participate in good faith the organization can make rational decisions about costs and benefits before an industry comes locked into a

155. See id. at 1198-1199.
156. Id at 1198.
157. Id.
158. Id at 1187.
160. See id. at 1896.
161. See id. at 1962.
standard. Under certain circumstances, the assertion of patent rights against established industry standards can seriously disrupt these beneficial arrangements in two situations. First, a patentee may encourage the adoption of standard related patents by offering them royalty free only to enforce its patents against adopters when the standard has gone into extensive use. In the second situation, which could be termed “patent hold-up,” a standard setting organization completes its lengthy process of evaluating technologies and adopting a new standard, only to discover that certain technologies essential to implementing the standard are patented. To avoid patent hold-up, standard-setting organizations often have rules requiring participants to disclose patents related to technologies under consideration for the standard. But sometimes, as in Broadcom Corp. v. Qualcomm Inc., patentees may hide the existence of patents in order to assert them against industry members who became locked into the standards to extract increased royalties. Deception such as these in a consensus driven private standard-setting environment harms the competitive process.

In this setting, the application of patent misuse doctrine, rendering the misused patent unenforceable, is particularly apposite given the problems of proving antitrust injury under the antitrust laws. Robert Merges and Jeffrey Khun have argued that patent misuse is not entirely suitable to remedy abusive practices by patentees in the standard-setting context. They point out that patent misuse has been traditionally applied in cases of “antitrust-like” abuses in licensing, often involving instances of

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162. See id. at 1898-1901.
164. Id. at 1.
165. Id. at 10, 14-15.
166. Id. at 11-12.
168. See id. at 318.
169. See Merges & Khun, supra note 163, at 11.
170. See Merges & Khun, supra note 163, at 38.
market power and in tying arrangements. As an alternative, they propose the use of a standards estoppels doctrine to fill the gap. The merits of their position could be argued but what they propose is a subset of patent misuse. No matter what you call it—patent misuse or standards estoppels—the beneficial result is much the same.

VII. Conclusion

Because a patent is a privilege which is conditioned by the public purpose of promoting innovation, courts should retain at least some form of the patent misuse doctrine. It is one tool that courts use to maximize net social welfare by invalidating inefficient restrictions through which patent holders earn rewards that are incommensurate with the patent grant and suppress technological progress. Of course, no one doctrine is a panacea. But we need a method that is able to evaluate various licensing techniques and other uses of the patent grant that abuse the patent system by expanding the scope and temporal aspects of governmental conferred monopoly contrary to patent policy. As novel techniques emerge, particularly in the areas of patent accumulation and licensing, there is a need for a broad equitable doctrine—one that can evolve with the times—to curtail forms of patentee behavior that abuse the patent system and have a detrimental effect on innovation.

171. See Merges & Khun, supra note 163, at 38.
172. Merges & Khun, supra note 163, at 38.