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INTELLECTUAL PROPERTY AND ANTITRUST:

STEPS TOWARD STRIKING A BALANCE

James Langenfeld

INTRODUCTION

Although intellectual property and antitrust laws may be both “aimed at encouraging innovation, industry and competition,”¹ a tension between intellectual property and antitrust policy has always existed. This tension has been brought into clearer focus by a number of recent court decisions, including the Ninth Circuit’s decision in Image Technical Services, Inc. v. Eastman Kodak Co.,² the Federal Circuit’s decision rejecting the Ninth Circuit’s reasoning in In re Independent Service Organizations Antitrust Litigation (“Xerox”),³ the decisions in Intergraph Corp. v. Intel Corp.,⁴ Nobelpharma AB v. Implant Innovations, Inc.,⁵ and C.R. Bard, Inc. v. M3 Systems, Inc.,⁶ and the Federal Trade Commission (“FTC”) allegations and consent in Intel. As Former FTC Chairman Pitofsky remarked:

[T]he broader implications of the Xerox decision are troubling. Traditionally, cases at the intersection between intel-

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¹ Director, LECG, LLC and Senior Research Fellow, AAI. The author thanks Robert Taylor, James Kobak, Jr., and Richard Higgins for discussions and materials on the subject. The paper also benefits from the comments of members of the AAI IP/AT Interface Committee. David Johanson of LECG, LLC provided excellent research assistance for this paper. However, the paper only represents the views of the author, and not necessarily these scholars, LECG, LLC, or the AAI.

³ 125 F.3d 1195 (9th Cir. 1997).
⁵ 195 F.3d 1346, 1358-59 (Fed. Cir. 1999).
⁶ 141 F.3d 1059, 1068 (Fed. Cir. 1998).
⁷ 157 F.3d 1340 (Fed. Cir. 1998).
lectual property and antitrust laws have been analyzed by examining the impact on economic incentives and balancing them against anticompetitive effects . . . . An approach that starts from the point of view that a patent holder does not have to sell or license to anyone, and proceeds from that unchallenged assumption to the rule that it therefore can condition its sales or licenses in any way it sees fit (with tie-in sales as the sole antitrust exemption), would be an unwise and unfortunate departure from the traditional approach in this area. I question whether there is a reason to believe any such interpretation is necessary to encourage the innovation process.7

Given the "new economy," where firms may be more likely to base their competitive advantage on intellectual property rather than brick and mortar assets, this tension could grow and is likely to become an even more important policy issue.8 The purpose of this Article is to stimulate discussion of certain economic, legal, and policy issues that arise from the tension between intellectual property and antitrust.

I. UNIQUE ASPECTS OF INTELLECTUAL PROPERTY AND OPTIMAL INTELLECTUAL PROPERTY PROTECTION

One key problem in analyzing the tension between intellectual property and antitrust lies in a fundamental misconception about the equivalence of intellectual and tangible property. The Department of Justice and the Federal Trade Commission Antitrust Guidelines for the Licensing of Intellectual Property9 state, "for the purpose of antitrust analysis, the Agencies regard intellectual property as being essentially comparable to any other form of property."10 The Guidelines continue "That is not to say that intellectual property is in all respects the same as intangible property. Intellectual property has important characteristics, such as ease of misappropriation, that distinguish it from many other forms of property."11 Despite this recog-

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8 It should be clear that this paper and its recommendations are not designed to criticize any particular set of companies. Even large companies with extensive patent portfolios find themselves as plaintiffs and defendants in both private antitrust and intellectual property cases. As discussed in the paper, the key issue is ensuring optimal intellectual property protection in the light of potential competitive concerns.
10 Id. § 2.0.
11 Id. § 2.1.
nition, the *Guidelines* say in the next sentence: “These characteristics can be taken into account by standard antitrust analysis, however, and do not require the application of fundamentally different principles.” Although it is true that in many ways the fundamental principles of antitrust analysis can be applied to intellectual property, this apparently broad simplification is not correct.

Some scholars have argued that intellectual property should be given more primacy because of its constitutional status and its unique economic characteristics. Setting aside the constitutional issues for attorneys to debate, consider some of the characteristics that differentiate intellectual property from other forms of property that may affect antitrust analysis. These include:

- **Substantial social benefits:** Intellectual property often embodies advancements that produce significant cost and performance advantages. These advantages frequently spill over into other industries. The benefits from innovation are generally not fully recovered by the inventor, particularly where the legal regime for protecting the invention is weak. Antitrust rules which reduce the value of intellectual property or discourage broad exploitation of intellectual property may therefore impose a more substantial social cost than similar rules applied to other forms of property.

- **Importance of complementary assets:** Perhaps to a greater degree than other assets, successful exploitation of intellectual property requires the owner to combine it with assets owned by others. These may include other intellectual property, product development assets, manufacturing assets, or marketing assets. This fact may argue for broader tolerance of intellectual property transactions in which the objective is to obtain access to related assets.

- **Substantial free-rider possibilities:** Intellectual property is accompanied by strong free-rider characteristics, which are only partly overcome by legal protection. This leaves a broad area in which protection against free-riding by private action is socially desirable in order to maintain adequate incentives to invest in innovation.

- **Substantial risk:** Absent government research grants or other subsidies, inventors assume substantial costs which are gen-

\[\text{\textsuperscript{12}} \text{Id.}\]
erally not recoverable if the research does not lead to a commercial product. The risk of recovering these sunk costs is often higher than for other forms of investment: "Dry holes" and "blind alleys" are the rule and not the exception." In view of this risk, antitrust rules that unduly limit the investment return of the successful inventor will discourage invention.\(^{13}\)

In effect, these observations imply that "Schumpeterian"\(^{14}\) innovation is much more valuable than marginal improvements in efficiency and lower pricing that in general come from competition in the short run, which is often the focus of antitrust policy. The argument appears to be that antitrust laws can discourage innovation by not adequately taking into account "spillover" benefits of innovations into other markets and not adequately rewarding the inventor for her efforts due to free riding. These observations argue for granting innovators a safe harbor from normal antitrust concerns.

Other scholars have highlighted additional ways intellectual property is different than tangible property. Gilbert and Tom have recently written that intellectual property differs from tangible property in at least the following aspects:

- "[A] patent grants the owner a power of exclusion that, in some respects, exceeds the powers that attach to tangible property."\(^{15}\) The owner of a factory can prevent someone from trespassing on the factory grounds, but cannot prevent someone from building another factory. The owner of a patent can prevent others from making or selling a similar product, even if others create the product independently of the knowledge embodied in the patent.

- "[T]he boundaries of intellectual property defy accurate survey to a much greater extent than with tangible property."\(^{16}\) It is often the case that neither a patentee nor a potential infringer can know the precise scope of patent protection without a final determination from a court of law.

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\(^{14}\) Joseph A. Schumpeter, Capitalism, Socialism and Democracy 88, 103 (1942).


\(^{16}\) Id.
The statutory language governing use of the property differs from one form of property to another, giving rise to a variety of interpretive questions. For example, § 271(d)(4) of the Patent Reform Act of 1988 provides that "[n]o patent owner otherwise entitled to relief for infringement or contributory infringement shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of having . . . refused to license or use any rights to the patent." Some have argued, and some courts have agreed, that this statutory language confers an antitrust exemption to patentees for unilateral refusals to deal, while others have vigorously disagreed.

Economically, these differences can be significant and under certain circumstances argue for more, rather than less, limitation of intellectual property rights.

First, a patent inherently can have a substantially larger impact than tangible property on competition in any market, since its property rights extend well beyond production facilities of a company.

Second, the duration of a patent at twenty years from filing can ensure market power over a period of time seldom possible in markets lacking legally granted rights of exclusion. Accordingly, a firm with market power derived from a patent is more likely to be in a position to exert its market power than one lacking patent related market power.

Third, the threat of a patent suit can deter legitimate competition as well as tend to deter an innovator when there is less certainty about the extent of the property right. If competitors are "risk averse" as most economists believe, they will be less likely to legitimately attempt to design around or build upon a patent.

Fourth, the unsettled nature of what unilateral actions a patent holder can take again creates uncertainty that is likely to deter non-patent holder actions, even when there may be a valid damage to competition from a patent holder's actions.

It is clear that the same economics and law traditionally used to analyze tangible assets do not always carry over to innovation and intellectual property, especially in many parts of the new econ-

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18 See Gilbert & Tom, supra note 15, at 83-86 (noting the need for additional guidance in the area of patent disputes).
19 See, e.g., Mary Coleman & James Langenfeld, Antitrust Analysis and Remedies in High-Tech Industries, GLOBAL COMPETITION REV., June-July, 2001, at 42 (1998) ("The very nature of competition, the definition of industries, the basis of competitive advantage, the effects
It should also be clear, however, that the differences between intellectual and tangible property do not imply that antitrust is irrelevant or counterproductive. As discussed above, in some ways intellectual property raises more, rather than less antitrust concerns.

These differences need to be more explicitly recognized and studied in determining the trade off between patent protection and competitive concerns. Patents and other intellectual property rights are critical in stimulating innovation and ensuring dynamic competition, particularly in the new economy. These intellectual property rights must be protected. There should not be a return to 1972 and the Department of Justice's "nine no-no's." However, the differences between intellectual and tangible property should not imply that overbroad intellectual property rights should sweep away all concerns about the competitive impact of manipulating intellectual property to defeat competition. Landes and Posner have written:

For copyright law to promote economic efficiency, its principal legal doctrine must, at least approximately, maximize the benefits from creating additional works minus both the losses from limiting access and the costs of administering copyright protection.

As Landes and Posner point out, if intellectual property rights are enforced too strictly, then subsequent innovators who build upon earlier innovations will be foreclosed and overall welfare will be reduced. This principal also applies to patents and trade secrets. Moreover, if an innovator were allowed to keep all of the surplus from an innovation through extended property rights, then there would be no benefit of 'restrictive' practices, and the nature of economic rents are all different in the context of innovation.

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20 See Gilbert & Tom, supra note 15, at 45 ("[H]igh technology markets are characterized by rapid rates of technological change, high fixed costs of research and development relative to the variable costs of production, knowledge spillovers, and (sometimes) strong 'network effects'.")

21 See James Langenfeld & David Scheffman, Innovation and U.S. Competition Policy, 34 Antitrust Bull. 1, 1-3 (1989) (arguing that competition policy since 1945 has been overly restrictive on new technology, including technology transfer between firms and joint ventures); David Teece & Mary Coleman, The Meaning of Monopoly: Antitrust Analysis in High-Technology Industries, 43 Antitrust Bull. 801, 801-03 (1998) (arguing that antitrust agencies lack understanding of the economics of innovation, especially critical for high technology markets).

22 See ABA Text & Commentary, supra note 13, at 5. At that time, the Department of Justice's approach was to treat certain licensing practices as per se violations of antitrust laws, such as a licensor and a licensee agreeing that the licensor will not grant further licenses to others. Id.

to the rest of society from the innovation. As such, innovations would not drive the economy forward to more productivity, but would only enrich the inventor.

Figure 1 illustrates the impact of the degree of intellectual property protection on the number of innovations and total welfare. The solid curve represents the relationship between the number of innovations (vertical axis) and the degree of intellectual property protection (horizontal axis). With complete intellectual property protection (the left end of the graph) there will be a number of innovations, but such protection will greatly limit the number of developmental innovations by others. As the degree of protection is relaxed, the number of innovations will increase to point A, where the number of innovations is maximized. Further relaxation of intellectual property rights after this point will begin to discourage the number of basic innovations because on the margin innovators are less likely to able to reap the full monetary gains from their innovations. With no intellectual property protection (right end of the graph), there will still be some innovations due to some innovators being able to capture gains from having a "first mover" advantage in bringing an improved product to market first. However, the number of innovations without any intellectual property protection will be the lowest.

Figure 1: Optimal IP Protection
Figure 1 then compares this pattern of the number of innovations and degree of intellectual property protection to the relationship between the total welfare and intellectual property protection, represented by the dashed curve. With complete intellectual property protection, total welfare is relatively lower than the number of innovations. Innovators gain all of the benefits from their innovations, there is no price competition or competition from the follow innovations of others, and no consumer surplus from innovations. As intellectual property protection is relaxed (moving left to right in Figure 1), total welfare increases to its peak at point B, with more development innovations by others and more competition reducing prices and increasing consumer welfare. The optimal total welfare will in general be at point B, right of point A, indicating that total welfare is maximized with less intellectual property protection than a structure designed to maximize innovations. However, reducing intellectual property protection below point B reduces total welfare as innovators have increasingly less incentive to innovate and fewer innovations occur.

It should be clear from this discussion that a balancing of intellectual property rights and competitive issues is clearly required, and many are concerned that the courts may be moving to immunize from antitrust any company action that could involve a patent. Such a move could shift the balance so substantially that it would not only eliminate any concerns about the benefits from short run price competition, but would prevent competition policy from helping to achieve the common goal of antitrust and intellectual property rights – stimulating useful innovations.

Assertions that the different types of property can be treated entirely the same confuse rather than enlighten this basic trade-off between intellectual property and competition policy. Identifying the proper balance requires a clearer depiction of the interests to be balanced, and I believe this can only be achieved through explicit recognition of the differences between tangible and intellectual property. Given this recognition, we need more research that identifies and

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24 See Lynne Pepall et al., Industrial Organization: Contemporary Theory and Practice 709, 711-12 (1999) (defining “total welfare” as the economic concept of the sum of consumer and producer surplus: the value that consumers gain from purchasing a product in excess of its price, plus the profits that the innovator realizes from the innovation).

25 Antitrust enforcement often focuses just on consumer surplus. See, e.g., Timothy J. Muris, Robert Pitofsky: Public Servant and Scholar, 52 Case W. Res. L. Rev. 25, 37 (2001) (stating “there is wide-spread agreement that the purpose of antitrust is to protect consumers”). As such, the relationship between consumer surplus and the degree of intellectual property protection would have a similar pattern to the total welfare curve, but optimal consumer welfare will reach its maximum further to the right of B with less intellectual property protection. With regard to balancing intellectual property rights and competition, it can be argued that maximizing consumer surplus may not be the most appropriate goal because it would lead to less intellectual property protection and not adequately protect the profits of the innovators.
quantifies the impact of the differences between tangible and intellectual property on innovation and competition.

II. INTELLECTUAL PROPERTY RIGHTS AND LEGALLY RECOGNIZABLE ANTICOMPETITIVE ACTS

A patent, copyright, trademark, or trade secret holder should be rewarded for her investments and risks to encourage competition in innovations. Under the appropriate circumstances, however, even an absolute property right to the intellectual property for a given innovation should not permit a firm from extending that legal “monopoly” into markets that do not involve products or services that are covered by the patent. The Federal Circuit in a series of decisions has sought to limit the circumstances where extension of a patent into different markets could be considered anticompetitive. In In re Independent Service Organizations Antitrust Litigation,26 (“Xerox”), described by former Chairman Pitofsky above, the Federal Circuit stated “[i]n the absence of any indication of illegal tying, fraud in the Patent and Trademark Office, or sham litigation, the patent holder may enforce the statutory right to exclude others from making, using, or selling the claimed invention free from liability under the antitrust laws.”27 The Supreme Court decided against reviewing the Federal Circuit’s Xerox decision, presumably in part because the Department of Justice argued that the issues needed to be better developed in the lower courts.28 All appeals of antitrust cases involving patents go to the Federal Circuit since the Federal Circuit asserted that power in Nobelpharma AB v. Implant Innovations, Inc.29 in 1998.30 Accordingly, it would appear that the Federal Circuit, a court that specializes in enforcing the patent laws, will be making both the relevant patent and antitrust law. In effect, it has placed itself in the role of balancing of patent and competition issues, and has also offered dicta as to how other courts should review copyright and competition issues.

There is some question that the Federal Circuit will find many instances that fit into the three areas that it has identified. Clearly, it is difficult to prove a case of sham litigation relating to inequitable conduct relating to a patent application since the Federal Court’s first opinion in Nobelpharma and a subsequent Ninth Circuit decision that

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27 Id. at 1327.
28 For a discussion of the Department of Justice’s Supreme Court Brief on Xerox, see Melvin Schwartz, Balancing IP Rights and Competition, GLOBAL COMPETITION REV., Apr.-May, 2001, at 28. I am not commenting on the merits of the Xerox case, but the apparent breadth of the Federal Circuit's decision.
29 141 F.3d 1059, 1068 (Fed. Cir. 1998).
30 Id. at 1068 (“[W]e conclude that we should decide these issues as a matter of Federal Circuit law, rather than rely on various regional precedents.”).
litigation cannot be deprived of immunity unless it is objectively baseless. There are cases that suggest a pattern of litigation can be a sham, but the Federal Circuit has not yet recognized this type of evidence of sham litigation in the context of patent law. The Federal Circuit did sustain one of the few antitrust verdicts of a Walker Process fraud on the United States Patent and Trademark Office ("PTO") in Nobelpharma. However, the Federal Circuit made it clear that the standard for showing fraud is quite high and that a failure to cite prior art will support liability only in "limited circumstances."

Even before its decision in Xerox, the Federal Circuit had shown a sharp resistance to going beyond these three areas to allow antitrust laws to interfere with an intellectual property holder’s right to refuse to deal, even though the antitrust agencies may not have agreed. In Intergraph Corp v. Intel Corp., the Federal Circuit overturned a district court opinion that had found antitrust liability against Intel for refusing to deal with Intergraph. The district court had found Intel had illegally denied its customer Intergraph access to Intel chips and technical product development information. Intel cut Intergraph off from an existing relationship because Intergraph had sued Intel for patent infringement, and Intergraph had refused Intel’s demand to enter a cross-licensing agreement for Intergraph’s "Clipper chip" patents at issue in the patent dispute. The district court viewed Intel’s chips and technology as an essential facility, and found that...

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31 See Columbia Pictures Indus., v. Prof’l Real Estate Investors Inc., 944 F.2d 1525, 1530 (9th Cir. 1991), aff’d, 508 U.S. 49 (1993).
32 For example, in USS-Posco Industries v. Contra Costa County Building & Construction Trades Council, AFL-CIO, 31 F.3d 800 (9th Cir. 1994), the Ninth Circuit discussed the impact of Professional Real Estate Investors on California Motor Transport, Co. v. Trucking Unlimited, 404 U.S. 508 (1972). The Ninth Circuit’s decision states "California Motor Transport deals with the case where the defendant is accused of bringing a whole series of legal proceedings. Litigation is invariably costly, distracting and time-consuming; having to defend a whole series of such proceedings can inflict a crushing burden on a business. California Motor Transport thus recognized that the filing of a whole series of lawsuits and other legal actions without regard to the merits has far more serious implications than filing a single action, and can serve as a very effective restraint on trade. The fact that a small number in the series of lawsuits turn out not to be frivolous will not be fatal to a claim under California Motor Transport; even a broken clock is right twice a day." USS-Posco Industries, 31 F.3d at 811 (affirming summary judgment for union, as its lobbying did not constitute sham legislation/litigation activity under Noerr-Pennington). See also Primetime 24 Joint Venture v. Nat’l Board, Co., 219 F.3d 92, 100-01 (2d Cir. 2000) (citing sham litigation standard from Prof’l Real Estate Investors Inc.); Moore U.S.A. Inc. v. Standard Register Co., 139 F. Supp. 2d 348, 358-59 (W.D.N.Y. 2001) (same).
33 See Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172 (1965) (remanding to the trial court to allow Walker the opportunity to make section 2 Sherman Act claims more specific).
34 See Nobelpharma. 141 F.3d at 1061-62.
35 Id. at 1070-71.
36 195 F.3d 1346, 1358 (Fed. Cir. 1999)
37 See id. at 1358-59.
Intel was a monopolist that had "affirmative duties to refrain from acting in a manner that unreasonably harms competition." The court enjoined Intel from refusing to deal with Intergraph and required Intel to provide Intergraph with the same supply of chips and technical information provided to Intergraph's competitors.

The Federal Circuit reversed the district court, and the district court eventually dismissed Intergraph's action. The Federal Circuit found that Intergraph had not proven that Intel's withholding of "strategic benefits" from Intergraph was designed to enhance Intel's competitive position in the microprocessor market. The Federal Circuit stated:

[A]s we have stated, the owner of proprietary information has no obligation to provide it, whether to a competitor, customer, or supplier. . . . [A] customer who is dependent on a manufacturer's supply of a component cannot on that ground force the producer to provide it; there must be an anticompetitive aspect invoking the Sherman Act. . . . The district court herein recognized that there must be an anticompetitive intent, but ignored the absence of competition between Intel and Intergraph.

The Federal Circuit also expressed concerns about the application of the essential facility doctrine to intellectual property. With the Federal Circuit's decision in Xerox, this position appears to have hardened, and eliminated any inquiry into intent.

At least the FTC and the Ninth Circuit have not agreed with the Federal Circuit's opinions limiting antitrust liability. This can be clearly seen in the FTC's recent consent with Intel, involving not only the same actions by Intel's with regard to Intergraph, but similar alleged incidents involving Digital Equipment Corporation and Compaq Computer Corporation. The FTC in its complaint alleged that Intel's coercing these companies to cross licensing would illegally maintain Intel's dominant position in microprocessor-related innovation. In the Digital matter, the FTC alleged Digital was both a customer and competitor of Intel. The FTC also charged that Intel had no reasonable belief that these companies had, could, or would mis-
use Intel’s technical information or prototypes. The resulting consent prevents Intel from discriminating against customers that have an intellectual property dispute with Intel, providing that the customers are not suing Intel for injunctive relief that would prevent Intel from manufacturing chips. Whether the FTC will continue to be interested in this type of case under the new administration will presumably depend on the extent of empirical evidence that supports the allegations and whether the FTC can show anticompetitive impact.

In balancing intellectual property rights against competitive concerns, there also may be other means to abuse a patent beyond the three areas the Federal Circuit explicitly identifies in Xerox. The Antitrust Guidelines for the Licensing of Intellectual Property Section 5 identifies areas of potential competitive harm from unilateral actions to include exclusive dealing, as well tying arrangements and enforcement of invalid intellectual property rights. Former Chairman Pitofsky has challenged the Federal Circuit with four hypothetical cases where the Circuit Court’s approach in Xerox suggests that patent rights may eliminate any legal concerns over lost competition, assuming the patent has given market power to the patent holder.

(1) [A] patent holder refuses to sell except on condition that the purchaser not buy from a potential competitor.

(2) [A]n inventor licensed an important process patent to five firms. One of the firms is a price cutter. [T]he inventor terminates the license resulting from joint coercive action by the other licensees .

(3) [T]wo firms have entered into a patent pooling agreement in which each firm retains veto power over the selection of its partner’s licensees . [There exists] a unilateral

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44 See Timothy J. Muris, GTE Sylvania and the Empirical Foundations of Antitrust, 68 ANTITRUST L.J. 899, 911-12 (2001) ("Sylvania was a milestone. [Sylvania's] insistence on measuring restraints by 'demonstrable economic effect' provides a sound guide for the antitrust community. . . . [F]ollowing Sylvania, objective observers will decide these controversies based upon empirical evidence.").

45 See Timothy J. Muris, The FTC and the Law of Monopolization, 67 ANTITRUST L.J. 693, 718 (2000) ("[T]he crucial issue . . . is not whether [the FTC's] VISX and Intel arguments are correct. The issue is whether the plaintiffs should be required to show that, whatever its impact on the firms in question, the conduct had an impact on the market. . . . Accordingly, those cases should have proceeded, as have past Section 2 cases, to analyze all relevant issues, including anticompetitive impact.").

46 See DEP'T OF JUSTICE, supra note 9, § 5 (listing horizontal restraints, resale price maintenance, tying arrangements, exclusive dealing, cross-licensing and pooling arrangements, grantbacks, and acquisition of intellectual property rights).

47 See id. § 6.

refusal to license, designed to reduce competition below levels that would exist in the absence of the pooling agreement, [and] the pooling agreement led to the refusal.

(4) [A] patent holder knowingly misinformed a standard-setting organization that it had no patents in a particular area, and as a result the organization developed a standard that required use of the patent holder's patent. . . . [T]he patent holder refused to license, or would license only at exorbitant rates.49

Although one may be able to juggle an analysis of these types of cases into the three exceptions described in Xerox,50 it appears unlikely the Federal Circuit would be willing to do so.

Before its decisions in Xerox and Intergraph, the Federal Circuit had left open the possibility of predatory design change, which presumably would not fall into the three Xerox exceptions. C.R. Bard, Inc. v. M3 Systems, Inc.51 involved various patent and antitrust issues relating to tissue sampling devices. A jury verdict found in favor of M3 (1) that Bard's patents were invalid, (2) M3 had not violated the patents, (3) Bard was guilty of fraud on the PTO, (4) Bard violated the antitrust laws, and (5) it engaged in patent misuse.52 The Federal Circuit, in a divided panel, dismissed all charges except patent invalidity for violating the on-sale bar and the antitrust count.53 It may be helpful to consider the facts in this case more closely.

Biopsies can be performed with a variety of tissue sampling devices. The devices at issue included a "gun" and disposable needles used with the gun to take certain types of tissue samples. Bard had claimed patent infringement by M3 on Bard's guns and needles. M3 alleged that Bard had deliberately changed the design of its biopsy gun to make it incompatible with M3's competing needles. According to the dissent in the Federal Circuit's opinion, the redesign was within the claims of Bard's patents.

The majority of the panel found that there was enough evidence for the jury to find "Bard maintained its monopoly position by exclusionary conduct, to wit, modifying its patented gun in order to ex-

49 Id. at 922-23.
50 See Schwartz, supra note 28 for a discussion of these examples.
51 157 F.3d 1340 (Fed. Cir. 1998).
52 See id. at 1346.
53 See id. An "on-sale" bar is when a company is found to have made commercial sales of a product containing claims in a patent application more than a year before the inventor applies for a patent. If the product is found to have been sold under these circumstances, the patent is not valid.
clude competing replacement needles." The dissent stated that modifications improved Bard's guns, and that preventing such modifications would have the "pernicious" effect of penalizing innovators for improving their products. However, the majority found "there was substantial evidence that Bard's real reasons for modifying the gun were to raise the cost of entry to potential makers of replacement needles, to make doctors apprehensive about using non-Bard needles, and to preclude the use of 'copycat' needles."

The Federal Circuit declined Bard's petition for rehearing in banc. However, two of the judges in the concurrence stated that:

Bard did not argue to this court that modification of a patented product within the scope of the claims by a patentee cannot, as a matter of law, constitute an antitrust violation. Nor did Bard challenge the jury instructions . . . . The majority opinion turns solely on Bard's argument regarding the sufficiency of the evidence and its failure to challenge the propriety of the jury instructions. The question of whether or not a cause of action premised upon the antitrust laws exists when a patentee redesigns a patented product within the scope of the patent claims, awaits another day.

The Federal Circuit's Xerox decision suggests that the type of predatory design theory allowed in the Bard case may now be disallowed if pleaded differently, regardless of the evidence on intent or efficiency justifications for the design change.

The Federal Circuit's interpretation of the interplay between intellectual property rights and competition suggests little or no trade off between these two policy interests, except in perhaps the three areas identified in its Xerox decision. In particular, the trend in the Federal Circuit's decisions suggests it is likely to base its analysis by determining whether there is any patent issue involved, rather than allowing juries and lower courts to examine evidence of the net effect of a patent holder's actions on innovation and competition.

III. INTELLECTUAL PROPERTY AND AGREEMENTS TO SETTLE PATENT DISPUTES

The Antitrust Guidelines for the Licensing of Intellectual Property focus most of their analysis on the conditions where agreements

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54 Id. at 1368 (noting that "the evidence of Bard’s market power was in dispute").
55 Id. at 1382.
56 Id.
58 Id., 1380-81 (citations omitted) (emphasis added).
among intellectual property holders might defeat competition, and in general present a balanced analysis of intellectual property rights and competitive concerns in this area. The FTC has recently focused several actions against companies that have settled patent disputes in ways the FTC has believed to be anticompetitive. These include the recent series of brand and generic drug agreements relating to the statutory provisions in the Hatch-Waxman Act, and the agreement and consent in FTC v. Summit Technology, Inc. and VISX, Inc. Each of these cases is very fact specific. The FTC is now engaged in a broad sweep of generic drug agreements to locate other agreements that the FTC may consider anticompetitive.

Some courts have found some of these agreements per se illegal, and the AAI has submitted an amicus brief that urges upholding a per se rule of anticompetitive market division in one of these cases. Similarly former Chairman Pitofsky expressed the view that:

[T]he key provisions effectively paying the generic to stay off the market (and by staying out to preclude other from entering the market), along with ancillary provisions blocking competing sales, lead the Commission to conclude that the primary purpose and effect of the arrangement was to extend the de facto duration of the patent by private agreement.

Others have disagreed with this position. For example, Gilbert and Tom state "the fact that the settlement involves a payment from the patentee to the challenger is not sufficient to determine the settlement is anticompetitive." Similarly, in discussing these cases FTC Commissioner Leary has written:

I think the issues in these patent settlements are difficult and individual facts are important. These settlements, like any patent settlement, require a resolution of two conflicting policies. On the one hand, there is a policy in favor of resolving disputes in order to conserve public and private resources

61 See In Re Cardizem CD Antitrust Litig., MDL No. 1278, Case No. 00-2483 (6th Cir. 2001). I have had no involvement in this AAI brief, and am not commenting on it.
63 Gilbert and Tom, supra note 15, at 78.
and, in some cases, to facilitate entry. On the other hand, there is always a risk of a collusive agreement to share monopoly profits from an individual patent. In the pharmaceutical area, these issues are played off against a special regulatory framework.64

As with my concern that intellectual property protection should not completely trump antitrust concerns, I believe antitrust analysis of patent settlements should be based on a careful analysis of the facts and economics of each case—however these cases are argued legally.

IV. THE PROCESS OF GRANTING INTELLECTUAL PROPERTY PROTECTION AND THE PRESUMPTION THAT GRANTING PATENTS ALWAYS PROTECTS INCENTIVES TO INNOVATE

In enforcing many of the intellectual property laws, there is a presumption that the Patent and Trademark Office effectively protects the legitimate intellectual property interests of inventors of unique products, processes, written works, and trademarks. There are at least three challenges to the PTO in fulfilling this job.

First, the patent process is ex parte. In this type of process there may be a greater likelihood of making decisions that undercut competition, because the initial information comes from the company seeking a legally recognized monopoly.

Second, the PTO does the best job ensuring the legitimacy of patent applications that it can, given the resources that it possesses. However, there has been a rapid increase in patent filings. As illustrated in Figure 2, in 2000, the PTO received over 293,000 applications, or over a thousand patent applications per work day. From 1996 to 2000, the PTO had a 53 percent increase in patent applications, and almost an 8 percent increase in applications from just 1999 to 2000. It unclear whether the PTO can effectively process this massive and increasing number of patents, as reflected in the PTO’s own projections of an increasing inventory of unprocessed patent applications.65

Third, much of the recent increases in filings have been for “business methods” such as “one click” ordering, rather than the traditional product and process patents. Some have suggested that the PTO has been granting many questionable patents without adequate review. Figure 2 also illustrates that although currently a relatively

small portion of total patent applications, the number of business methods applications increased 276 percent from just 1999 to 2000. As a result of these three factors, and the Federal Circuit’s decisions that apparently imply a strong presumption of the legitimacy and supremacy of any patent issued, the patent process could be offering a greater degree of protection against competition than is intended.

**Figure 2: Patent Applications 1996-2000**


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Three policy issues arise in this context. First, the PTO approves about three-quarters of the patent applications it considers. Is the PTO approving this high a percentage of patents actually discouraging innovation, as some companies seek to obtain wide ranging patents on questionably unique claims? Given that there needs to be a balance between protecting the intellectual property rights of early inventors and subsequent inventors, as Landes and Posner show, granting too sweeping rights to early inventors through the issuance of questionable or overbroad patents can deter innovation from subsequent inventors. This can have the perverse effect of reducing the incentives to innovate optimally, which the intellectual property laws are presumably designed to protect. Despite the fact that patent holders are responsible for protecting their patent rights, my reading of the recent Federal Circuit decisions suggests that an inadequate review of patent applications could discourage or eliminate much innovation.

Accordingly, the PTO may need more resources to process claims both quickly and accurately. To the extent that the PTO will continue to issue business practice patents, the PTO may also want to consider increasing the number of patent examiners with more business training and experience. It may even be desirable for the PTO and the antitrust agencies to regularly share information, to see if the patent processing system and antitrust enforcement are having their desired effects. Under any condition, I believe it would be beneficial if the FTC, General Accounting Office ("GAO"), or another agency to study the patent processing system to determine the impact of easing or tightening the current patent processing system.

Second, how does one define intellectual property that should be protected by law? Innovative techniques in production have often been guarded as trade secrets, but many of the new business innovations in the information age can be copied quickly by competitors—as numerous e-businesses have found out. However, should a firm be able to patent any business practice? Presumably one cannot patent a business practice that people practiced in the field would see as obvious, but can the PTO apply this test effectively given the increase in these types of patents? The result of granting an excessively large number of business practices patents can create a number of wide ranging "monopolists," and substantially postpone the benefits of shorter term competition as well as deter subsequent innovations. The PTO has recently rethought its granting of so many business methods patents, and has stated it will give them more scrutiny. I applaud this policy change.

67 See id. ("Overall, the Patent Office last year granted 182,223, or 72%, of the 252,871 patent applications it studied.").
68 See id.
Third, would it be desirable for the patent office to take some aspects of competition into account? If so, should the FTC study the patent-granting process to evaluate ways in which anticompetitive issues might be spotted in advance? Should there be any legislation or other actions that better institutionalize potential competitive concerns? Should the patent office hire attorneys and economists that perform at some level competitive analyses, similar to the Department of Defense’s procurement group? I do not endorse any of these alternatives, but I would be interested in reactions to these or other alternatives.

V. SUMMARY OF RECOMMENDATIONS

I believe there should be an explicit recognition and accounting of the unique aspects of intellectual property. In this light, there need to be more research on optimal intellectual property rights protection, the trend in court decisions, and the limitations of the PTO. Depending on the results of this research, policies should be changed where appropriate.

In particular, the intellectual property/antitrust tradeoff calls for several actions to be considered. First, there should be more economic and policy analysis of the full impact of intellectual property on competition and innovation. Not only is there a need for better and more detailed theoretical analysis of the unique aspects of intellectual property in a world of rapid technological change and network effects, but more empirical research is needed to provide a solid basis for both antitrust analysis and intellectual property protection. Professor Scherer and others have engaged in empirical research on competition and innovation, but more needs to be done.

Quantifying the impact of broad intellectual property rights and competition on innovation is difficult, since it is difficult to measure true innovations. However, research is possible on the impact of intellectual property rights on at least research and development, and case studies could provide useful insights. For example, is there evidence that antitrust cases are being reformulated as patent cases to get them into the Federal Circuit and limit antitrust exposure? If yes, has this damaged either short run price competition or incentive for second generation inventors to innovate? Are there any instances where firms asserting patent protection for some of their products should be required to sell any of their products at nondiscriminatory terms?

The PTO and the antitrust agencies jointly may benefit from creating a task force to provide a broader empirical and theoretical basis for competition and intellectual property policy. It is my understanding that the American Antitrust Institute would be willing to fa-
cilitate any such efforts, including co-hosting a forum, proposing a specific research agenda, or undertaking its own study.

Second, there needs to be a critical look at the way the courts and agencies balance the protection of individual and joint intellectual property vs. their effect on competition. In particular, there should be a review of the Federal Circuit's apparent strengthening of patent rights over competitive concerns in light of its conflict with the antitrust agencies' and Ninth Circuit's approaches. The tension between the Ninth Circuit's *Kodak* decision and the Federal Circuit's *Xerox* decision will need to be resolved in a case that presents a clear test of when antitrust issues can be considered in the presence of patents. Absent such a resolve or a consensus, both primary and developmental innovations are likely to be deterred by the existing uncertainty in the courts.

Third, there needs to be a review of the PTO's procedures. The existing decisions by the Federal Circuit give great weight to issued patents, and the PTO. The relatively new policy of granting many business practice patents, in particular, could threaten legitimate competition across many markets for many years by establishing monopolies over efficient business practices that may not truly be patentable innovations.