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**INTELLECTUAL PROPERTY AND
ANTITRUST: GENERAL PRINCIPLES**

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I. THE ANTITRUST LAWS

A. *Policy and Economics of the Antitrust Laws*

The economic rationale behind a free market economy is that freely operating competitive markets will result in the most efficient allocation of a nation's scarce resources and will bring consumers the widest variety of choices and the lowest possible prices.¹ Antitrust laws are intended to ensure that markets remain competitive.

For much of their history, the antitrust laws were given a vaguely populist hue, with both social as well as economic justifications.² However, over the past twenty years, the promotion of consumer welfare has become the sole guiding principle of the antitrust laws.³ Consumer welfare has in turn been equated with economic efficiency.

The antitrust laws protect competitive markets (thereby promoting economic efficiency) by proscribing certain types of conduct. Agreements among competitors that interfere with the ability of firms to enter markets, introduce new products or price their products as they see fit are generally viewed as "anticompetitive" and the proper concern of antitrust policy.⁴ The other prime antitrust concern is monopolization. Monopolies are viewed as destructive to competition, at least when accomplished or maintained by means unrelated to merit.⁵ Monopolists impose a "deadweight loss" on society by reducing their output below the level which consumers would be willing to purchase at a competitive price.⁶ Also, monopolies reduce consumer choice.

While there is widespread consensus regarding the harm to consumers from cartels and monopolies, there is disagreement among

¹ Herbert Hovenkamp, *Federal Antitrust Policy: The Law of Competition and its Practice*, West Pub. Co. p.3 (1994).

² See generally, Herbert Hovenkamp, *Federal Antitrust Policy: The Law of Competition and its Practice*, West Pub. Co. p. 59-61 (1994)

³ See Chairman Timothy Muris, Remarks at the American Bar Association, Antitrust Section Annual Meeting, *Antitrust Enforcement at the Federal Trade Commission: In a Word—Continuity* (ABA, Aug. 7, 2001) (press release at <<http://www.ftc.gov/opa/2001/08/murisaba.htm>> (accessed Mar. 7 2003)).

⁴ See generally, ABA, Antitrust Section, *Antitrust Law Developments* vol. 1, 3-16 (Debra J. Pearlstein ed., 5th ed., ABA 2002).

⁵ Robert H. Bork, *The Antitrust Paradox*, __ (Basic Books, Inc. 1978).

⁶ Herbert Hovenkamp, *Federal Antitrust Policy: The Law of Competition and its Practice*, West Pub. Co. p. 20 (1994)

both academics and the judicial community about how to respond when the threat to consumer welfare is more tenuous or less likely to materialize, as would be the case with some mergers or predatory pricing strategies, for example.

B. *The Laws*

The three main statutory provisions defining conduct that is unlawful under the antitrust laws are Sections 1 and 2 of the Sherman Antitrust Act⁷ and Section 7 of the Clayton Act.⁸

There are a number of other statutory antitrust provisions that occasionally come into play in the intellectual property context, for example Section 5 of the Federal Trade Commission Act⁹ (prohibiting unfair methods of competition) and Section 3 of the Clayton Act¹⁰ (prohibiting certain forms of tying and exclusive dealing).

C. *Enforcement of the Antitrust Laws—Standards*

1. Section 1 of the Sherman Act

⁷ 15 U.S.C. §§ 1-2 (2000). Section 1 of the Sherman Act provides: “Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.”

Section 2 of the Sherman Act provides:

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding \$10,000,000 if a corporation, or, if any other person, \$350,000, or by imprisonment not exceeding three years, or by both said punishments, in the discretion of the court.

⁸ *Id.* § 18. Section 7 of the Clayton Act proscribes stock and asset acquisitions that, “where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.”

⁹ *Id.* § 45.

¹⁰ *Id.* § 14.

Section 1 reaches exclusively collective conduct (*i.e.*, contract, combination, or conspiracy). It reaches both horizontal bilateral conduct (among competitors) and vertical bilateral conduct (among entities at different levels of the distribution chain, *e.g.*, manufacturers and distributors, sellers and buyers, and licensors of technology and users of technology).

The term “restraint of trade” is extremely broad and if read literally could encompass many types of productive commercial activities.¹¹ However, as the law has developed, conduct is reviewed under Section 1 more flexibly, using either a “*per se*” or “rule of reason” standard.¹²

A *per se* approach is reserved for business methods that are so pernicious and plainly anti-competitive that they can be deemed unlawful “without elaborate inquiry as to the precise harm that they have caused or the business excuse for their use.”¹³ Examples of conduct that is *per se* illegal under the antitrust laws are price fixing, bid rigging, and horizontal market allocations. In a suit brought against conduct that is *per se* unlawful, the sole competitive issue is whether the defendant committed the conduct.¹⁴ If the conduct occurred, there is a violation of Section 1.¹⁵ The defendant may not present evidence to show that, in fact, the conduct at issue had no anticompetitive effects or indeed had procompetitive benefits.¹⁶

Conduct not *per se* illegal is evaluated under the “rule of reason.”¹⁷ In rule of reason cases, the finder of fact must decide whether the questioned conduct is an unreasonable restraint on competition by balancing the procompetitive and anticompetitive effects of the conduct.¹⁸ This analysis involves a number of factors, including “specific information about the relevant business, its condition before and after the

¹¹ For example, common business partnerships could be considered to restrain trade, although they have not been deemed illegal “restraints of trade” under Section 1 of the Sherman Act. See, *Northern Securities Co. v. United States*, 193 U.S. 197, 406 (1904) (Holmes, J., dissenting).

¹² ABA, Antitrust Section, *Antitrust Law Developments* vol. 1, 47-48 (Debra J. Pearlstein ed., 5th ed., ABA 2002).

¹³ *Northern Pacific Railway v. United States*, 356 U.S. 1, 5 (1958).

¹⁴ *Id.*

¹⁵ See generally, ABA, Antitrust Section, *Antitrust Law Developments* vol. 1, 46-47 (Debra J. Pearlstein ed., 5th ed., ABA 2002).

¹⁶ *Id.* at 47.

¹⁷ *Id.* at 58.

¹⁸ See *e.g.* *Natl. Soc’y. of Prof. Engr. v. U.S.*, 435 U.S. 679 (1978).

restraint was imposed, and the restraint's history, nature, and effect.”¹⁹ The rule of reason is most commonly applied in Section 1 cases.²⁰ The Supreme Court has also approved the use of a truncated rule of reason analysis (sometimes called a “quick look” analysis) in situations that seem obviously anticompetitive but could still have a procompetitive justification.²¹ In quick look cases, the courts do not require the plaintiff to conduct a complete market analysis before shifting the burden on to the defendant to prove that the restraint has a procompetitive effect.²² In *California Dental Association v. Federal Trade Commission*,²³ the Supreme Court rejected the use of quick look analysis for challenged advertising restrictions, but suggested that a longer look, although short of full rule of reason analysis, would suffice.²⁴

2. Section 2 of the Sherman Act

Section 2 reaches both collective conduct (combination or conspiracy) and unilateral conduct (monopolization and attempts to monopolize).

“The offense of monopoly under [Section] 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.”²⁵ It forbids the use of monopoly power “to foreclose competition, to gain a competitive advantage, or to destroy a competitor.”²⁶

¹⁹ *St. Oil Co. v. Khan*, 522 U.S. 3, 10 (1997).

²⁰ See ABA, Antitrust Section, *Antitrust Law Developments* vol. 1, 58 (Debra J. Pearlstein ed., 5th ed., ABA 2002).

²¹ See *Natl. Collegiate Athletic Assn. v. Bd. of Regents of the U. of Okla.*, 468 U.S. 85 (1984); *Fed. Trade Commn. v. Ind. Fedn. of Dentists*, 476 U.S. 447 (1986).

²² *Bd. of Regents*, 468 U.S. at 109-10 (“As a matter of law, the absence of market power does not justify a naked restriction on price or output.”).

²³ 526 U.S. 756 (1999).

²⁴ *Id.* at 779. The Court suggested a flexible inquiry approach, “looking to the circumstances, details, and logic of a restraint.” *Id.* at 781.

²⁵ *U.S. v. Grinnell Corp.*, 384 U.S. 563, 570 (1966).

²⁶ *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 482-83 (1992) (quoting *U.S. v. Griffith*, 334 U.S. 100, 107 (1948)).

Monopoly power is “the power to control prices or exclude competition.”²⁷ It may be “inferred from a firm's possession of a dominant share of a relevant market that is protected by entry barriers.”²⁸ To determine whether monopoly power exists in a “relevant market,” it is necessary to define the relevant product and geographic market. The relevant product market includes substitute products to which a customer may turn in response to a rise in price of the main product.²⁹ Thus, commodities that are “reasonably interchangeable” make up part of the same relevant market.³⁰ The geographic market is the geographic area to which customers may look for such competing products. “Defining the relevant market is an indispensable element of any monopolization or attempt case.”³¹

Attempted monopolization requires: (a) the intent to monopolize a relevant market, (b) predatory conduct in pursuit of that end, (c) a dangerous probability of success, and (d) causal “antitrust” injury.³²

3. Section 7 of the Clayton Act

Section 7 generally governs stock and asset acquisitions. Exclusive licenses are also evaluated under Section 7. To assess whether an acquisition violates Section 7, the relevant product and geographic markets must be defined and the effect of the acquisition on competition in that market must be assessed. The Merger Guidelines explain the Antitrust Division of the Department of Justice (DOJ) and Federal Trade Commission's (FTC) current standards for evaluating the lawfulness of acquisitions under Section 7.³³

D. Enforcement of the Antitrust Laws

²⁷ *U.S. v. E.I. Du Pont de Nemours & Co.*, 351 U.S. 377, 391 (1956).

²⁸ *U.S. v. Microsoft Corp.*, 253 F.3d 34, 51 (D.C. Cir. 2001).

²⁹ *Grinnell Corp.*, 384 U.S. at 571.

³⁰ *E.I. Du Pont*, 351 U.S. at 395.

³¹ *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 1355 (Fed. Cir. 1999). For defining relevant markets, see generally U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines section one (April 2, 1992) [hereinafter *Merger Guidelines*] <http://www.usdoj.gov/atr/public/guidelines/horiz_book/toc.html> (accessed Mar. 7, 2003).

³² *Transamerica Computer Co. v. IBM Corp.*, 698 F.2d 1377, 1382 (9th Cir. 1983).

³³ See Merger Guidelines, *supra*.

The FTC and DOJ are responsible for enforcing the antitrust laws. The DOJ enforces Sherman Act and Clayton Act cases through actions in the courts, while the FTC enforces FTC Act and Clayton Act violations, generally through administrative litigation.³⁴

The Sherman Act is both a civil and criminal statute. The DOJ regularly enforces the Sherman Act criminally against “hard core” anticompetitive behavior such as bid rigging and price fixing.³⁵ In criminal cases, the DOJ seeks jail terms and fines.³⁶ In civil actions, the DOJ and the FTC generally seek injunctive relief and, where appropriate, damages.³⁷ Federal and state governments, like any other entity, may seek treble their actual damages where they have been injured in their business or property.³⁸

Private parties may seek injunctive relief under 15 U.S.C. § 15 and also may secure treble damages under Section 4 of the Clayton Act. Private parties must satisfy certain standing requirements³⁹ and must demonstrate antitrust injury.⁴⁰ The statute of limitations for Section 4 treble damage actions is four years.⁴¹

It is also important to note that the U.S. antitrust laws are extraterritorial in their application and thus will generally govern conduct outside the United States that has an effect on competition in the United States.⁴²

³⁴ ABA, Antitrust Section, *Antitrust Law Developments* vol. 1, 725, 603 (Debra J. Pearlstein ed., 5th ed., ABA 2002)

³⁵ ABA, Antitrust Section, *Antitrust Law Developments* vol. 1, 725, 730 (Debra J. Pearlstein ed., 5th ed., ABA 2002)

³⁶ *Id.*

³⁷ See generally Herbert Hovenkamp, *Federal Antitrust Policy: The Law of Competition and its Practice*, West Pub. Co., 534-36 (1994).

³⁸ 15 U.S.C. § 15(a).

³⁹ See e.g. *Associated Gen. Contractors of Cal., Inc. v. Cal. St. Council of Carpenters*, 459 U.S. 519 (1983); *Ill. Brick Co., v. Ill.*, 431 U.S. 720 (1977).

⁴⁰ See e.g. *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 489 (1977).

⁴¹ 15 U.S.C. § 15(b).

⁴² See e.g. *U.S. v. Aluminum Co. of Am.*, 148 F.2d 416, 444 (2d Cir. 1945); *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 582, n. 6 (1986); *Hartford Fire Ins. Co. v. Cal.*, 509 U.S. 764, 814 (1993); *U.S. v. Pilkington, Plc.*, 1994-2 Trade Cas. ¶ 70,842 (D. Ariz. 1994) (consent decree in settlement enjoining foreign licensing arrangements with anticompetitive impact on U.S. commerce).

E. Enforcement of the Antitrust Laws—General Caveats

Antitrust is an area where potential liability can be difficult to predict. All three statutes quoted above use terms that are not capable of narrow definition and application: “restraint of trade,”⁴³ “monopolize any part of the trade or commerce,”⁴⁴ “substantially . . . lessen competition.”⁴⁵ Congress, in effect, has given the courts significant leeway in defining these terms and applying the terms to the facts of a particular case. For many years, the uncertain scope of the laws was somewhat curtailed by the widespread use by the courts of *per se* prohibitions for various types of conduct, which were considered presumptively anticompetitive. However, over the past twenty-five years *per se* prohibitions have given way in many areas to a more nuanced rule of reason analysis that takes into account the likely economic consequences of a particular course of conduct.

The basic focus of the antitrust inquiry is to determine whether the conduct under scrutiny is likely to harm consumers, for example by raising prices or restricting production of goods or services. This leads to the inquiry of whether the conduct will serve to create or maintain monopoly power, or facilitate cartel behavior through which a group of firms is able to coordinate their activity so as to, in effect, jointly exercise monopoly power. As a rule of thumb, highly competitive markets where firms have low market shares or where it would be easy for new entrants to compete do not attract much antitrust concern. Conversely, restrictive conduct in highly concentrated markets with few competitors and high barriers to new entry is more likely to threaten the operation of competitive markets and is, therefore, closely scrutinized by the courts and antitrust agencies.

Unfortunately, it often is not as simple as it may appear at first blush to distinguish procompetitive behavior from anticompetitive behavior. The competitive process is complex, and the analysis of the effect of conduct on competition is similarly complex. Conduct that superficially appears to be anticompetitive often can be demonstrated to involve no net welfare loss to society and in fact to have net procompetitive effects.⁴⁶ The

⁴³ 15 U.S.C. § 1.

⁴⁴ *Id.* § 2.

⁴⁵ *Id.* § 18.

⁴⁶ To give one example, while tying arrangements were considered *per se* illegal for many years, most economists now agree that in certain circumstances tying can be efficient and procompetitive. See Michael Katz & Carl Shapiro, *Antitrust in Software Markets*, in COMPETITION, INNOVATION, AND THE MICROSOFT MONOPOLY: ANTITRUST IN

ability to analyze the economic effects of specific business transactions continues to improve as the base of experience grows and methods of economic analysis become more sophisticated and more accurate.

The about-face by the Supreme Court in its analysis of antitrust legality of vertical restraints is an excellent example of the difficulty in distinguishing anticompetitive behavior from procompetitive behavior and the related difficulty of predicting whether courts will find certain behavior illegal.⁴⁷ In *United States v. Arnold, Schwinn & Company*,⁴⁸ the Supreme Court found Schwinn's territorial system for distribution of its bicycles *per se* illegal under Section 1 of the Sherman Act because it impaired competition among Schwinn distributors.⁴⁹

Schwinn sparked controversy that in turn generated a considerable amount of scholarly work focusing on the economic effects of vertical arrangements.⁵⁰ The consensus among academics was that territorial restrictions could have net procompetitive effects because manufacturers could use vertical restraints to better position their goods for interbrand competition against competing goods.⁵¹ Territorial restraints could be used to address the "free-rider phenomenon." In light of this analytical work, nine years later in *Continental T.V., Incorporated v. GTE Sylvania Incorporated*,⁵² the Supreme Court reversed its position and concluded that a *per se* illegal approach to territorial restraints is unsound.⁵³ The

THE DIGITAL MARKETPLACE 29, 67-69 (Jeffrey A. Eisenach and Thomas M. Lenard eds., 1999). On the other hand, some conduct that used to be seen as relatively harmless, such as exclusive dealing contracts, are now understood to be more problematic. A. Douglas Melamed, speech, *Antitrust at the Turn of the Century* (Fourth International Symposium on Competition Policy, Dec. 7, 1999) (available at www.usdoj.gov/atr/public/speeches/5232.htm) (accessed Apr. 17, 2003)

⁴⁷ Andrew I. Gavil, "A First Look at the Powell Papers: Sylvania and the Process of Change in the Supreme Court," 17 *Antitrust* 8 (2002).

⁴⁸ 388 U.S. 365 (1967).

⁴⁹ *Id.* at 382.

⁵⁰ *Id.* at n 48.

⁵¹ See, e.g., Klein, Crawford & Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297, 299-300 (1978); Halverson, *An Overview of the Legal and Economic Issues Regarding Vertical Arrangements*, in ANTITRUST POLICY IN TRANSITION: THE CONVERGENCE OF LAW AND ECONOMICS 343-71 (1984); Herbert Hovenkamp, *Vertical Restrictions and Monopoly Power*, 64 B.U.L. Rev. 521, 523 (1984).

⁵² 433 U.S. 36 (1977).

⁵³ *Id.* at 57-58.

Court indicated that nonprice vertical restraints should be evaluated under the rule of reason.⁵⁴ Thus, the lawfulness of a particular vertical restraint now depends upon whether the restraint on balance restricts or promotes competition.

To assess the likelihood of antitrust liability based on conduct involving intellectual property, it is typically necessary to perform a rigorous economic analysis of the likely competitive effects of potential conduct. However, to assess the competitive effect of such conduct, it is necessary first to understand the nature and scope of the different intellectual property rights.

II. THE INTELLECTUAL PROPERTY LAWS

Like the antitrust laws, the laws relating to intellectual property are aimed, in significant part, at fostering economic development. The following section will briefly describe the laws in four main fields of intellectual property: patents, copyrights, trademarks, and trade secrets. However, there are not significant differences in the ways in which the antitrust laws interact with each form of intellectual property right. The body of this article will therefore for the most part focus on patent law, as that is where most of the cases impacting the antitrust laws have arisen. Other forms of intellectual property rights will be discussed where relevant.

A. Policy and Economics of Intellectual Property Law

Economists have offered four principal rationales for the existence of intellectual property rights.⁵⁵ According to Robert Stoner, these are as follows:

(1) Intellectual property rights provide an incentive to invent. Without intellectual property rights, inventors might not be able to appropriate the full value of their inventions. So-called free riders would be able to benefit from the results of innovation without actually investing in innovation themselves;

⁵⁴ *Id.* at 52.

⁵⁵ See Robert Stoner, Presentation at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy, *Intellectual Property and Innovation* (FTC/DOJ, Feb. 26, 2002) <<http://www.ftc.gov/opp/intellect>> (accessed Mar. 7, 2003).

- (2) Intellectual property rights lead to the broader dissemination of innovations. Without the protection of intellectual property rights, inventors would be forced to keep their inventions secret in order to prevent free riding. However, the patent laws allow for licenses, and give licenses value by protecting them against infringement. Also, the patent laws mandate a public disclosure of the intellectual property in a patent application;
- (3) Intellectual property rights lead to a greater commercialization of inventions. Intellectual property rights encourage the licensing of those property rights to entities that are better able to exploit those rights in an economically efficient manner;
- (4) Patent rights assure the appropriability of inventions with a strong potential for follow-on innovation. This will minimize the occurrence of duplicative research.⁵⁶

However, commentators disagree on the extent of IP protection that is desirable, and this issue was debated at the DOJ/FTC hearings on the intersection of antitrust and intellectual property law.⁵⁷ Some suggest that the current system of intellectual property protection does little if anything to increase innovation and may actually harm the economy in various ways.⁵⁸ Some of the potentially negative effects that the overextensive protection of intellectual property rights may result in are:

Intellectual property rights may discourage second-generation innovation.⁵⁹ As the cost of acquiring access to protected intellectual

⁵⁶ *Id.*

⁵⁷ See Presentations at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy (FTC/DOJ, Feb., 2002) <<http://www.ftc.gov/opp/intellect>> (accessed Mar. 7, 2003).

⁵⁸ See Bronwyn H. Hall, Presentation at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy (FTC/DOJ, Feb. 26, 2002) <<http://www.ftc.gov/opp/intellect>> (accessed Mar. 7, 2003) (calling patent system something of a necessary evil and stating that the evidence does not clearly show that the patent system increases innovation, with the possible exception of the pharmaceuticals, biotechnology, and specialty chemicals fields). See Michele Boldrin & David Levine, *The Case Against Intellectual Property*, vol. 92(2) Am. Econ. Rev. (Papers and Proceedings) 209-12 (2002).

⁵⁹ James Langenfeld, *Intellectual Property and Antitrust: Steps Toward Striking a Balance*, 52 Case W. Res. L. Rev. 91, 96 (2001) ("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."); see also, James B. Kobak, Jr., *Intellectual Property*,

property increases, the amount of research conducted using such property will decrease, all else being equal.⁶⁰

Intellectual property rights are a form of legalized monopoly, which can be harmful to a competitive economy for the reasons outlined in the previous section.⁶¹ In general, a monopolist will receive the greatest return by pricing at a level that excludes part of the market that is willing and able to pay above marginal cost for the product, thus creating a deadweight loss.⁶²

In addition, it has been noted that increasing the cost of information via intellectual property protection will lead to dynamic inefficiencies in the economy as a whole because market decisions will either not be fully informed or will be influenced by the cost of acquiring information.⁶³

Intellectual property rights can allow a company to leverage its possession of those rights in order to engage in anticompetitive behavior or monopolization beyond what is expressly allowed by the intellectual property grant.⁶⁴

In the intellectual property context, antitrust law is most concerned with preventing this last negative economic effect from occurring.

B. The Patent Laws

The patent laws are enacted pursuant to Article I, Section 8, Clause 8, of the Constitution, which provides: “The Congress shall have Power . . .

Competition Law and Hidden Choices Between Original and Sequential Innovation, 3 Va. J.L. & Tech. 6 (1998).

⁶⁰ Harvey S. Perlman, *Symposium: Taking Stock: The Law and Economics of Intellectual Property Rights: Taking the Protection-Access Tradeoff Seriously*, 53 Vand. L. Rev. 1831, 1834-35 (2000) (pointing out that while licensing can encourage further investment, transaction costs, externalities, strategic behavior, and uncertainty can all decrease the effectiveness of the licensing process).

⁶¹ Langenfield, *supra*, at 96-97 (“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 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.”).

⁶² James Boyle, *Symposium: Taking Stock: The Law and Economics of Intellectual Property Rights: Cruel, Mean, or Lavish? Economic Analysis, Price Discrimination and Digital Intellectual Property*, 53 Vand. L. Rev. 2007, 2013 (2000).

⁶³ Sanford J. Grossman & Joseph E. Stiglitz, *On the Impossibility of Informationally Efficient Markets*, 70 Am. Econ. Rev. 393 (1980).

⁶⁴ See generally, *Id.* at 99.

[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

The Patent Act provides: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.”⁶⁵ The owner of a patent generally may exclude others from infringing that patent by making, using, or selling the patented invention.⁶⁶

1. The Patent Grant

The patent grant functions to encourage investment in the discovery of new technologies. The amount a firm will invest in developing new technologies generally will depend upon the perceived financial reward from its investment; the patent grant is intended to increase this perceived reward. It does so by offering the investor the right for 20 years to exclude all competitors from making, using, or selling certain technological advances that result from the investment.⁶⁷ This right to exclude is made contingent on the disclosure of certain details of the invention in the patent application, which are then made available to any interested members of the public.⁶⁸

This right to exclude can enable the investor to appropriate much of the value to society that results from the technological advance. Absent such protection, “free riders” who did not make the investment that resulted in discovery of the technology may be able to copy the technology and appropriate much of its value for themselves. The ability of “free riders” to appropriate the benefits of a new technology serves as a deterrent to those considering an investment in developing such technologies. The exclusive patent grant eliminates this deterrent and thereby increases the perceived value of the patent and hence encourages increased investment in technology development.

There are a number of interesting issues in patent policy that have arisen over the past several years that have in turn had an impact on the interface between competition and IP law. Many of these issues were

⁶⁵ 35 U.S.C. § 101.

⁶⁶ *Id.* §§ 154, 271.

⁶⁷ *Id.* § 154.

⁶⁸ *Id.*

addressed at the FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy.⁶⁹

2. Licensing of Patents

A patent license is essentially an agreement by a patent holder not to sue a licensee for what would otherwise be infringement of its patent. Licenses can either be non-exclusive, conveying the bare right not to be sued for infringement, or exclusive, also conveying the right to exclude others from exploiting the patent in the field covered by the license. The patent grant always includes the right to license.⁷⁰ This is a common law right that has not been codified.⁷¹ The validity of a license is determined by standard contract principles, including the requirement of good consideration.⁷²

There are two main economic rationales for licensing. First, the grant of a license provides the recipient with the option to use a technology that it otherwise could not use. Second, licensing permits the patent owner to increase its financial reward from investing in the patent. Each of these rationales will be discussed in more depth later in this article.⁷³

C. The Copyright Laws

The copyright laws also were enacted pursuant to Article I, Section 8, Clause 8, of the Constitution. The Copyright Act⁷⁴ provides:

(a) Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device . . .

⁶⁹ See e.g. Panel on Substantive Standards of Patentability (Apr. 10, 2002) <<http://www.ftc.gov/opp/intellect/020410trans.pdf>> (accessed Mar. 7, 2003). See discussion *infra* at section XIII.

⁷⁰ *Cedars-Sinai Med. Ctr. v. Watkins*, 11 F.3d 1573, 1582 (Fed. Cir. 1993).

⁷¹ *L. L. Brown Paper Co. v. Hydroiloid, Inc.*, 32 F. Supp. 857, 867 (S.D.N.Y. 1939).

⁷² *Davis Airfoils v. U.S.*, 124 F. Supp. 350, 352 (Ct. Cl. 1954).

⁷³ See discussion of procompetitive benefits of licensing at *infra*, section VII (A).

⁷⁴ 17 U.S.C. § 102.

(b) In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.⁷⁵

The copyright system differs from the patent system in a number of ways, most prominently: (1) copyright protection exists from the moment of a work's creation (although registration is a prerequisite to enforcement); (2) the copyright system is a registration system, and applications receive relatively limited scrutiny; (3) copying is required for infringement of a copyright but not for infringement of a patent, and; (4) copyrights are subject to certain defenses and limitations not present in patent law, such as fair use.⁷⁶

D. The Trademark Laws

The federal trademark system is a supplement to state law systems that recognize common law marks. State common law trademarks are not preempted by federal law, but federal registration provides broader rights.

Trademarks distinguish goods with respect to their source. The Trademark Act of 1946 (The Lanham Act) § 1052 provides: "No trademark by which the goods of the applicant may be distinguished from the goods of others shall be refused registration on the principal register on account of its nature . . ."⁷⁷ The statute goes on to enumerate certain exceptions to the general proposition listed in Section 1052 that relate to social concerns (*i.e.*, immoral or scandalous material, the flag of the United States), or to economic concerns. Section 1052(d) provides: "[A] mark or trade name previously used in the United States by another and not abandoned, as to be likely, when used on or in connection with the goods of the applicant, to cause confusion, or to cause mistake, or to deceive . . ." may not be registered. Unlike with patents and copyrights, trademark protection is not limited in time.

E. Trade Secrets (Know-How)

⁷⁵ *Id.*

⁷⁶ Herbert Hovenkamp *et al.*, *IP and Antitrust* vol. 1, § 2.3a, 2-32 to 2-33 (Aspen L. & Bus. Supp. 2003).

⁷⁷ 15 U.S.C. § 1052.

Trade secrets, sometimes called know-how, comprises knowledge that has economic value essentially because it is not known to others. The list of potentially protectable trade secrets is vast, and includes “formulas, manufacturing processes, product specifications and drawings, marketing plans, customer lists, computer software, R&D information, and special price and cost data.”⁷⁸ The protection of trade secrets is essentially a matter of state law.⁷⁹

Possessors of trade secrets are protected in their advantage primarily by general laws against theft. The owner of a trade secret has no recourse against somebody who discovers or reproduces the know-how through independent development or innovation. When a trade secret is licensed, the extent to which the licensor can thereafter limit the licensee's use of know-how generally depends upon restrictions included in the contract.

III. THE ECONOMIC THEORY OF INNOVATION AND COMPETITION

According to the Federal Circuit, both competition law and intellectual property law “are aimed at encouraging innovation, industry and competition.”⁸⁰ However, in practice there has always been considerable tension between the two bodies of law. Intellectual property law provides for government-granted temporary monopolies, while competition law tries to prevent monopolization from occurring.⁸¹ From

⁷⁸ William C. Holmes, *Intellectual Property and Antitrust* vol. 1, § 2.01, 2-2 (West 2002).

⁷⁹ ABA, Antitrust Section, *Antitrust Law Developments* vol. 1, 1106 (Debra J. Pearlstein ed., 5th ed., ABA 2002).

⁸⁰ *Atari Games Corp. v. Nintendo of Am., Inc.*, 897 F.2d 1572, 1576 (Fed. Cir. 1990) (citing *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 876-77 (Fed. Cir. 1985)); see Antitrust Guidelines for the Licensing of Intellectual Property, § 1.0 (April 6, 1995) [hereinafter *Licensing Guidelines*] <www.usdoj.gov/atr/public/guidelines/ipguide.htm> (accessed Mar. 7, 2003) (“The intellectual property laws and antitrust laws share the common purpose of promoting innovation and enhancing consumer welfare.”). Some commentators disagree with this perception of identical underlying goals. See e.g. Suzanne Scotchmer, Discussion at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy, *Competition Policy and Innovation: The Context of Cumulative Innovation* (FTC/DOJ, Feb. 26, 2002) <<http://www.ftc.gov/opp/intellect/020226suzanneandersonscotchmer.pdf>> (accessed Mar. 7, 2003) (saying that while it is true that both antitrust laws and intellectual property laws are aimed at improving consumer welfare, the real question is what kind of consumer welfare should be improved. Innovation is a component of welfare, but so are lower prices through competition.).

⁸¹ See *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1203 (2d Cir. 1981) (“While the antitrust laws proscribe unreasonable restraints of competition, the patent laws reward the inventor

an economist's point of view, intellectual property law is primarily concerned with the provision of appropriate *ex ante* incentives (and increasing competition in innovation markets) while antitrust law is primarily concerned with *ex post* incentives (and increasing competition in product markets).⁸²

The broad questions for courts and policymakers to decide, then, is how to find an economically optimal equilibrium, so that innovation can be encouraged while anticompetitive behavior in product markets can be kept to a minimum. According to Landes and Posner, for copyright law to promote economic efficiency, it "must, at least approximately, maximize the benefits from creating additional works minus both the losses from limiting access and the costs of administering [intellectual property] protection."⁸³

In recent years, economists that have looked at this equilibrium have increasingly come to the conclusion that promoting innovation is of far greater importance to the economy than avoiding access limitations.⁸⁴ This realization has in turn led economists to address the conceptually simpler (but in practice very controversial) question of what type of competition policy can best bring about an optimal level of innovation.⁸⁵

with a temporary monopoly that insulates him from competitive exploitation of his patented art."). The Supreme Court has observed that the granting of patents "is an exception to the general rule against monopolies and to the right to access to a free and open market." *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 177 (1965) (quoting *Precision Instrument Mfg. Co. v. Automotive Maint. Mach. Co.*, 324 U.S. 806, 816 (1945)).

⁸² See Patrick Rey, Presentation at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy (May 22, 2002). <http://www.ftc.gov/opp/intellect/020522reydoc.pdf>

⁸³ William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. Leg. Stud. 325, 326 (1989). This principle would apply equally to other forms of intellectual property.

⁸⁴ See Michael A. Carrier, *Unraveling the Patent-Antitrust Paradox*, 150 U. Pa. L. Rev. 761 (Jan. 2002); William F. Baxter, *Antitrust Law and Technological Innovation*, Issues Sci. & Tech., Winter 1985, at 80, 82 ("The contribution of technological advances to our economic well-being is very substantial when compared with the damage that could be caused by restrictive behavior the antitrust laws seek to halt."); F.M. Scherer, *Antitrust, Efficiency, and Progress*, 62 N.Y.U. L. Rev. 998, 1018 (1987) (productive efficiency is "much more important quantitatively than allocative efficiency, and dynamic efficiency is almost surely even more important"); Donald F. Turner, *Basic Principles in Formulating Antitrust and Misuse Constraints on the Exploitation of Intellectual Property Rights*, 53 Antitrust L.J. 485, 485 (1985) ("[I]n the long run, technological progress contributes far more to consumer welfare than does the elimination of allocative inefficiencies caused by noncompetitive pricing.").

⁸⁵ Langenfeld, at 92.

A. Schumpeter's Theory of Monopolies Leading to Innovation

This question was first breached by Joseph Schumpeter in 1942.⁸⁶ He argued that the main motors for technological innovation were companies with monopolistic or quasi-monopolistic powers.⁸⁷ He saw monopolies as better able to invest more resources in research and development due to their size, and more willing to do so because they could later recoup the entire profits stemming from their innovation without sharing them with free-riding competitors.⁸⁸ Schumpeter also noted that monopolies were under constant challenge from newer technologies, so those monopolies that did not innovate well were likely to be replaced by new monopolies that were more effective innovators.⁸⁹

Schumpeter's general theories on innovation and competition were expanded upon in the intellectual property context by Edmund Kitch.⁹⁰ Kitch argued that broad patent rights that effectively conferred a monopoly on "prospects" (*i.e.* "upstream research far removed from commercial use") are economically beneficial for two reasons.⁹¹ First, the patent rights would provide development incentives by allowing the prospect owner to fully gain the benefits of such development (thus echoing Schumpeter's main point).⁹² And second, the early and broad patent right would allow coordination of development efforts, which would decrease duplicative investments in development.⁹³

B. Responses to Schumpeter's Theories

⁸⁶ See Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* 100-106 (3d ed., Harper & Row 1950).

⁸⁷ *Id.*

⁸⁸ *Id.* at 81-106.

⁸⁹ *Id.* at 83.

⁹⁰ See Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & Econ. 265, 276 (1977).

⁹¹ Arti K. Rai, *Fostering Cumulative Innovation in the Biopharmaceutical Industry: the Role of Patents and Antitrust*, 16 Berkeley Tech. L.J. 813, 819 (2001).

⁹² *Id.*

⁹³ *Id.*

Kenneth Arrow, among others, has challenged Schumpeter's conclusion that monopolies foster innovation.⁹⁴ Arrow points out that a monopolist would have no incentive to create a new or superior product if the profits from that product would only eat into the profits on the monopolist's current products.⁹⁵ Arrow posits that the risk of duplicative investment is overblown. According to Rebecca Eisenberg, duplicative investments are not a major problem because competing researchers can arrive at different results at a quicker pace and multiple discoveries help establish the validity of new research claims.⁹⁶ Robert Merges and Richard Nelson add that as an empirical matter patent holders do not seem to coordinate innovation in an effective manner through tailored licensing.⁹⁷ There has not been a decisive resolution to the debate over whether or not competition promotes innovation. The empirical studies that have been done are equivocal.⁹⁸ According to Howard Shelanski, the absence of convincing evidence that any of the hypotheses regarding firm size or industry concentration and innovation are right or wrong leads to uncertainty, and therefore the anticompetitive effects of concentration in innovation markets should not be assumed but rather examined on a case by case basis.⁹⁹

IV. THE GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY

In 1995 the DOJ and FTC collectively issued guidelines ("Licensing Guidelines") for the licensing of intellectual property, to help clarify the agencies' enforcement position.¹⁰⁰ They are helpful for giving clearer guidance to companies and law enforcers, and in many respects advance

⁹⁴ See Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Innovation*, in *The Rate and Direction of Inventive Activity: Economic and Social Factors* 609-25 (Nat'l. Bureau of Econ. Research ed., 1962).

⁹⁵ *Id.* at 611-612.

⁹⁶ See Rebecca Eisenberg, 56 U.Chi. L. Rev. 1017, 1063-64 (1999) (citing Robert K. Merton, *The Sociology of Science* 378-80 (Chicago, 1973)).

⁹⁷ See Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 Colum. L. Rev. 839, 875 (1990).

⁹⁸ Rai, *supra*, at 827.

⁹⁹ See Howard Shelanski, Presentation at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy (FTC/DOJ, Feb. 25, 2002) <<http://www.ftc.gov/opp/intellect>> (accessed Mar. 7, 2003).

¹⁰⁰ Licensing Guidelines, *supra*.

the law. Perhaps the most important feature of the Licensing Guidelines is the provision of safe harbors, in which licensing provisions will be considered lawful, absent extraordinary circumstances.¹⁰¹ The majority of licensing agreements probably fall into one of the safe harbors.

A. General Principals

The Licensing Guidelines embody three general principles: (1) for the purpose of antitrust analysis, the Agencies regard intellectual property as being essentially comparable to any other form of property;¹⁰² (2) the Agencies do not presume that intellectual property creates market power in the antitrust context;¹⁰³ and (3) the Agencies recognize that intellectual property licensing allows firms to combine complementary factors of production and is generally procompetitive.¹⁰⁴ The Licensing Guidelines represent an important move away from the standards of the 1970s and early 1980s (which were based on whether the patent holder had “misused” the patent), toward an effects-based approach.

¹⁰¹ *Id.* § 4.3.

¹⁰² *Id.* § 2.0(a). This proposition has been criticized as overly simplistic. Commentators have argued that intellectual property actually differs from ordinary property in a number of different ways. See e.g. Langenfeld, *supra*, at 93-94 (stating that (1) “intellectual property often embodies advancements that produce significant cost and performance advantages;” (2) “successful exploitation of intellectual property usually requires the owner to combine it with assets owned by others;” (3) “intellectual property is accompanied by strong free-rider characteristics,” and (4) “inventors often assume substantial costs which are generally not recoverable if the research does not lead to a commercial product”); Richard J. Gilbert & Willard K. Tom, *Is Innovation King at the Antitrust Agencies? The Intellectual Property Guidelines Five Years Later*, (Competition Policy Ctr. Working Paper No. CPC01-020) (May 3, 2001) <<http://repositories.cdlib.org/iber/cpc/CPC01-020>> (arguing that (1) the power of exclusion in patent grants is broader than that in ordinary property; (2) the boundaries of intellectual property defy accurate survey to a much greater extent than with tangible property, and (3) the statutory language governing use of the property differs from one form of property to another); James Rogan, Presentation at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy (FTC/DOJ, Feb. 6, 2002) <<http://www.ftc.gov/opp/intellect>> (accessed Mar. 7, 2003) (saying that intellectual property rights are of particular importance because they are specifically provided for in Article I, Section 8 of the Constitution).

¹⁰³ Licensing Guidelines, *supra* n. 87 § 2.0(b); see *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 37-38 n. 7 (1984) (O’Connor, J., concurring); *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1367 & n. 7 (Fed. Cir. 1998); *Abbott Labs. v. Brennan*, 952 F.2d 1346, 1354-55 (Fed. Cir. 1991) (“A patent does not of itself establish a presumption of market power in the antitrust sense.”).

¹⁰⁴ Licensing Guidelines, *supra*, § 2.0(c).

As is the case with other property transfers, intellectual property licensing arrangements are generally divided for analytical purposes into horizontal and vertical relationships.¹⁰⁵ Licensing arrangements have a vertical component where they involve activities in a complimentary relationship. For example, this is the case when a company whose primary business is product manufacturing acquires a license from a company whose primary business is research and development.¹⁰⁶ A restraint in a vertical arrangement can harm competition if it “anticompetitively forecloses access to, or increases competitors’ costs of obtaining, important inputs, or facilitates coordination to raise price or restrict output.”¹⁰⁷

Licensing arrangements can also have horizontal aspects, which is the case where the licensee and licensor “would have been actual or likely potential competitors in a relevant market in the absence of the license.”¹⁰⁸ A restraint in a horizontal licensing arrangement can harm competition if it “increase[s] the risk of coordinated pricing, output restrictions, or the acquisition or maintenance of market power.”¹⁰⁹

The Licensing Guidelines provide that in most cases, restraints in intellectual property licensing arrangements are to be evaluated under the rule of reason, by weighing a restraint’s pro and anticompetitive effects.¹¹⁰ The agencies do not require the theoretically least restrictive means of achieving an efficiency but rather ask whether “the parties could have achieved similar efficiencies by means that are significantly less restrictive.”¹¹¹

However, the Licensing Guidelines recognize that in certain instances, a “restraint’s ‘nature and necessary effect are so plainly anticompetitive’ that it should be treated as unlawful *per se*, without an elaborate inquiry into the restraint’s likely competitive effect.”¹¹² Restraints that have been

¹⁰⁵ *Id.* § 3.3. The courts and agencies take a relatively more permissive approach toward vertical agreements than they do toward horizontal agreements. See e.g. *Generac Corp. v. Caterpillar Inc.*, 172 F.3d 971, 977 (7th Cir. 1999).

¹⁰⁶ Licensing Guidelines, *supra*, § 3.3.

¹⁰⁷ *Id.* § 4.1.1.

¹⁰⁸ *Id.* § 3.3.

¹⁰⁹ *Id.* § 4.1.1.

¹¹⁰ *Id.* § 3.4; see *Ind. Fedn. of Dentists*, 476 U.S. 447; *Bd. of Regents*, 468 U.S. 85; *Broad. Music, Inc. v. Columbia Broad. Sys., Inc.*, 441 U.S. 1 (1979); Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* vol. 7, § 1502 (2d ed., Aspen L. & Bus. 2003).

¹¹¹ Licensing Guidelines, *supra*, § 4.2.

¹¹² *Id.* § 3.4 (citations omitted).

held *per se* illegal by courts include: “[n]aked price-fixing, output restraints, and market division among horizontal competitors, as well as certain group boycotts and resale price maintenance.”¹¹³ “To determine whether a particular restraint in a licensing arrangement is given *per se* or rule of reason treatment, the Agencies will assess whether the restraint in question can be expected to contribute to an efficiency-enhancing integration of economic activity.”¹¹⁴

B. Types of Markets

The Licensing Guidelines identify three different types of markets that may be affected by licensing arrangements: goods markets; technology markets; and innovation markets.¹¹⁵ Goods markets are most familiar to standard antitrust analysis and are delineated as in Section 1 of the Merger Guidelines.¹¹⁶ Licensing restraints can have competitive effects on markets for final or intermediate goods that use intellectual property, or in upstream markets for goods that are used as inputs, along with intellectual property, in the production of other goods.¹¹⁷

Technology markets include “the intellectual property that is licensed (the “licensed technology”) and its close substitutes—that is, the technologies or goods that are close enough substitutes significantly to constrain the exercise of market power with respect to the intellectual property that is licensed.”¹¹⁸ When IP rights are marketed separately from the products encompassing the intellectual property, technology markets may be used to analyze competitive effect.¹¹⁹

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.* §§ 3.2-3.2.3.

¹¹⁶ Merger Guidelines, *supra*, § 1.1.

¹¹⁷ Licensing Guidelines, *supra*, § 3.2.1.

¹¹⁸ *Id.* § 3.2.2.

¹¹⁹ *Id.*; see e.g. *U.S. v. Pilkington Plc.* (D. Ariz. May 25, 1994) (DOJ alleged that licensing restraints harmed competition in licensing of float glass technology); *In the Matter of Montedison S.P.A.*, 119 F.T.C. 676, 683 (F.T.C. 1995) (FTC alleged that proposed joint venture would lessen competition in licensing of polypropylene technology and polypropylene catalyst technology); *In the Matter of The Dow Chem. Co.*, 2001 F.T.C. LEXIS 27, *10-*11 (Mar. 15, 2001) (complaint Dkt. No. C-3999) <<http://www.ftc.gov/bc/caselist/index.htm>> (accessed Mar. 7, 2003) (FTC alleged that Dow’s acquisition of Union Carbide would lessen competition in licensing of polyethylene reactor technology and catalyst technology).

Finally, the Licensing Guidelines recognize the existence of innovation markets.¹²⁰ While many licensing arrangements can be assessed within the relevant markets for goods or technology, in some instances the analysis will require the delineation of a market for innovation in and of itself.¹²¹ “An innovation markets consists of the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development.”¹²² Close substitutes include: “research and development efforts, technologies, and goods that significantly constrain the exercise of market power with respect to the relevant research and development.”¹²³ The FTC and DOJ will delineate innovation markets “only when the capabilities to engage in the relevant research and development can be associated with specialized assets or characteristics of specific firms.”¹²⁴ Innovation market theory has been applied to mergers, joint ventures, and intellectual property licensing.¹²⁵ The use of innovation markets is controversial.¹²⁶ Critics note that it is often very hard to define an innovation market, especially where the innovation relates to a good that did not previously exist.¹²⁷

C. Safe Harbors

¹²⁰ Licensing Guidelines, *supra*, § 3.2.3

¹²¹ *Id.*; see generally M. Howard Morse, *The Limits of Innovation Markets*, in *Antitrust and Intellectual Property*, *The Intellectual Property Committee Newsletter*, vol. 2, No. 1, at 22-35 (Spring 2001) also available at <http://www.abanet.org/antitrust/committees/intell_property/559817-2.pdf> (accessed Mar. 7, 2003).

¹²² Licensing Guidelines, *supra*, § 3.2.3.

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ See e.g. *In the Matter of Hoechst AG*, 2000 F.T.C. LEXIS 3, *9 (Jan. 18, 2000) (complaint Dkt. No. C-3919) <<http://www.ftc.gov/os/2000/01/index.htm>> (accessed Mar. 7, 2003) (alleging merger would reduce innovation competition and raise barriers to entry); Ciba-Geigy, *infra*. and accompanying text; see David A. Balto & James F. Mongoven, *Antitrust Enforcement in Pharmaceutical Industry Mergers*, 54 Food Drug L.J. 255 (1999) (discussing FTC's application of innovation markets analysis to mergers in pharmaceutical industry).

¹²⁶ See e.g. Richard T. Rapp, *The Misapplication of the Innovation Market Approach to Merger Analysis*, 64 Antitrust L.J. 19 (1995); Robert J. Hoerner, *Innovation Markets: New Wine in Old Bottles*, 64 Antitrust L.J. 49 (1995).

¹²⁷ Rai, *supra*, at 827.

The Licensing Guidelines also establish important safe harbors in which conduct will be considered lawful, absent extraordinary circumstances.¹²⁸ The safe harbors standards differ according to whether the relevant market is a goods market, technology market, or innovation market.¹²⁹ When the relevant market is a goods market, a proposed licensing arrangement falls within the safety zone if it is “(1) not facially anticompetitive and (2) the licensor and its licensees collectively account for no more than twenty percent of each relevant goods market significantly affected by the restraint.”¹³⁰ When the relevant goods market is a technology market, a proposed licensing arrangement falls within the safety zone if it is (1) not facially anticompetitive and (2) there are at least four independently controlled substitute technologies.¹³¹ When the relevant market is an innovation market, a licensing arrangement falls within the safety zone if (1) it is not facially anticompetitive and (2) there are at least four independently controlled entities in addition to the parties to the licensing agreement that have the incentive, assets, and characteristics necessary to engage in research and development that is a close substitute for the activities of licensee and licensor.¹³² The safety zone is inapplicable to transfers of intellectual property rights when a merger analysis is applied.¹³³

V. THE ACQUISITION OF INTELLECTUAL PROPERTY

A. *Antitrust Concerns Stemming From the Acquisition of Intellectual Property From Third Parties*

¹²⁸ Licensing Guidelines, *supra*, § 4.3.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.* The DOJ/FTC Joint Venture Guidelines provide a somewhat broader safety zone for innovation markets, only requiring that “three or more independently controlled research efforts in addition to those of the collaboration possess the required specialized assets or characteristics and the incentive to engage in R&D that is a close substitute for the R&D activity of the collaboration” for a collaboration to fall into the agencies’ safety zone. DOJ/FTC, *Antitrust Guidelines for Collaborations Among Competitors*, 4 Trade Reg. Rep. (CCH) ¶ 13,161, § 4.3 (Apr. 2000) <<http://www.ftc.gov/os/2000/04/ftcdojguidelines/pdf>> (accessed Mar. 7, 2003).

¹³² Licensing Guidelines, *supra*, § 4.3.

¹³³ *Id.*

Patent acquisitions generally produce significant efficiencies, for example by allowing the introduction of new products into the market and by providing an incentive to invent. However, in some instances, patent acquisitions can be anticompetitive.

Sections 1 and 2 of the Sherman Act and Section 7 of the Clayton Act can apply to acquisitions of intellectual property from third parties.¹³⁴ Section 7 applies to acquisition of all assets, including intellectual property.¹³⁵

The basic economic analysis for evaluating an acquisition of rights to intellectual property is no different than the Section 7 Clayton Act analysis that would apply for the acquisition of any other type of property. The relevant markets must be defined and the effect of the acquisition of the intellectual property in those markets must be assessed.

The courts have recognized a number of instances where patent acquisitions were deemed unlawful as part of a broader monopolistic scheme or conspiracy to restrain trade.¹³⁶ For example, in *Kobe, Incorporated v. Dempsey Pump Company*,¹³⁷ the court found that when combined with other anticompetitive acts, the acquisition of every important patent in a field with the purpose of excluding competitors constituted a violation of Section 2 of the Sherman Act.¹³⁸

Exclusive Licenses

One critical issue in looking at challenges to the acquisition of intellectual property rights is whether the acquisitions are exclusive or non-exclusive. An acquisition is considered to be exclusive if any aspect of the license is exclusive (*e.g.*, exclusive in a particular territory or for a particular use) but is deemed non-exclusive if the licensor retains the unrestricted right to use the licensed intellectual property or license it to

¹³⁴ *Id.* at § 5.7.

¹³⁵ 15 U.S.C. § 18.

¹³⁶ See, *e.g.*, *United States v. Parker Rust-Proof Company*, 61 F.Supp. 805 (E.D. Mich. 1945); *United States v. Besser Mfg. Co.*, 96 F.Supp. 304 (E.D. Mich. 1951); *Kobe, Incorporated v. Dempsey Pump Company*, 198 F.2d 416 (10th Cir. 1952); *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195 (2nd Cir. 1981).

¹³⁷ 198 F.2d 416 (10th Cir. 1952).

¹³⁸ *Id.* at 423; see ABA, Antitrust Section, *Antitrust Law Developments* vol. 2, 1036 (Debra J. Pearlstein ed., 5th ed., ABA 2002).

others.¹³⁹ Non-exclusive arrangements that do not contain restraints on competitive conduct are not likely to implicate antitrust concerns, while exclusive licenses or outright purchases can be more problematic, especially when the agreement contains restraints.¹⁴⁰ A putative non-exclusive license can be *de facto* exclusive if so indicated by the surrounding circumstances.¹⁴¹

According to the Seventh Circuit in *L.G. Balfour Company v. Federal Trade Commission*,¹⁴² while the mere accumulation of intellectual property rights is not normally an antitrust offense, when a monopoly acquires exclusive licenses that are a prerequisite for participation in the relevant market, and competitors do not have an equal opportunity to procure the needed licenses, the monopolist may be guilty of monopolization.¹⁴³ Areeda and Hovenkamp propose that the acquisition by a monopolist of exclusive rights in related patents should be considered a presumptive violation of Section 2 of the Sherman Act, but a monopolist should be allowed to acquire exclusive rights in unrelated patents and non-exclusive rights in any patent.¹⁴⁴

Exclusive licenses of patents are reportable under the Hart-Scott-Rodino Act¹⁴⁵ if the two parties are of sufficiently large size and the

¹³⁹ See Bruce J. Prager, ABA Section of Antitrust Law, Pre-merger Notification Practice Manual 45 (ABA 1991).

¹⁴⁰ Licensing Guidelines, *supra*, § 4.1.2; see e.g. *In the Matter of FMC Corp. & Asahi Chem. Indus. Co.*, 2002 F.T.C. LEXIS 32, *7-*8 (June 12, 2002) (complaint Dkt. No. C-4051) <<http://www.ftc.gov/bc/caselist>> (accessed Mar. 7, 2003) (exclusive trademark licensing agreement that was alleged to include an unwritten market allocation scheme); *U.S. v. Am. Natl. Can Co.*, 61 Fed. Reg. 34,862 (1996) (exclusive license for laminated toothpaste tubes along with agreement not to manufacture laminated tubes in the United States granted in exchange for agreement not to manufacture tube-making equipment).

¹⁴¹ Licensing Guidelines, *supra*, at Example 11; see *U.S. v. S.C. Johnson & Son Inc.*, 1995-1 Trade Cas. (CCH) ¶ 70,884 (N.D. Ill. 1994), 59 Fed Reg. 43,859 (Aug. 25, 1994) (DOJ alleged that a nominally nonexclusive license for household insecticides was *de facto* exclusive since the licensor refused all other offers to license and refrained from using the technology itself). See generally, David Balto, *Networks and Exclusivity: Antitrust Analysis to Promote Network Competition*, 7 George Mason L. Rev. 523 (May 1999).

¹⁴² 442 F.2d 1 (7th Cir. 1971).

¹⁴³ *Id.* at 15-16.

¹⁴⁴ Philip E. Areeda & Herbert Hovenkamp, *Antitrust Law* vol. 3 § 707(a) (2d ed., Aspen L. & Bus. 2002).

¹⁴⁵ 15 U.S.C. § 18(a).

transaction is considered a legal transfer with a value of \$50 million or more.¹⁴⁶

a. Lilly/Sepracor¹⁴⁷

Lilly, owner of the drug Prozac, sought an exclusive license to the rights of R-fluoxetine, a follow-on antidepressant that was a potential competitor to Prozac.¹⁴⁸ R-fluoxetine was produced by Sepracor. Lilly's Prozac patents were going to expire in 2004, while Sepracor's R-fluoxetine patent was not due to expire until 2015.¹⁴⁹

This scenario raised two main concerns. First, there was the general concern that arises when a dominant firm buys a potential competing product.¹⁵⁰ Second, there was the concern about the competitive implications of a potential share-shifting strategy.¹⁵¹ With the rights to R-fluoxetine, Lilly could potentially introduce R-fluoxetine in the waning years of the Prozac patent in an attempt to market it as a replacement or improvement on Prozac.¹⁵² Since the new drug was patent protected, this might shield Lilly's overall market share from generic competition.¹⁵³

After a thorough investigation, the FTC voted to allow the transaction to proceed unchallenged.¹⁵⁴ The first concern was lessened by the fact that the market could be defined quite broadly to include many

¹⁴⁶ 15 U.S.C. § 18(a), as amended by the Hart-Scott-Rodino Antitrust Improvements Act Amendments of February 1, 2001, Pub.L. 106-102, Title I, § 133(c), 113 Stat. 1383 (1999).

¹⁴⁷ There is no public decision, but the investigation was discussed in a speech by Commissioner Anthony. See Sheila F. Anthony, Speech before the ABA Antitrust and Intellectual Property: The Crossroads Program, *Riddles and Lessons from the Prescription Drug Wars: Antitrust Implications of Certain Types of Agreements Involving Intellectual Property*, (San Francisco, Cal., June 1, 2000) <<http://www.ftc.gov/speeches/anthony.htm>> (accessed Mar. 7, 2003).

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Id.* ("I was concerned about the competitive implications of a potential share-shifting strategy. For example, with the rights to R-fluoxetine, Lilly could introduce R-fluoxetine in the waning years of the Prozac patent and attempt to market it in such a way as to move its Prozac share to the new drug.") <http://www.ftc.gov/speeches/anthony/sfip000601.htm>

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

other antidepressants.¹⁵⁵ The second concern of share-switching was not considered to be a real risk, according to Commissioner Anthony, because she trusted doctors and patients to see the real worth of the competing products.¹⁵⁶ Efficiencies also played a role in the decision not to challenge the merger, at least according to former Chairman Pitofsky, who noted that Lilly's distribution resources and scientific expertise increased the likelihood that R-fluoxetine would reach the market quickly.¹⁵⁷

b. Biovail¹⁵⁸

Biovail is a Canadian manufacturer of branded and generic pharmaceutical products. One of its largest-selling brands is Tiazac, a prescription drug used to treat high blood pressure and chronic chest pain.¹⁵⁹ Andrx, a Florida-based company, filed an application to market a generic version of Tiazac.¹⁶⁰ Biovail immediately sued Andrx for infringement, which, under the terms of the Hatch-Waxman Act, delayed the generic's entry into the market.¹⁶¹ Andrx won, but before it could start production of the generic drug, it was sued once more by Biovail for infringement of a different patent (the '463 patent).¹⁶² This patent had been acquired by Biovail from a third company (DOV) in an exclusive licensing agreement.¹⁶³

The FTC alleged that Biovail illegally acquired exclusive licensing rights to the '463 patent in order to protect its monopoly in the market for

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ Robert Pitofsky, Speech before the Antitrust and Technology Conference, *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, (Berkeley Ctr. for L. & Tech. Univ. of Cal. Berkeley, Cal., Mar. 2, 2001) in 16 Berkley Tech. L.J. 535 (June/July, 2001), also available at <<http://www.ftc.gov/speeches/pitofsky/ipf301.htm>> (accessed Mar. 7, 2003).

¹⁵⁸ *In the Matter of Biovail Corp.*, 2002 F.T.C. LEXIS 56 (Oct. 4, 2002) (consent order Dkt. No. C-4060) <<http://www.ftc.gov/opa/2002/04/biovailtiazac.htm>>. > (accessed Mar. 7, 2003).

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at n 157.

¹⁶¹ *See Biovail Corp. Intl. v. Andrx Pharm. Inc.*, 458 F. Supp. 2d 1318 (S.D. Fla. 2000).

¹⁶² *Id.*

¹⁶³ *Id.*

Tiazac and generic versions of Tiazac.¹⁶⁴ The FTC also alleged that Biovail illegally maintained its monopoly by wrongfully listing the acquired patent in the Orange Book¹⁶⁵ and making misleading statements to the FDA.¹⁶⁶

The case was settled under a consent order under which Biovail was: (1) required to divest part of the exclusive rights to the '463 patent back to DOV; (2) prohibited from taking any action that would trigger additional statutory stays on final FDA approval of a generic form of Tiazac; and (3) prohibited from wrongfully listing any patents in the Orange Book for a product for which the company already has an FDA-approved New Drug Application.¹⁶⁷

B. Mergers and Acquisitions

When two companies with intellectual property holdings combine through a merger or acquisition, many of the same issues arise as with acquisitions of intellectual property in isolation. However, there are also many practical legal differences. Mergers involve procedural requirements to notify the FTC and DOJ of any possible antitrust issues through Hart-Scott-Rodino filings, with the possibility of a legal challenge by one of the agencies.¹⁶⁸

Mergers are typically challenged under Section 7 of the Clayton Act,¹⁶⁹ although Sections 1 and 2 of the Sherman Act can also be used.¹⁷⁰ Traditionally, merger analysis has been divided into analysis of

¹⁶⁴ *Id.*

¹⁶⁵ The Orange Book is a list of patents identified by branded drug companies as covering specific products that is published by the FDA under the framework of the Hatch-Waxman Act. <<http://www.fda.gov/cder/ob/default.htm>> (updated Jan. 29, 2003).

¹⁶⁶ *Id.* at n 157.

¹⁶⁷ *Wrongful "Orange Book" Listing Raises Red Flag with FTC; Leads to Consent Order with Biovail Corp. Concerning its Drug Tiazac*, F.T.C. Press Release (Apr. 23, 2002) <<http://www.ftc.gov/opa/2002/04/index.htm>> (accessed Mar. 7, 2003).

¹⁶⁸ 15 U.S.C. § 18 (a).

¹⁶⁹ 15 U.S.C. § 18; see generally Ramon A. Klitzke, *Patents and Section 7 of the Clayton Act: The Significance of Patents in Corporate Acquisitions*, 12 Loy. U. L.J. 401 (1981).

¹⁷⁰ See e.g. *U.S. v. Rockford Meml. Corp.*, 898 F.2d 1278 (7th Cir. 1990) (acquisition that could not be challenged under section 7 of Clayton Act was successfully challenged under section 1 of Sherman Act); *McDonald v. Johnson & Johnson*, 537 F. Supp. 1282 (D. Minn. 1982), *aff'd in part*, 722 F.2d 1370 (8th Cir. 1983) (challenging merger under section 2 of Sherman Act as an illegal act of monopolization).

horizontal and vertical mergers. The Agencies have broad leeway in formulating appropriate consent orders to deal with innovation concerns in mergers, or indeed in blocking the merger from taking place.¹⁷¹

Antitrust analyses of both horizontal and vertical mergers increasingly involve the examination of issues relating to intellectual property rights and innovation. From 1990 to 1994, the FTC and DOJ identified innovation concerns in their challenges of four mergers, while from 1995 to 1999, the agencies cited innovation concerns in challenging 47 different proposed mergers.¹⁷² Meanwhile, it has also become common for companies to defend proposed mergers on grounds that the combined company will be able to develop new products more efficiently because the merging companies possess complementary intellectual property rights.¹⁷³

In a March 2001 speech,¹⁷⁴ Robert Pitofsky, former Chairman of the Federal Trade Commission, illustrated the FTC's consideration of intellectual property concerns as demonstrated in *Ciba-Geigy/Sandoz*,¹⁷⁵ a 1996 horizontal merger, and *Silicon Graphics*,¹⁷⁶ a 1995 case involving the acquisition of two manufacturers of complementary products.

1. Ciba-Geigy/Sandoz

In *Ciba-Geigy/Sandoz*, the FTC's complaint alleged the existence of a market for the development of gene therapy products, even though at the time there were no such products available that had been licensed by FDA.¹⁷⁷ The complaint noted that the first products would not be available until the year 2000, but that the market could grow to forty-five

¹⁷¹ See generally, David A. Balto and James F. Mongoven, "Antitrust Remedies in High Technology Industries," Antitrust Report 22 (January 1999). http://www.whitecase.com/article_antitrust_remedies_high_technology_balto.pdf. The authors discuss the various remedies available to the Agencies.

¹⁷² Gilbert, *supra* (claiming that the actual impact of innovation concerns on merger policy is somewhat less than these numbers would indicate because most of the mergers that have been challenged on that basis could also have been effectively challenged on other conventional grounds as well.).

¹⁷³ Pitofsky, *supra*.

¹⁷⁴ *Id.*

¹⁷⁵ *Ciba-Geigy Ltd.*, 123 F.T.C. 842 (F.T.C. Mar. 24, 1997) (consent order Dkt. No. C-3725).

¹⁷⁶ See *In re Silicon Graphics, Inc.*, 120 F.T.C. 928, 931 (F.T.C. Nov. 14, 1995) (Dkt. No. C-3626).

¹⁷⁷ Balto, *supra*.

billion dollars by the year 2010.¹⁷⁸ The FTC alleged that this merger would harm competition in a broad gene therapy R&D market.

The complaint also alleged that the merger would harm competition in the research and development, manufacture, and sale of (1) herpes simplex virus-thymidine kinase (HSV-tk) gene therapy for the treatment of cancer, (2) HSV-tk gene therapy for the treatment of graft versus host disease, (3) gene therapy for the treatment of hemophilia, and (4) chemoresistance gene therapy.¹⁷⁹

The technology at issue concerned the treatment of disease through manipulation of genetic material and insertion or reinsertion into a patient's cells.¹⁸⁰ Although many firms were conducting research into gene therapies, the merging firms were two of only a few entities with the intellectual property rights and other assets necessary for commercialization of such therapies.¹⁸¹ The firms' combined position in gene therapy research was so dominant that other firms doing research in this area needed to enter into joint ventures, or contract with either Ciba-Geigy or Sandoz, to have any hope of commercializing their own research efforts.¹⁸² In particular, they possessed an over-whelming amount of R&D resources, making it necessary for firms seeking to conduct research and development in this area to contract with one firm or the other.¹⁸³ Competition between the two firms facilitated joint ventures and contracts on reasonable terms.¹⁸⁴ Without competition, the combined entity could have appropriated most of the commercial value of other firms' research, leading to a substantial decrease in such

¹⁷⁸ *Ciba-Geigy*, 123 F.T.C. at 845.

¹⁷⁹ *Id.* at 844-45.

¹⁸⁰ See generally, David A. Balto and James F. Mongoven, "Antitrust Remedies in High Technology Industries," Antitrust Report 22 (January 1999). http://www.whitecase.com/article_antitrust_remedies_high_technology_balto.pdf. The authors discuss the various remedies available to the Agencies.

¹⁸¹ *Ciba-Geigy*, 123 F.T.C. at 845.

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ *In the Matter of Ciba-Geigy*, FTC Docket No. C-3725 (statements by Chairman Robert Pitofsky, and Commissioners Janet D. Steiger, Roscoe B. Starek, III, and Christine A. Varney) (1997) (last accessed, April 24, 2003, <http://www.ftc.gov/os/1997/04/others.htm>).

research.¹⁸⁵ In addition, there was direct competition between the two companies with respect to specific products.¹⁸⁶

The FTC was concerned that Novartis, the newly-named surviving company, might not adequately license its gene therapy intellectual property to assure that other firms would be unable to close the R&D gap.¹⁸⁷ By not licensing its intellectual property to the other research firms, Novartis could have blocked access to the broad future gene therapy market. Absent the merger, Ciba-Geigy and Sandoz could have licensed their patents either for cash or as part of competing cooperative development projects.¹⁸⁸ The FTC resolved its concerns in this important innovation market through a consent order that required the licensing of certain technology and patent rights to Rhone-Poulenc Rorer.¹⁸⁹ This licensing arrangement ensures that Rhone-Poulenc will be in a position to compete with the merged firm.¹⁹⁰

2. Silicon Graphics

In the early-to-mid 1990s, Silicon Graphics controlled 90 percent of the market for entertainment graphics workstations.¹⁹¹ It wanted to acquire Wavefront and Alias, two of the three dominant developers of Unix-based entertainment graphics software that run on those workstations.¹⁹²

The FTC was concerned that this would produce a vertical foreclosure that would eliminate innovative competition in both markets: rival workstation manufacturers would not be able to compete effectively if Wavefront and Alias designed their software to be compatible only

¹⁸⁵ *Id.*

¹⁸⁶ See *In the Matter of Ciba-Geigy*, FTC Docket No. 3275 (complaint) (1997) (discussing corn herbicides).

¹⁸⁷ *Id.*, at 9.

¹⁸⁸ See Elyse Tanouye & Robert Langreth, *Genetic Giant: Cost of Drug Research is Driving Merger Talks of Glaxo, SmithKline*, Wall St. J. A1 (Feb. 2, 1998) (discussing Ciba-Geigy/Sandoz's licensing or gene-therapy technologies and patents).

¹⁸⁹ See John R. Wilke, *U.S. Forces New Drug Giant to Share Genetic Research*, Wall St. J. B4 (Dec. 18, 1996) (reporting on FTC's demand that Ciba-Geigy and Sandoz license rivals in order to preserve competition and innovation).

¹⁹⁰ *Id.*

¹⁹¹ See *In re Silicon Graphics, Inc.*, 120 F.T.C. 928, 931 (F.T.C. 1995).

¹⁹² *Id.* at 928-31.

with Silicon Graphics Workstations, and rival entertainment graphics software developers would be foreclosed from 90 percent of the market if Silicon Graphics closed its open software interface so that only Wavefront and Alias could design compatible software.¹⁹³

The Commission negotiated a three-part consent order with Silicon Graphics.¹⁹⁴ To preserve workstation competition, the Commission required that the post-acquisition company enter into a porting agreement with workstation competitors whereby Silicon Graphics would be required to (1) ensure optimal interoperation of Alias's leading software programs with competitors' workstations; (2) construct a firewall to bar the transfer of workstation competitors' proprietary information to Silicon Graphics in order to promote competition fairness; and (3) ensure software competition by maintaining an open architecture and publishing its application programming interfaces in addition to not discriminating against software rivals of Alias and Wavefront.¹⁹⁵

C. Acquisition of Intellectual Property through Unilateral Conduct

Most case law suggests that the acquisition of valid intellectual property by unilateral actions does not raise any significant antitrust issue.¹⁹⁶ However, Section 2 of the Sherman Act focuses on the purpose behind the conduct and has been interpreted in such a manner that even the mere acquisition of patents through internal actions can sometimes be subject to antitrust attack, especially where the acquisition of the patent is part of a broader monopolistic scheme.¹⁹⁷ The District Court for the District of Connecticut demonstrated an example of this point of view in *SCM Corporation v. Xerox Corporation* : “[O]nce a company had acquired monopoly power, it could not thereafter acquire lawful patent

¹⁹³ *Id.* at 940-41.

¹⁹⁴ Pitofsky, *supra*.

¹⁹⁵ *Id.* at 554.

¹⁹⁶ See e.g. *Automatic Radio Mfg. Co. v. Hazeltine Research, Inc.*, 339 U.S. 827, 834 (1950) (“The mere accumulation of patents, no matter how many, is not in and of itself illegal.”).

¹⁹⁷ See *U.S. v. United Shoe Mfg. Corp.*, 110 F. Supp. 295, 332 (D. Mass 1953), *aff'd*, 347 U.S. 521 (1954); *U.S. v. E.I. Du Pont de Nemours & Co.*, 118 F. Supp. 41, 214 (D. Del. 1953), *aff'd*, 351 U.S. 377 (1956) (“No judge has ever said where an inventor discloses his invention in return for the grant by the Government of a 17-year exclusive right to practice the same, and, having been awarded the patent, produces the product, he is guilty of monopolization.”).

power if it obtained new patents on its own inventions primarily for the purpose of blocking the development and marketing of competitive products rather than primarily to protect its own products from being imitated or blocked by others.”¹⁹⁸

VI. REFUSAL TO LICENSE INTELLECTUAL PROPERTY

As a general rule, a United States patent does not have to be licensed.¹⁹⁹ This rule conforms to the fundamental principle of antitrust law that companies are allowed to unilaterally choose with whom they want to conduct business.²⁰⁰

However, Section 2 of the Sherman Act may prohibit a firm from unilaterally refusing to license their intellectual property rights where such a refusal would allow the firm to obtain or maintain monopoly power by excluding competition in a way that does not benefit consumers.²⁰¹ This proposition has been given a relatively broad interpretation by the Ninth Circuit in *Image Technical Services*,²⁰² and a much narrower interpretation by the Federal Circuit in *In re Independent Service Organizations (Antitrust Litigation)*.²⁰³

A. *Image Technical Services v. Eastman Kodak Co.*

In *Image Technical Services*, a group of independent service organizations (ISOs) challenged the defendant Eastman Kodak’s practice of refusing to sell patented parts for its copiers to ISOs servicing its

¹⁹⁸ 463 F. Supp. 983, 1007 (D. Conn. 1978), *certifying question to*, 645 F.2d 1195 (2d Cir. 1981).

¹⁹⁹ *Continental Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 429 (1908); 35 U.S.C. § 271(d)(4). The same rule generally applies to copyright. *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1187 (1st Cir. 1994) (“author’s desire to exclude others from use of its copyright work is a presumptively valid business justification.”). See also, *Antitrust Law Developments* (5th ed. 2002) p. 1075.

²⁰⁰ *U.S. v. Colgate & Co.*, 250 U.S. 300, 307 (1919).

²⁰¹ *Eastman Kodak Co. v. Image Technical Serv.*, 504 U.S. 451, 480 n 29 (1992). The court stated that a patent holder could refuse to license, but such refusal was subject to a rebuttal presumption that refusing to license was harmful to consumers.

²⁰² *Image Technical Serv., v. Eastman Kodak Co.*, 125 F.3d 1195, 1218 (9th Cir. 1997) [hereinafter *Kodak II*].

²⁰³ *CSU, L.L.C. v. Xerox Corp.*, 203 F.3d 1322, 1326 (Fed. Cir. 2000).

copiers and micrographic equipment.²⁰⁴ The ISOs claimed that Kodak leveraged “its monopoly over Kodak parts to gain or attempt to gain a monopoly over the service of Kodak equipment,”²⁰⁵ thus violating the prohibition against monopolization in Section 2 of the Sherman Act. The jury awarded a \$71.8 million verdict to the plaintiffs.²⁰⁶ The Ninth Circuit upheld the verdict on appeal.²⁰⁷ The appellate court stated that “‘exploiting [a] dominant position in one market to expand [the] empire into the next’ is broad enough to cover monopoly leveraging under [Section] 2.”²⁰⁸

The court also stated that a monopolist is presumed to have a valid business justification in refusing to license: the “‘desire to exclude others from its [protected] work is a presumptively valid business justification for any immediate harm to consumers.’”²⁰⁹ However, the court went on to qualify this general proposition, adding that “[n]either the aims of intellectual property law, nor the antitrust laws justify allowing a monopolist to rely upon a pretextual business justification to mask anticompetitive conduct.”²¹⁰ Thus, the presumption of a valid business justification may be rebutted by evidence of pretext; this can be shown by evidence of the monopolist’s state of mind or subjective motivations.²¹¹ In this case, the Ninth Circuit found it more likely than not a jury would have found that Kodak was motivated by pretext, as opposed to the genuine desire to protect its intellectual property rights.²¹²

B. *FTC v. Intel*²¹³

One case consistent with *Image Technical Services* is the FTC’s challenge to Intel’s refusal to provide customers with technical

²⁰⁴ This group included Image Technical Services and ten others. *Kodak II*, 125 F.3d at 1195.

²⁰⁵ *Id.* at 1208.

²⁰⁶ *Id.* at 1195.

²⁰⁷ *Id.* at 1207.

²⁰⁸ *Id.* at 1216 (quoting *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 480 n. 28 (1992) [hereinafter *Kodak I*]).

²⁰⁹ *Kodak II*, 125 F.3d at 1218 (quoting *Data Gen.*, 36 F.3d at 1187).

²¹⁰ *Id.* at 1219 (citing *Kodak I*, 504 U.S. at 484).

²¹¹ *Id.*

²¹² *Id.* at 1219-20.

²¹³ *In the Matter of Intel Corp.*, 1999 F.T.C. LEXIS 145 (F.T.C. Aug. 3, 1999) (Dkt. No. 9288).

information relating to its microprocessor technology.²¹⁴ Intel was considered a monopolist in the microprocessor industry, with over 80 percent of the market share.²¹⁵ Intel traditionally had promoted its microprocessors by providing customers with proprietary technical information in advance of the official release of a new product, thereby enabling use of the processors in new computers more readily.²¹⁶ The FTC alleged that on a number of occasions, Intel ceased sharing this information with customers that were seeking to protect their intellectual property rights against Intel, an action which reduced innovation and harmed customers.²¹⁷

The case was eventually settled with a consent decree.²¹⁸ As part of the consent decree, Intel agreed not to withhold the information from a customer because of an intellectual property dispute with that customer.²¹⁹ This settlement supported the proposition that a monopolist may not use its monopoly power to coerce or intimidate rivals to give up their intellectual property rights without a legitimate business justification.

C. *Intergraph Corp. v. Intel Corp.*²²⁰

This case stemmed from the same set of facts as the FTC's Intel challenge. Intergraph made the argument that the proprietary technology and chips that Intel had been supplying to it were "essential facilities," without which it could not do business, and Intel's decision to withhold the technology and chips in retaliation for Intergraph's refusal to license its patents violated Section 2 of the Sherman Act.²²¹

The district court granted a preliminary injunction in favor of Intergraph,²²² but the preliminary injunction was vacated on appeal by the

²¹⁴ See generally David Balto, *Protecting Competition from the Abuse of Monopoly Power: The Intel Case*, 16 *The Computer Law.* 4, 4-10 (June/July 1999).

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *Intel*, 1999 F.T.C. LEXIS 145, at *3.

²¹⁸ *In the Matter of Intel Corp.*, FTC Decision and Order (August 6, 1999) (Docket No. 9288) <http://www.ftc.gov/os/1999/08/intel.do.htm>

²¹⁹ *Id.*

²²⁰ 195 F.3d 1346 (Fed. Cir. 1999).

²²¹ *Id.* at 1356-59.

²²² *Intergraph Corp. v. Intel Corp.*, 3 F. Supp. 2d 1255, 1259 (N.D. Ala. 1998).

Federal Circuit.²²³ The Federal Circuit stated that the essential facilities doctrine required both the facility owner (Intel) and the facility user (Intergraph) to compete in a downstream market that required access to the essential facility.²²⁴ In that case, the court held that the two companies did not compete in the downstream market, and therefore there could be no antitrust violation.²²⁵ The court did not rule out finding essential facility doctrine to be applicable to intellectual property rights in the appropriate situation, however.²²⁶

The Federal Circuit also rejected the charge that Intel was guilty of improperly tying its continued supply of technical information to Intergraph's relinquishment of its patents.²²⁷ The court held that, "Intel did not demand that Intergraph buy its products, and the record describes no market in which Intel's licensing proposals were shown to have distorted competition."²²⁸

D. *In re Independent Service Organizations (Antitrust Litigation)*

In *In re Independent Service Organizations (Antitrust Litigation)*, the Federal Circuit took a different approach from the Ninth Circuit in *Image Technical Services*. At issue was Xerox's refusal to sell certain parts of its copiers to ISOs that were not also end users of Xerox products.²²⁹ Xerox's policy forced CSU, an ISO, to purchase used parts from other ISOs and from its customers. CSU sued Xerox, alleging that its policies were intended to drive ISOs from a relevant market of service and repair of Xerox copiers.²³⁰ In affirming the district court's grant of summary judgment for Xerox, the Federal Circuit held that:

In 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. We therefore will not inquire into his subjective motivation for exerting his statutory rights, even though his refusal to sell or license his patented invention may have an

²²³ *Intergraph*, 195 F.3d at 1349.

²²⁴ *Id.* at 1357.

²²⁵ *Id.* at 1357-58.

²²⁶ *Id.*

²²⁷ *Id.* at 1361-62.

²²⁸ *Id.* at 1361.

²²⁹ *CSU*, 203 F.3d at 1324

²³⁰ *Id.*

anticompetitive effect, so long as that anticompetitive effect is not illegally extended beyond the statutory patent grant.²³¹

Thus, at least in the Federal Circuit, a monopolist's mere refusal to license will be upheld, except in very limited circumstances. Moreover, the subjective motivation of the patentee is irrelevant—an approach contrary to that taken in *Image Technical Services*. The broader approach espoused in *In re Independent Service Organizations (Antitrust Litigation)* has since been criticized.²³² Former FTC Chairman Pitofsky has stated that it is an undue expansion of the intellectual property grant.²³³ Furthermore, in an *amicus curiae* brief filed before the Supreme Court on the request for *certiorari*, the DOJ stated it would have “serious concerns” were the Federal Circuit to hold a refusal to license could only be an antitrust violation in such limited circumstances.²³⁴ However, other commentators agree with the Federal Circuit and view the *Image Technical Services* decision as relying too much on principles of antitrust law as opposed to intellectual property law.²³⁵

E. Refusal to Deal as Part of a Broader Non-Compete Agreement

1. United States v. General Electric

²³¹ *Id.* at 1327-28. In a related case, the district court went further, stating that “where a patent has been lawfully acquired, subsequent conduct permissible under the patent laws cannot give rise to liability under the antitrust laws” and that “[a] patentee may unilaterally exclude others from using its invention even if such conduct allows the patentee to obtain monopolies in multiple markets.” *In re Indep. Serv. Org. Antitrust Litig.*, 114 F. Supp. 2d 1070, 1088-89 (D. Kan. 2000).

²³² See R. Hewitt Pate, Speech, *Antitrust and Intellectual Policy* (Am. Intell. Prop. L. Assn., Jan. 24, 2003) (available at <www.usdoj.gov/atr/public/speeches/200701.htm>) (accessed Apr. 17, 2003); A. Douglas Melamed & Ali M. Stoepelwerth, Presentation at FTC/DOJ Hearings on Competition & Intellectual Prop. Law & Policy in the Knowledge Based Econ., *The CSU Case: Facts, Formalism and the Intersection of Antitrust and Intellectual Property Law* (F.T.C. May 1, 2002), in 10 Geo. Mason L. Rev. 407 (2002) (claiming that refusals to deal should not be treated any differently when they involve intellectual property then when they involve other types of property).

²³³ Pitofsky, *supra*.

²³⁴ Br. of Amicus Curiae U.S. at 11-12, *CSU, L.L.C. v. Xerox Corp.*, 531 U.S. 1143 (2002) (No. 00-62).

²³⁵ See e.g. Michael H. Kauffman, *Image Technical Services, Inc. v. Eastman Kodak Co.: Taking One Step Forward and Two Steps Back in Reconciling Intellectual Property Rights and Antitrust Liability*, 34 Wake Forest L. Rev. 471 (1999).

Where a refusal to deal is part of a broader non-compete arrangement, it may be open to challenge. *United States v. General Electric Company (GE)* involved the licensing of diagnostic materials developed by GE to help service GE medical imaging equipment more efficiently.²³⁶ GE made licenses available to hospital purchasers of GE imaging machines under GE's most sophisticated diagnosis materials but conditioned the grant of a license on the licensee refraining from competing with GE in the repair of imaging equipment owned by third parties.²³⁷

The DOJ alleged that GE had violated Sections 1 and 2 of the Sherman Act by refusing to deal with potential competitors in the imaging equipment repair market.²³⁸ The district court denied GE's motion to dismiss with respect to the Section 1 claims, but granted the motion with respect to the government's Section 2 claim.²³⁹

A settlement and consent decree was eventually reached, which prohibited GE from entering into any agreement whereby the end user is prohibited from providing third party service.²⁴⁰ However, the Competitive Impact Statement provides that the "[j]udgment does not prohibit GE from refusing to license its advanced service materials to independent service organizations or to any other person who is not an end-user of GE medical equipment."²⁴¹ The consent agreement also allowed GE to implement security procedures aimed at preventing the unauthorized use of its intellectual property by limiting its software to the particular GE machine covered by the relevant licensing agreement.²⁴²

VII. LICENSING OF INTELLECTUAL PROPERTY

The licensing of intellectual property rights often has a strong procompetitive rationale, but may also have anticompetitive

²³⁶ *U.S. v. Gen. Elec. Co.*, 1997-1 Trade Cas. (CCH) ¶ 71,765 (D. Mont. 1997) (denial of GE's motion to dismiss alleged violation of Section 1 of the Sherman Act) [hereinafter *GE 1997*]; *U.S. v. Gen. Elec. Co.*, 1999-1 Trade Cas. (CCH) ¶ 72,399 (D. Mont. 1999) (final judgment) [hereinafter *GE 1999*].

²³⁷ *GE 1999*, 1999-1 Trade Cas. (CCH) ¶ 72,399 at **3-4.

²³⁸ *GE 1997*, 1997-1 Trade Cas. (CCH) ¶ 71,765 at **1-2.

²³⁹ *Id.* at *13.

²⁴⁰ *GE 1999*, 1999-1 Trade Cas. (CCH) ¶ 72,399 at ** 4-5.

²⁴¹ *In the Matter of General Electric Co.*, Department of Justice, Competitive Impact Statement ¶ III (B) (July 14, 1998) (last accessed April 24, 2003, <http://www.usdoj.gov/atr/cases/ft800/1842.htm>).

²⁴² *Id.* at *5-6.

consequences. In addition to granting the right to use intellectual property, licenses typically include some type of restriction on the use of the property. This section first outlines the pro and anticompetitive effects of patent licensing and then takes a closer look at how the courts have treated several restrictions that are sometimes present in licensing agreements.

A. Procompetitive Justification for Licensing Agreements

A license under a patent involves, in effect, a grant of immunity from an infringement suit. Such a grant of immunity can yield procompetitive benefits.

First, the grant of a license provides the recipient with the option to use a technology that it otherwise could not use. Access to the technology can yield production efficiencies, increased output, and lower prices. Moreover, access to the technology may produce synergies in that the recipient of the immunity may be in a unique position to improve or expand the patented invention and thereby bring new products and additional choices to consumers.

Second, licensing also permits the patent owner to increase its financial reward from investing in the patent. Sometimes the owner of a patented technology will not be in the best position to commercialize the patent in all possible fields of use. Licensing permits the patent owner to choose the most efficient means for commercialization of the patent. Such exploitation in turn increases the perceived value of patents and hence increases the incentives to invest in the development of new technologies. Indeed, the Licensing Guidelines provide that: “[t]he owner of intellectual property has to arrange for [the intellectual property’s] combination with other necessary factors to realize its commercial value. Often, the owner finds it most efficient to contract with others for these factors, to sell rights to the intellectual property, or to enter into a joint venture arrangement for its development, rather than supplying these complementary factors itself.”²⁴³

B. Anticompetitive Effects of Licensing Agreements

Licensing agreements can be anticompetitive in two ways.²⁴⁴ Occasionally, a license can be a “mere sham to disguise a naked,

²⁴³ Licensing Guidelines, *supra*.

²⁴⁴ See Hovenkamp, *supra*.

anticompetitive activity”.²⁴⁵ More often, a licensing arrangement can provide some social benefits as described in the previous section, but might also pose a threat of economic harm by foreclosing competition in a market where a less restrictive alternative is available.

Licensing agreements with certain restrictive terms were dealt with very strictly by the agencies and courts for many years. This treatment was outlined in a 1970 speech which described the now infamous “nine no-nos.”²⁴⁶ The nine no-nos are discounted as overly restrictive today and no longer represent the law or the position of the agencies.²⁴⁷

C. Analysis of Licensing Restrictions

In general, the methods of analyzing the competitive nature of particular licensing clauses are not so distinctive from the methods of analyzing other potentially anticompetitive contract clauses that do not involve intellectual property rights. However, intellectual property rights can make the analysis of agreements between competitors or potential competitors more complex, because it is often difficult to tell whether two intellectual property owners are horizontal competitors, vertical competitors, or not in competition at all. Also, because of the peculiar nature of intellectual property rights as a type of legalized monopoly, agreements between competitors are important means of exploiting intellectual property and are vital to the economy. Licensing restrictions generally are efficient to the extent that they facilitate such agreements.

While in recent years the antitrust authorities and the courts have been relatively sympathetic to intellectual property licensing arrangements, they have rejected arguments that there should be broad immunity. For example, in the D.C. Circuit decision in *United States v. Microsoft*,

²⁴⁵ *Id.*

²⁴⁶ The following provisions comprised the nine no-nos; that is, licensing provisions that were considered *per se* illegal by the FTC: (1) Tying of unpatented supplies; (2) Mandatory grantbacks; (3) Post-sale restrictions on resale by purchasers of patented products; (4) Tie-outs; (5) Licensee veto power over the licensor's grant of further licenses; (6) Mandatory package licensing; (7) Compulsory payment of royalties in amounts not reasonably related to sales of the Patented product; (8) restrictions on sales of unpatented products made by a patented Process; and (9) Specifying prices licensee could charge upon resale of licensed products. See Bruce B. Wilson, Address, *Patent and Know-How License Agreements: Field of Use, Territorial, Price and Quantity Restrictions* (New Eng. Antitrust Conf., Nov. 6, 1970).

²⁴⁷ Willard K. Tom and Joshua A. Newberg, “Antitrust and Intellectual Property: From Separate Spheres to Unified Field,” 66 Antitrust L.J. 167, 175-82 (1997)

Corp.,²⁴⁸ the court summarily rejected Microsoft's argument that intellectual property licenses enjoyed antitrust immunity:

Microsoft's primary copyright argument borders upon the frivolous. The company claims an absolute and unfettered right to use its intellectual property as it wishes: "If intellectual property rights have been lawfully acquired," it says, then "their subsequent exercise cannot give rise to antitrust liability." Appellant's Opening Br. at 105. That is no more correct than the proposition that use of one's personal property, such as a baseball bat, cannot give rise to tort liability. As the Federal Circuit succinctly stated: "Intellectual property rights do not confer a privilege to violate the antitrust laws." *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d 1322, 1325 (Fed. Cir. 2000).²⁴⁹

Often the legality of a licensing agreement will depend on the competitive relationship of the relevant firms. According to Section 1 jurisprudence, agreements between horizontal competitors or potential competitors are viewed much more harshly than agreements between non-competitors because of the fear of cartels.²⁵⁰ Under the Licensing Guidelines, "[a] firm will be treated as a likely potential competitor if there is evidence that entry by that firm is reasonably probable in the absence of the licensing arrangement."²⁵¹ However, this counter-factual determination often involves extremely difficult judgment calls.

Agreements between non-competitors can also run foul of the antitrust laws in a number of ways. In general, a provision in a license to a non-competitor will run afoul of Section 1 if it unreasonably forecloses competitors of either party to the agreement from competing on the merits and does not offer likely or actual benefits to consumers that would outweigh the likely or actual anticompetitive effects.

One particular area of patent law that should be considered in the antitrust analysis of licensing restrictions is the exhaustion doctrine. This doctrine states that: "[T]he patent owner's authority under the patent laws

²⁴⁸ 253 F.3d 34 (D.C. Cir. 2001); see *Atari Games*, 897 F.2d at 1576 ("[A] patent owner may not take the property right granted by a patent and use it to extend his power in the marketplace improperly, i.e. beyond the limits of what Congress intended to give in the patent laws. The fact that a patent is obtained does not wholly insulate the patent owner from the antitrust laws.").

²⁴⁹ *Microsoft*, 253 F.3d at 63.

²⁵⁰ See Seth Schiesel, *New Economy, Bringing Competition Policy into the Age of the Internet*, The New York Times, December 25, 2000 (quoting then-acting assistant attorney general for antitrust A. Douglas Melamed: "There is no question that horizontal problems are easier to understand and are more likely to trigger law enforcement than vertical arrangements. Antitrust law is now, and I think quite appropriately, focused on identifying where there might exist a particular competition problem in the sense of the creation of economic power in certain markets.")

²⁵¹ Licensing Guidelines, *supra*.

to control the manufacture, use and sale of the patented product is ‘exhausted’ by the first sale of the product by someone authorized to make sales.”²⁵² Therefore, if a licensee wants to resell or re-license a patent, the contract terms will be governed by standard antitrust law, without the protections that are peculiar to intellectual property rights.²⁵³

D. Requirement of the Payment of Royalties

Because patentees have the right to exclude others from manufacturing or using a patented invention, a patentee's decision to license a patent, but only at a very high royalty, does not ordinarily raise any antitrust scrutiny.

Some courts have looked with suspicion at licensors who license their patents at different royalties to different licensees.²⁵⁴ These cases have been widely criticized, however, because if a patentee has the right to refuse altogether to grant a license to a second licensee, the decision to grant a license—but at a higher rate than charged to the first licensee—should not, absent more, create any competitive concern.²⁵⁵

Royalty requirements become problematic when they are seen as expanding the patent grant in some way. For example, in *Brulotte v. Thys Company*, the Supreme Court held that an obligation in a patent license to pay royalties extending beyond the patent term was *per se* illegal.²⁵⁶ In that case, the Court appeared to be referring to notions of patent misuse and does not declare such a license illegal under the antitrust laws.²⁵⁷ It is far from apparent that such a restriction in a license would tend to present competitive problems that would constitute an antitrust violation.²⁵⁸

²⁵² Holmes, *supra*.

²⁵³ See *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992).

²⁵⁴ See e.g. *Laitram Corp. v. King Crab, Inc.*, 244 F.Supp. 9 (D. Alaska 1965); *LaPeyre v. Fed. Trade Commn.*, 366 F.2d 117 (5th Cir. 1966).

²⁵⁵ ABA, Antitrust Section, *Antitrust Law Developments* vol. 1, 1060 (Debra J. Pearlstein ed., 5th ed., ABA 2002)

²⁵⁶ *Brulotte v. Thys Co.*, 379 U.S. 29, 32 (1964); see *Bayer AG v. Housey Pharm., Inc.*, 169 F. Supp. 2d 328, 331 (D. Del 2001) (“Arrangement in which a patentee effectively extends the terms of its patent by requiring post-expiration royalties constitutes *per se* patent misuse.”).

²⁵⁷ *Brulotte*, 379 U.S. at 34.

²⁵⁸ Judge Posner recently criticized the *Brulotte* rule as containing dubious reasoning and being out of touch with the Supreme Court’s current thinking, while noting that he has no authority to overrule a Supreme Court precedent. *Scheiber v. Dolby Laboratories, Inc.*, 293 F.3d 1014,

Royalties based on sales of products which do not use the patent have been found unlawful, but royalties may be measured by sales of products not based on the patent where “convenience of the parties rather than patent power dictates.”²⁵⁹ Differential royalties are not subject to the Robinson-Patman Act (which bans price discrimination) if no goods are sold with the license.²⁶⁰

E. Territorial Restrictions

35 U.S.C. § 261 expressly permits the exclusive licensing of a United States patent “to the whole or any specified part of the United States.”²⁶¹ The Ninth Circuit and Federal Circuit have both held that restrictions on exportation of a patented product are also acceptable in licensing agreements.²⁶²

On occasion, territorial restrictions in licenses have been struck down where the licensing agreements itself was seen by the courts as a sham or pretext for implementing a market division scheme between competitors.²⁶³ Territorial restrictions have also been struck down where there are several licensees, and the restrictions are seen as being requested by the licensees themselves as a way to avoid competition with each other.²⁶⁴

1017-18 (7th Cir. 2002). (*cert denied*, Jan 13, 2003). According to Posner, “charging royalties beyond the term of the patent does not lengthen the patentee’s monopoly; it merely alters the timing of royalty payments.” *Id.* at 1018; see Harold See & Frank M. Caprio, *The Trouble with Brulotte: the Patent Royalty Term and Patent Monopoly Extension*, 1990 Utah L. Rev. 813 (1990).

²⁵⁹ *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100 (1969).

²⁶⁰ *La Salle St. Press, Inc. v. McCormick & Henderson, Inc.*, 293 F. Supp. 1004, 1005 (N.D. Ill. 1968), *aff’d in part and rev’d in part*, 445 F. 2d 84 (7th Cir. 1971).

²⁶¹ 35 U.S.C. § 261.

²⁶² *Brownell v. Ketcham Wire & Mfg. Co.*, 211 F.2d 121, 129 (9th Cir. 1954); *Atari Games*, 897 F.2d at 1578 .

²⁶³ See *Timken Roller Bearing Co. v. U.S.*, 341 U.S. 593, 598-99 (1951); Licensing Guidelines, *supra*, Example 7; ABA, Antitrust Section, *Antitrust Law Developments* vol. 2, 1065 (Debra J. Pearlstein 5th ed. ABA 2002).

²⁶⁴ See *Intl. Wood Processors v. Power Dry, Inc.*, 792 F.2d 416, 429 (4th Cir. 1986); ABA, Antitrust Section, *Antitrust Law Developments* vol. 2, 1065 (Debra J. Pearlstrin 5th ed. ABA 2002).

The general freedom to impose territorial restrictions is somewhat limited by the exhaustion doctrine, which provides that the patent right is exhausted by the first sale of the patented product.²⁶⁵

F. Field of Use Restrictions

A “field of use restriction” is a restriction in a license that limits the licensee's use of the patented invention to one or more specified fields. In *General Talking Pictures Corporation v. Western Electric Company*, the Supreme Court held such a limitation enforceable.²⁶⁶ In *United Sates v. Westinghouse Electric Corporation*, the Ninth Circuit concluded that the patent owner's right to shut out all competition included the lesser right to restrict the license's field of use.²⁶⁷

Field of use restrictions imposed on a purchaser from the patent holder are valid so long as they do not in some way go beyond the scope of the patent grant,²⁶⁸ for example by imposing restrictions upon product use after they are sold,²⁶⁹ in which case they will be analyzed under the rule of reason.

G. Price Restrictions

Price restrictions are licensing provisions that in some way restrict the price at which the patented article is sold. There is considerable uncertainty regarding the circumstances when price restrictions will be considered antitrust violations.²⁷⁰

General Electric

²⁶⁵ See e.g. *Adams v. Burke*, 84 U.S. 453 (1873); *U.S. v. Univis Lens Co.*, 316 U.S. 241 (1942).

²⁶⁶ *Gen. Talking Pictures Corp. v. W. Elec. Co.*, 304 U.S. 175, 181 (1938).

²⁶⁷ *U.S. v. Westinghouse Elec. Corp.*, 471 F. Supp. 532, 541 (N.D. Cal. 1978), *aff'd* 648 F.2d 642 (9th Cir. 1981).

²⁶⁸ See e.g. *Va. Panel Corp. v. MAC Panel Co.*, 133 F.3d 860 (Fed. Cir. 1997).

²⁶⁹ This would violate the exhaustion doctrine. See *U.S. v. Ciba Geigy Corp.*, 508 F. Supp. 1118, 1147 (D.N.J. 1976).

²⁷⁰ See Holmes, *supra*, § 16.01.

In *United States v. General Electric Co.*,²⁷¹ the Supreme Court concluded that a provision in a single license setting the price at which the manufacturer can sell the patented product “is reasonably within the reward which the patentee by the grant of the patent is entitled to secure.”

²⁷² The Court observed that “[i]t would seem entirely reasonable that [a patentee] should say to the licensee, ‘Yes, you may make and sell articles under my patent, but not so as to destroy the profit that I wish to obtain by making them and selling them myself.’”²⁷³

The Supreme Court’s ruling in *General Electric* is limited to price fixing for the patented product itself.²⁷⁴ Price fixing of non-patented items, even when produced by patented machines or processes, remains *per se* unlawful. In the past, the Department of Justice has attacked *General Electric* and sought to have the decision overruled.²⁷⁵ Twice, the Supreme Court has upheld the case.²⁷⁶

While *General Electric* has not been overruled, it has been limited by a series of decisions in which the Supreme Court held certain licensing schemes that included price restrictions were illegal.²⁷⁷

It should be noted that *General Electric* provides no protection where a licensing arrangement is shown to have the true purpose of fixing prices among competitors, with the exploitation of patents being merely incidental to this purpose. This would constitute horizontal price fixing and be considered *per se* illegal.²⁷⁸

H. Quantity Restrictions

²⁷¹ 272 U.S. 476, 489 (1926).

²⁷² *Id.* at 489.

²⁷³ *Id.* at 490.

²⁷⁴ *Id.* at 493.

²⁷⁵ See *U.S. v. Huck Mfg. Co.*, 382 U.S. 197 (1965); *U.S. v. Line Material Co.*, 333 U.S. 287, 291-304 (1948).

²⁷⁶ *Id.*

²⁷⁷ See e.g. *U.S. v. U.S. Gypsum Co.*, 333 U.S. 364, 400 (1948) (It is unlawful for a patentee “[to] ac[t] in concert with all members of an industry, to issue substantially identical licenses to all members of the industry under the terms of which the industry is completely regimented”.); *Line Material*, 333 U.S. at 303 (cross licenses with price fixing provisions); *Newburgh Moire Co. v. Superior Moire Co.*, 237 F.2d 283, 292 (3rd Cir. 1956); *United States v. Vehicular Parking*, 54 F. Supp. 828, 834, *modified*, 56 F. Supp. 297 (D. Del. 1944), *modified*, 61 F. Supp. 656 (D. Del. 1945).

²⁷⁸ See *U.S. v. New Wrinkle, Inc.*, 342 U.S. 371, 377 (1952).

Few decisions have addressed quantity restrictions.²⁷⁹ However, the courts have generally held that provisions in patent licenses that restrict the quantity of patented articles produced by the licensor are lawful.²⁸⁰ There is a split of authority as to whether the patent grant protects a patentee who includes a provision in a patent license that limits the quantity of unpatented products produced by the patented apparatus.²⁸¹

I. Grantback Clauses

A grantback clause in a patent license typically requires the licensee to grant back to the licensor patent rights which the licensee may later develop related to the subject matter of the licensed patent. Grantback requirements can be exclusive (requiring the licensee to assign future patents to the licensor) or nonexclusive (requiring only the grant back of a license).

Grantbacks have a number of procompetitive justifications, including (1) risk sharing between a licensee and licensor, (2) incentives for licensor to continue research in an area, (3) stimulating first-generation innovation, and (4) encouraging the licensing of first-generation innovation.²⁸²

On the other hand, grantback provisions potentially can have a negative competitive effect, *inter alia*, by: (1) discouraging the licensee from engaging in competitive research and development, (2) permitting the licensor to acquire or maintain monopoly power, or (3) facilitating cartel behavior in a market.²⁸³

In *Transparent-Wrap Machine Corporation v. Stokes & Smith Company*,²⁸⁴ the Supreme Court concluded that a grantback provision which required the licensee to assign back to the licensor any patents on improvements of the licensed patented invention was not *per se* illegal.²⁸⁵

²⁷⁹ Holmes, *supra*, § 19.01, at 19-1.

²⁸⁰ See e.g. *Atari Games*, 897 F.2d 1572; *E.I. Du Pont de Nemours*, 118 F. Supp. 41[]; *U.S. v. Parker-Rust-Proof Co.*, 61 F. Supp. 805, 812 (E.D. Mich. 1945).

²⁸¹ *Compare Am. Equip. Co. v. Tuthill Bldg. Material Co.*, 69 F.2d 406, 409 (7th Cir. 1934), with *Q-Tips, Inc. v. Johnson & Johnson*, 109 F. Supp 657, 660 (D.N.J. 1951), *modified*, 207 F.2d 509 (3rd Cir. 1953).

²⁸² See Licensing Guidelines, *supra*, § 5.6.

²⁸³ *Id.*; see e.g. *U.S. v. Gen. Elec. Co.*, 82 F. Supp. 753 (D.N.J. 1949).

²⁸⁴ 329 U.S. 637 (1947).

²⁸⁵ *Id.* at 648.

But the Court stressed that under appropriate circumstances a grantback provision could have a purpose or effect violative of the antitrust laws.²⁸⁶ Generally, the agencies and courts apply the rule of reason in their analysis of grantback provisions.²⁸⁷ Some of the factors that are considered include whether the grantback is exclusive or not (and if it is, whether the licensee has the right to use improvements), whether the grantback is royalty free, whether the parties are competitors, the market power of the parties, the policy of the grantback regarding sublicenses, whether the grantback is limited in scope to the licensed patent, the duration of the grantback, and the effect of the grantback on the incentive for developmental research.²⁸⁸

J. Tying Arrangements

A “tie-in” is a commercial arrangement in which the seller of one product (the tying product) conditions the sale of the product on the buyer purchasing a second product (the tied product) from a seller or a designated third party.²⁸⁹ A classic tie-in involving a patent license occurred in *International Salt Company v. United States*,²⁹⁰ where a patent owner licensed a patent covering salt making machinery (the tying product) on the condition that the licensee purchase unpatented salt (the tied product) from the licensor.²⁹¹ The Supreme Court unanimously found this to be illegal.²⁹²

Tying arrangements potentially run afoul of Section 1 of the Sherman Act or Section 3 of the Clayton Act. The potential competitive problem with a tie-in has been described as the seller using market power in one market to diminish competition in another market.²⁹³ “The [Supreme]

²⁸⁶ *Id.* at 646.

²⁸⁷ Licensing Guidelines, *supra*, § 5.6.

²⁸⁸ ABA, Antitrust Section, 2 *Antitrust Law Developments*, vol. 2 1038 (Debra J. Pearlstein 5th ed. ABA 2002).

²⁸⁹ *Id.* at 1067

²⁹⁰ 332 U.S. 392 (1947).

²⁹¹ *Id.* at 393-94 .

²⁹² *Id.* at 395-96.

²⁹³ See, e.g., Daniel Rubinfeld, Speech, *Competition, Innovation, and Antitrust Enforcement in Dynamic Network Industries*, (Software Publisher’s Association Spring Symposium, Mar. 24, 1998) (available at <www.usdoj.gov/atr/public/speeches/1611.htm>) (accessed Mar. 7, 2003) (“Suppose, for example, that a dominant firm has a product with a current technology that is supported legally by its intellectual property rights. Suppose further that the firm

Court has held many times that power gained through some natural and legal advantage such as a patent, copyright, or business acumen can give rise to liability if ‘a seller exploits his dominant position in one market to expand his empire into the next.’”²⁹⁴

There are a variety of potential licensing arrangements that do not involve a classic tie-in but which present similar economic issues. For example, licensing arrangements where the licensor (a) charges higher royalties to licensees who do not purchase unpatented products from the licensor than he or she charges to licensees who do, (b) threatens to discontinue purchases from a potential licensor unless the licensee agrees to a license, (c) requires the licensee not to compete in the sale of a related but unpatented product (tie-out), and (d) licenses a group of patents as a package.²⁹⁵

With respect to package licensing, when the license is offered only for the patents as a group and not for the individual patents, the license is referred to as a mandatory package license.²⁹⁶ In *Zenith Radio Corporation v. Hazeltine Research, Incorporated*,²⁹⁷ the Supreme Court found one particular mandatory package license to constitute a *per se* antitrust violation where the licensor refused to license the technology separately.

While some courts have characterized tying as *per se* illegal, the prohibition on tying has not been employed woodenly.²⁹⁸ The courts have

offers to license its technology only to those firms that agree to also license that firm's complementary product, and suppose that the complementary product builds on the firm's next generation technology. Such a tying arrangement could allow the dominant firm to create a new installed base of users of its next generation technology in a manner that would effectively foreclose the opportunities of competing firms to offer their products in the battle for the next generation technology.”).

²⁹⁴ *Kodak I.*, 504 U.S. at 479, n.29 (quoting *Times-Picayune Pub. Co. v. U.S.*, 345 U.S. 594, 611 (1953)).

²⁹⁵ See generally, ABA, Antitrust Section, 2 *Antitrust Law Developments*, vol. 2 175-206 (Debra J. Pearlstein 5th ed. ABA 2002)

²⁹⁶ R. Hewitt Pate, “Antitrust and Intellectual Property,” (address,) p. 7 (January 24, 2003) (<http://www.usdoj.gov/atr/public/speeches/200701.pdf>)

²⁹⁷ 395 U.S. 100. However, a package license that is voluntarily entered into as a matter of mutual convenience has been held to be lawful. *Automatic Radio*, 339 U.S. at 829-30; see *W. Elec. Co. v. Stewart-Warner Corp.*, 631 F.2d 333, 338-39 (4th Cir. 1980).

²⁹⁸ See, e.g., *Northern Pacific Ry. Co. v. United States*, 356 U.S. 1, 5 (1958). In a later case, the three elements of a *per se* antitrust tying claim are “(1) a tie-in between two products or services sold in different markets, (2) market power in the tying product, and (3) the tying arrangement affects a not insubstantial volume of commerce” *Datagate, Inc. v. Hewlett-Packard Co.*, 60 F.3d 1421, 1423-24 (9th Cir. 1995).

looked to potential economic justifications for such an arrangement before finding any antitrust violation.²⁹⁹ In fact, an argument can be made that in certain cases, tying can function in a procompetitive manner.³⁰⁰ According to the Licensing Guidelines, the antitrust agencies will use a type of rule of reason analysis, and would be likely to challenge a tying agreement where “(1) the seller has market power in the tying product, (2) the arrangement has an adverse effect on competition in the relevant market for the tied product, and (3) efficiency justifications for the arrangement do not outweigh the anticompetitive effects.”³⁰¹

According to the D.C. Circuit in *Microsoft*, there are four elements to a *per se* tying violation: “(1) the tying and tied goods are two separate products; (2) the defendant has market power in the tying product market; (3) the defendant affords consumers no choice but to purchase the tied product from it; and (4) the tying arrangement forecloses a substantial volume of commerce.”³⁰² “Market power is the power ‘to force a purchaser to do something that he would not do in a competitive market.’”³⁰³ Crucial to the antitrust inquiry is whether one or two distinct products are involved.³⁰⁴

Older cases have tended to presume the existence of market power in the tying product where the tying product is a patent or copyright.³⁰⁵ This presumption has been undermined in recent lower court decisions and by amendments to 35 U.S.C. § 271(d), which requires a showing of actual market power where a tying arrangement is being evaluated as a possible patent misuse.³⁰⁶ The Licensing Guidelines specify that the antitrust

²⁹⁹ See e.g. *U.S. v. Jerrold Elec. Corp.*, 187 F. Supp. 545 (E.D. Pa. 1960), *aff’d*, 365 U.S. 567 (1961); *Baker v. Simmons Co.*, 307 F.2d 458 (1st Cir. 1962); *Dehydrating Process Co. v. A.O. Smith Corp.*, 292 F.2d 653 (1st Cir. 1961).

³⁰⁰ See Robert H. Bork, *The Antitrust Paradox*, 355-81 (Basic Books, Inc. 1978).

³⁰¹ Licensing Guidelines, *supra*, § 5.3 (footnotes omitted).

³⁰² 253 F.3d at 85 (citing *Kodak I*, 504 U.S. at 461-62; *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 12-18 (1984)).

³⁰³ *Kodak I*, 504 U.S. at 464 (quoting *Jefferson Parish*, 466 U.S. at 14, n. 9).

³⁰⁴ *Jefferson Parish*, 466 U.S. at 19.

³⁰⁵ See e.g. *White Motor Co. v. U.S.*, 372 U.S. 253, 259 (1963); *U.S. v. Loew’s Inc.*, 371 U.S. 38, 45 (1962); *Jefferson Parish*, 466 U.S. at 9, n.10; *Digidyne Corp. v. Data Gen. Corp.*, 734 F.2d 1336, 1339 (9th Cir. 1984).

³⁰⁶ In relevant part 35 U.S.C. § 271(d) (The Patent Misuse Reform Act) states: “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 ... (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

agencies will not presume that intellectual property rights confer market power.³⁰⁷

In high-tech cases, the issue is often whether the arrangement involves two separate products that can be tied together. In the *Microsoft* case, the issue was whether Windows and Internet Explorer were two separate products and whether Microsoft's integration of Internet Explorer into Windows was an illegal tie.³⁰⁸ The D.C. Circuit refused to apply a static test of whether there was a separate demand for the two products, as had been developed in *Jefferson Parish*.³⁰⁹ The court believed this test would overly punish the first party who integrated at a point where there was still separate demand.³¹⁰ Moreover, the court held that the *per se* rule was not appropriate, at least with respect to platform software tied to applications and remanded the issue to the district court for consideration under the rule of reason.³¹¹ The court noted that the government had failed to provide a definition of the browser market and barriers to entry and would therefore on remand be precluded from arguing any theory of harm that depended on precise definitions of browsers or barriers to entry³¹² other than what may be implicit in Microsoft's tying arrangement.³¹³

The D.C. Circuit laid down the following test for tying on remand. First, the plaintiffs must show that Microsoft's conduct "unreasonably restrained competition."³¹⁴ Then, if Microsoft offers a procompetitive justification, it is the plaintiff's duty to show that the harms to competition outweigh the benefits.³¹⁵ Finally, the district court must consider price bundling.³¹⁶ If Microsoft price bundled by charging more for Windows and Internet Explorer than for Windows alone, then the

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."

³⁰⁷ Licensing Guidelines, *supra*, § 5.3.

³⁰⁸ 253 F.3d at 84-95.

³⁰⁹ 466 U.S. at 12-19 (1984).

³¹⁰ *Microsoft*, 253 F.3d at 89.

³¹¹ *Microsoft*, 253 F.3d at 89-95

³¹² For example, network effects from Internet protocols or extensions embedded in a browser.

³¹³ *Microsoft*, 253 F.3d at 95

³¹⁴ *Id.*

³¹⁵ *Id.*

³¹⁶ *Id.* at 96.

plaintiffs must demonstrate that the anticompetitive effects of Microsoft's price bundling outweigh any procompetitive justifications the company provides for it.³¹⁷

VIII. PATENT POOLS

A. Introduction

The term “pool” has been used to describe myriad different arrangements in which patent owners in some manner have combined their patents.³¹⁸ The structure of these pooling arrangements have varied dramatically, ranging from the cross-licensing of closely-related patents by two patent owners to the creation of giant patent holding companies to which many pool members assign patents covering disparate technologies.³¹⁹ All pools, however, have one common characteristic: two or more patent owners mutually agree to waive exclusive rights under their respective patents so as to grant each other rights and/or to jointly grant rights to others under their respective patents. The essence of a patent pool therefore is this mutual agreement among patent owners to waive their respective exclusive patent rights.

According to recent DOJ Business Review Letters, it appears that the most important issue involved in analyzing patent pools for possible anticompetitive effect is the degree of complementarity of the patents to each other.³²⁰ The inclusion of complementary patents in a patent pool is generally seen as desirable, while the assembly of substitute or rival

³¹⁷ *Id.*

³¹⁸ Acting Assistant Attorney General for Antitrust Joen Klein defined patent pools as “the aggregation of intellectual property rights which are the subject of cross-licensing, whether they are transferred directly by patentee to licensee or through some medium, such as a joint venture, set up specifically to administer the patent pool.” He also noted that *United States v. Line Materials*, 333 U.S. 287, 313 n.24 (1948) states that the term “patent pool” is not a term of art. Joel Klein, Speech, *Cross-Licensing and Antitrust Law* (Am. Intell. Prop. L. Assn., May 2, 1997) (available at <www.usdoj.gov/atr/public/speeches/1123.htm>) (accessed Mar. 7, 2003).

³¹⁹ See *Line Material*, 333 U.S. at 305; *Hartford-Empire Co. v. U.S.*, 323 U.S. 386, 395 (1945).

³²⁰ See e.g. Letter from Joel I. Klein to Carey R. Ramos, Esq., *DVD Business Review Letter #2* (June 10, 1999) (<http://www.usdoj.gov/atr/public/busreview/2485.htm>); Letter from Joel I. Klein to Garrard R. Beeney, Esq., *DVD Business Review Letter #1* (December 16, 1998) (<http://www.usdoj.gov/atr/public/busreview/2121.htm>); Letter from Joel I. Klein to Gerrard [sic] R. Beeney, Esq., *MPEG-2 Business Review Letter* (June 26, 1997) (<http://www.usdoj.gov/atr/public/busreview/1170.htm>).

patents in a pool can be anticompetitive and lead to elevated license fees.³²¹

B. Common Restrictions in Patent Pools

Seldom are the contractual obligations in a patent pool limited to the mutual agreement to grant immunities under patents. Pools typically contain restrictions on those who join a pool by contributing patents and/or those who take licenses under the pooled patents.

One common patent pool restriction is an obligation to pay a fee for the grant of immunity under the pooled patents. However, pooling agreements frequently include other types of restrictions on the actions of members of the pool and pool licensees. For example, entry into a pool or access to its patents sometimes is limited to those who are willing to agree to certain restrictions on how and where the patented inventions can be practiced or on the types of products that can be made through use of the patents. Sometimes the restrictions directly regulate the sale of products made using the licensed patents, such as restrictions on the price, territory of sale, or customers to which the products can be sold.³²²

Pools have also differed in the restrictions they place on the contributing patent members' ability to license their patents individually outside the pool. Sometimes outside licensing has been precluded, such as by requiring an assignment of all rights under the patent.³²³ Sometimes the patent owner has merely been limited in his or her ability to license, such as by a requirement that the patent owner receive the consent of other pool members.³²⁴ Recent DOJ Business Review Letters have placed considerable emphasis on allowing the patent owner the freedom to license its patent outside the pool.³²⁵

C. Procompetitive Benefits of Patent Pools

³²¹ *Id.*

³²² See e.g. *Line Material*, 333 U.S. 287.

³²³ See e.g. *Hartford-Empire*, 323 U.S. 386.

³²⁴ See e.g. *U.S. v. Krasnov*, 143 F. Supp. 184, 201 (E.D. Pa. 1956), *aff'd*, 355 U.S. 5 (1957); *Mason City Tent & Awning Co. v. Clapper*, 144 F. Supp. 754, 759 (W.D. Mo. 1956); but see *Memorex Corp. v. Intl. Bus. Mach. Corp.*, 55 F.2d 1379 (1977) (overruling *Mason City Tent & Awning Co. v. Clapper*).

³²⁵ See e.g. *DVD Business Review Letter #1*, *supra*; *DVD Business Review Letter #2*, *supra*, *MPEG-2 Business Review Letter*, *supra*.

The procompetitive benefits that generally flow from a licensor making patented technology available to licensees, as discussed in the previous section,³²⁶ are also present where multiple licensors make their technology available to multiple licensees through a patent pool. In addition to these benefits, patent pools have other unique procompetitive benefits.³²⁷

Patent pools can be a highly efficient way of resolving legal conflicts relating to the patents. Often, it is not possible to use one patent without infringing another—the so-called problem of “blocking patents.”³²⁸ When firms work in similar research or manufacturing areas, they sometimes become involved in patent conflicts, including mutual patent infringement claims or conflicting claims in patent interferences. It is often difficult to predict the ultimate outcome of such legal conflicts. The costs associated with resolving these conflicts through litigation can often be high. In addition, there are costs associated with developing a product while such disputes are ongoing, because an adverse decision may impair the firm's ability to profit from its investment. To limit all of these costs and provide greater predictability, firms involved in patent conflicts sometimes resort to some form of pooling of the patents in dispute, under which each member has the right to use the patents involved. This solution tends to be highly efficient because the costs associated with mutual grants of immunity can be comparatively low. The case law is replete with instances where patent pools that were formed at least in partial response to such conflicting patent claims are upheld.³²⁹

Pooling also can be a highly efficient way for patent owners to respond to a demand by a significant number of licensees for access to a large number of different patents. Without a pool, securing such licenses would require individual negotiations between numerous patent owners and numerous licensees. This process would involve significant transaction costs. This is especially true where the underlying technologies relate to a particular industry standard. A pool potentially

³²⁶ See *supra* Sec. VII. A.

³²⁷ These benefits were recognized in the Licensing Guidelines, which stated that pools “may provide procompetitive benefits by integrating complementary technologies, reducing transaction costs, clearing blocking positions, and avoiding costly infringement litigation.” Licensing Guidelines, *supra*, § 5.5.

³²⁸ See generally, Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in *Innovation Policy and the Economy*, Volume 1 (Adam B. Jaffe et al. eds. 2001).

³²⁹ See e.g. *Stand. Oil Co. v. U.S.*, 283 U.S. 163, 171 (1931); *Hartford-Empire*, 323 U.S. at 421; *Duplan Corp v. Deering Milliken, Inc.*, 594 F.2d 979, 982 (4th Cir. 1979).

can diminish the number of transactions and lower transaction costs by permitting the licensees to negotiate with a single entity that can supply access to the desired group of patents.³³⁰

D. Potential Anticompetitive Effects of Patent Pools

Naked restrictions in patent pools that limit competitive efforts totally unrelated to the patents being pooled obviously can produce anticompetitive effects. An example is where a pool among owners of patents covering microscopes contains a restriction that obligates the fixing of prices in an unrelated market for eyeglasses in which the patent owners also compete. However, even restraints that relate directly to the use of the patented inventions can potentially be anticompetitive in other ways.

For one thing, access could be a concern to the extent that the excluded firms cannot compete effectively in the market for the good using the licensed technology without belonging to the pool, and the pool participants collectively possess market power.³³¹ In addition to access restrictions, grantback requirements, obligating members to grant licenses to each other for any future products developed using a pool license can have an anticompetitive effect, as they could dampen the incentive to innovate as a firm would have to share successful research and development with other pool members.³³² This effect would be especially pronounced where the pool is large enough to encompass a significant part of a particular innovation market.³³³ Finally, patent pools can have anticompetitive effects when they are used to shield invalid patents or when they include patents that are not complementary, and would otherwise compete against each other.³³⁴

1. Market for Competitive Technology

³³⁰ See e.g. DVD Business Review Letter #1, *supra*; DVD Business Review Letter #2, *supra*, MPEG-2 Business Review Letter, *supra*.

³³¹ Licensing Guidelines, *supra*, § 5.5.

³³² *Id.*

³³³ *Id.*

³³⁴ Jeanne Clark *et al.*, *Patent Pools: A Solution to the Problem of Access in Biotechnology Patents?*, 10 (U.S.P.T.O. Dec. 5, 2000) (available at <<http://www.uspto.gov/web/offices/pac/dapp/opla/patentpool.pdf>> (accessed Mar. 15, 2003)).

When patents covering technologies that are economic alternatives are owned by different entities, then the entities can be viewed as competitors in the sale of the technology. If these entities then pool competing patents, the effect could be to diminish competition among the patent owners in the licensing of these competing patents.

When complementary patents are involved,³³⁵ the patent owners are not horizontal competitors in the offering of patent licenses since the patents are not economic substitutes for each other. The Justice Department has indicated that the best way to ensure that the patents in a pool are complementary is to limit the pool to essential patents, since essential patents are by definition complementary:

One way to ensure that the proposed Pool will integrate only complementary patent rights is to limit the Pool to patents that are essential to compliance with the Standard Specifications. Essential patents by definition have no substitutes; one needs licenses to each of them in order to comply with the standard. At the same time, they are complementary to each other; a license to one essential patent is more valuable if the licensee also has licenses to use other essential patents.³³⁶

Essential patents are clearly those patents that are technically essential for compliance with (or the manufacture of) the standard (or product) in question, but may also include those patents for which a technically viable alternative does not exist.

2. Foreclosure in Related Markets

Restrictions in patent pools can potentially impact competition in related markets comprising products or services that use the pooled patents as inputs.³³⁷ For example, if the patents in the pool represent a large percentage of the total cost of the product in question, then the pool may be used as a means of stabilizing or fixing prices in the market for that product. Additionally, audits of licensees may provide a licensor with access to the competitively sensitive information of a licensee. In these situations, firewalls can be erected to limit the flow of competitively sensitive information. Finally, where the licensors represent a significant percentage of the sales in a particular market, and where the underlying patents are not made available on equal and non-discriminatory terms, the pool faces a greater likelihood of challenge.

³³⁵ Complementary patents are patents whose value depends on their use together.

³³⁶ *DVD Business Review Letter #1, supra*; *DVD Business Review Letter #2, supra*.

³³⁷ See Hovenkamp, *supra*, § 34.4(b)(3) at 34-24.

3. Incentive to Innovate

Absent a pool, firms have an economic incentive to invest in research and development because the discovery of patentable inventions can provide them with an advantage over competitors in the marketplace. However this incentive is diminished where a patent pool includes a “grantback” provision, requiring the automatic licensing of future improvements in the underlying technology.³³⁸ This disincentive to innovate can be minimized by ensuring that new technologies contributed to the pool are weighted more heavily in any determination of royalties, thereby increasing the extent to which the innovator is able to capture the full value of the innovation in question. The disincentive is also minimized by ensuring that only essential patents are subject to the grantback.

E. Legal Analysis of Patent Pools

Patent pools have played an important role in American industry for almost 150 years.³³⁹ Certain pools have been examined, and sometimes challenged, by the antitrust agencies for the past 90 years.³⁴⁰ However, there has been frequent flux and uncertainty in the way that the courts and agencies have dealt with patent pools over that time period.³⁴¹ Like many licensing arrangements, patent pools were prosecuted relatively strictly until fairly recently. However, since the issuance of the Licensing guidelines, there have not been many court cases involving patent pools. Most of the guidance relevant for current business practices must therefore come from three business review letters issued by the Justice Department.³⁴²

³³⁸ See e.g. *U.S. v. Mfrs. Aircraft Assn., Inc.*, 1976-1 Trade Cas. (CCH) ¶ 60,810 (S.D.N.Y. 1975); *U.S. v. Automobile Mfrs. Assn., Inc.*, 1969 Trade Cas. (CCH) ¶ 72,907 (C.D. Cal. 1969).

³³⁹ In 1856, the Sewing Machine Combination formed one of the first patent pools consisting of sewing machine patents. See Robert P. Merges, *Institutions for Intellectual Property Transactions: The Case for Patent Pools*, 17-18 (August 1999) (available at <www.law.berkeley.edu/institutes/bclt/pubs/merges> (accessed Mar. 15, 2003)).

³⁴⁰ See e.g. *Stand. Sanitary Mfg. v. U.S.*, 226 U.S. 20 (1912); *Stand. Oil*, 283 U.S. 163; *Hartford-Empire*, 323 U.S. 386.

³⁴¹ See generally Steven C. Carlson, *Patent Pools and the Antitrust Dilemma*, 16 Yale J. on Reg. 359, 373-76 (1999).

³⁴² See DVD Business Review Letter #1, *supra*, DVD Business Review Letter #2, *supra*, MPEG-2 Business Review Letter, *supra*. In these letters, the DOJ approved the proposed pools. See generally Clark, *supra* at 7.

In the MPEG-2 Review letter, the Justice Department approved a patent pool involving nine large companies and twenty-seven patents that were considered by an independent administrator to be essential to video compression technology.³⁴³ The pooling agreement stated that only essential patents would be included and five-year package licenses for all of the patents in the pool would be provided for set royalties.³⁴⁴ In approving the arrangement, the DOJ laid forth the following guidelines for when a patent pool would probably be approved: (1) the pooled patents must be valid and not expired;³⁴⁵ (2) the pool should not aggregate competitive technologies and set a single price for them; (3) the determination of whether a patent is essential to complement technologies in the pool should be made by an independent expert,³⁴⁶ and (4) the pool agreement must not disadvantage competitors or facilitate collusion in downstream product markets.³⁴⁷

Although the MPEG-2 letter has clear efficiency justifications, the DOJ's decision has also been criticized. According to one observer, "the anticompetitive potential of the MPEG LA patent pool is enormous. The DOJ's approval of the pool validates a collectively enforced monopoly over a fundamental communications standard."³⁴⁸

In the first DVD Business Review Letter, the Justice Department narrowed the scope of their inquiry from five points down to two fundamental questions: (1) "whether the proposed licensing program is likely to integrate complementary patent rights," and (2) "if so, whether

³⁴³ *MPEG-2 Business Review Letter, supra.*

³⁴⁴ *Id.*

³⁴⁵ "A licensing scheme premised on invalid or expired intellectual property rights will not withstand antitrust scrutiny." *MPEG-2 Business Review Letter, supra* n. 330 (referring to *United States v. Pilkington plc*, 1994-2 Trade Cas. (CCH) ¶ 70,842 (D. Ariz. 1994)(consent decree resolving antitrust suit against exclusive licenses premised on technology covered by expired patents).

³⁴⁶ The Justice Department stated that: "[t]he continuing role of an independent expert to assess essentiality is an especially effective guarantor that the Portfolio patents are complements, not substitutes." *MPEG-2 Business Review Letter, supra* n. 330. The existence of certain structural safeguards is necessary to ensure the expert retains his or her independence. It is important that the expert's determinations are conclusive and non-appealable, that the expert can only be dismissed for malfeasance or nonfeasance and that the expert's compensation is not affected by his or her determinations of essentiality.

³⁴⁷ *Id.*

³⁴⁸ Carlson, *supra*, at 372.

the resulting competitive benefits are likely to be outweighed by competitive harm posed by other aspects of the program."³⁴⁹ This same two-step analysis was applied more recently in the DOJ's approval of the 3G patent platform.³⁵⁰ 3G refers to the third generation of wireless communication systems, which is based on five different radio interface technologies.³⁵¹ Unlike a conventional patent pool, the patent platform included patents related to each of the five separate 3G standards and was composed of several distinct entities.³⁵² This was meant to ensure that if the platform's actions implicated competitive considerations among the five technologies, competitive choices would be made independently for each technology.³⁵³ The DOJ's approval noted that the platform was likely to facilitate the availability of complementary patent rights related to each of the five standards, and could lower search and transaction costs for manufacturers and service providers who needed access to these patent rights.³⁵⁴

VISX

In the *VISX* case,³⁵⁵ the FTC challenged a patent pool involving VISX and Summit Technology, the only two companies in the United States with patents relating to the commercial use of photoreactive keratectomy (PRK), a form of laser eye surgery. According to the FTC's complaint, the two companies had pooled their patents and agreed to establish fixed fees for licensing.³⁵⁶ The two firms then shared the licensing fees according to a predetermined formula. Without the patent pool, the FTC claimed that the two companies would have competed in the sale or lease of PRK equipment and in the licensing of PRK technology.³⁵⁷ However,

³⁴⁹ *DVD Business Review Letter #1, supra.*

³⁵⁰ Letter from Charles A. James to Ky P. Ewing, Esq., *3G Business Review Letter* (November 12, 1999), available at <http://www.usdoj.gov/atr/public/busreview/200455.htm>

³⁵¹ *Id.*

³⁵² *Id.*

³⁵³ *Id.*

³⁵⁴ *Id.*

³⁵⁵ *In re Summit Technology, Inc., & VISX, Inc.*, 1999 FTC LEXIS 113 (1999) (decision as relates to complaint against VISX); *In re Summit Technology, Inc., & VISX, Inc.*, 1999 FTC LEXIS 23 (1999) (decision as relates to complaint against Summit Technology).

³⁵⁶ *See In the Matter of Summit Technology, Inc., and VISX, Inc.*, FTC Docket No. 9286 (complaint) (1998).

³⁵⁷ *Id.*

the companies argued that the patents in their pool were “blocking,” and not potential competitors. The FTC entered a consent decree prohibiting the defendants from engaging in retail price maintenance, and required the firms to license their patents to one another on a royalty-free, non-exclusive basis because investments subsequent to the pool made cross-licensing desirable.

IX. STANDARD SETTING

Industry standards are extremely common, especially in high technology areas such as information technology that are heavily dependent on innovation and intellectual property rights.³⁵⁸ Standard setting can promote innovation and economic efficiency by providing an agreed-upon base or by ensuring product quality.³⁵⁹ Standards can also improve price competition, because standardized products and technologies can be more easily compared and contrasted.³⁶⁰ However, standard setting can also be misused to block rivals’ innovation or increase costs by excluding new products or services.³⁶¹

Standard setting issues often overlap with patent-pool issues, as it is common for a patent pool to include the necessary technology to comply with a particular industry standard. However, standard setting also raises its own antitrust issues. Where the standards relate to intellectual property, these issues can become quite complicated, and have received relatively little attention in the Licensing Guidelines.³⁶²

³⁵⁸ The rise of standards has been credited to three main driving forces: product interoperability; public health and safety; and global competitiveness. See Janice M. Mueller, *Patenting Industry Standards*, 34 John Marshall L. Rev. 897, 903 (2001); See generally David A. Balto, *Standard Setting in the 21st Century Network Economy*, 18, No. 6 The Computer & Internet Law., 5 (June 2001).

³⁵⁹ See Ernest Gellhorn, Speech, *Standard Setting* FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy, (FTC/DOJ, Apr. 18, 2002) (available at <<http://www.ftc.gov/opp/intellect/>>) (accessed Mar. 7, 2003).

³⁶⁰ See Balto, *supra*.

³⁶¹ *Id.* See FTC Staff Report, *Anticipating the 21st Century: Competition Policy in the New High-Tech, Global Marketplace*, (May 1996) (available in 1996 WL 293773).

³⁶² The Licensing Guidelines address cross-licensing and patent pooling but may not give sufficient guidance on the more elaborate issues raised by standard-setting organizations. Richard C. Levin, Presentation, FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy, *FTC/DOJ Joint Hearings on*

The problem of anticompetitive standards can be analyzed similarly to any other Section 1 conspiracy in restraint of trade. The rule of reason will generally apply.³⁶³ Standards can be considered anticompetitive when they illegitimately raise prices, restrict competition, facilitate collusion, and, in rare cases, when they deny membership to a competitor.³⁶⁴ It is important to note that the rule of reason approach only applies to adoption of standards by private industry. When private groups devise standards and then petition the government for their adoption by public sector bodies, their petitions could be protected from antitrust liability under the Noerr doctrine.³⁶⁵

Possibly in reaction to the current state of legal uncertainty, standard-setting bodies have implemented a wide variety of policies with regards to intellectual policy rights.³⁶⁶ Some “require that the owner of any patent deemed essential to practicing the standard grant a royalty-free license to any user of the standard.”³⁶⁷ Others “require that patent owners grant licenses under terms that are ‘reasonable and non-discriminatory.’”³⁶⁸ Finally, there are some standard-setting bodies that do not oblige patent owners to license at all.³⁶⁹

The FTC is reported to be conducting a number of investigations into disputes concerning the non-disclosure of patents or patent applications to industry standard-setting groups. This problem was also explored during the recent FTC/DOJ hearings on intellectual property

Competition and Intellectual Property Law (FTC/DOJ, Feb. 6, 2002) (available at <<http://www.ftc.gov/opp/intellect/>>) (accessed Mar. 7, 2003).

³⁶³ See *Natl. Assn. of Rev. Appraisers & Mortg. Underwriters, Inc. v. The Appraisal Found.*, 64 F.3d 1130, 1133-34 (8th Cir. 1995); *Consol. Metal Prods., Inc. v. Am. Petroleum Inst.*, 846 F.2d 284, 292-93 (5th Cir. 1988).

³⁶⁴ Balto, *supra*, at 7. The denial of membership in a standard-setting organization has been analyzed under essential facilities doctrine and group boycott doctrine. See Hovenkamp, *supra*, at § 35.3.

³⁶⁵ See Gellhorn, *supra* (discussing Noerr-Pennington doctrine that lobbying activities are exempted from antitrust scrutiny).

³⁶⁶ See Mueller, *supra*, at 906-07.

³⁶⁷ *Id.* at 906.

³⁶⁸ *Id.*

³⁶⁹ *Id.* at 906-07.

and antitrust.³⁷⁰ The leading case involving this issue is *In re Dell Computer Corporation*.³⁷¹

1. Dell Computer

In 1996, the FTC alleged that the failure of computer manufacturer Dell to disclose certain of its patents to an industry standard-setting organization violated the antitrust laws.³⁷² Dell representatives were part of the Video Electronics Standards Association, a non-profit industry association that was in the process of developing a standard for the VL-bus, an important computer part.³⁷³ The association included virtually all major U.S. computer hardware and software manufacturers.³⁷⁴ The association required disclosure of intellectual property rights.³⁷⁵ Dell participated, but failed to disclose its relevant patents.³⁷⁶ Once the standard had been adopted, Dell revealed that compliance would violate its patents.³⁷⁷ The FTC brought an enforcement action, alleging that Dell's "bait and switch" tactics threatened to retard the development and adoption of VL-bus standards and discourage future standard-setting efforts.³⁷⁸ The case was eventually settled, with Dell agreeing not to enforce its patents that covered the VL-bus standard.³⁷⁹

The settlement has been criticized for a number of reasons. For one thing, it is not seen as providing sufficient guidance for other standard-setting organizations, especially on the issue of intent.³⁸⁰ The FTC majority stated that the non-disclosure by the Dell representative was "not inadvertent."³⁸¹ Although "not inadvertent" may have been an

³⁷⁰ David A. Balto & Daniel I. Prywes, *Standard-Setting Disputes: The Need for FTC Guidelines*, FTC Watch (March 25, 2002).

³⁷¹ 121 F.T.C. 616, 619 (Fed. Trade Commn. 1996).

³⁷² *Id.* at 618.

³⁷³ *Id.* at 617.

³⁷⁴ *Id.*

³⁷⁵ *Id.*

³⁷⁶ *Id.* at 617.

³⁷⁷ *Dell Computer*, 121 F.T.C. at 617.

³⁷⁸ *Id.* at 619-20.

³⁷⁹ *Id.* at 619-20.

³⁸⁰ Balto & Prywes, *supra*.

³⁸¹ *Dell Computer*, 121 F.T.C. at 625-26.

appropriate statement for the level of evidence secured, it did not provide much guidance to standard-setting participants about the scope of their duty (if any) to search for intellectual property rights or to disclose those rights.³⁸² Moreover, the Dell enforcement action did not suggest what kind of disclosure duty a standard-setting body should impose upon its members.³⁸³

2. FTC v. Rambus³⁸⁴

The FTC's Rambus complaint is a more recent response to a situation analogous to the situation in *Dell Computer*. The FTC filed a complaint alleging that Rambus violated Section 5 of the FTC Act by engaging in unfair competition, monopolization, and attempted monopolization of certain markets relating to technological features necessary for the design and manufacture of a common form of digital computer memory, known as dynamic random access memory (DRAM).³⁸⁵ The FTC claimed that Rambus failed to disclose its ownership of certain relevant patents and patent applications to an industry standard-setting organization of which it was a member (JEDEC),³⁸⁶ in violation of the organization's rules.

A Rambus representative allegedly attended numerous JEDEC meetings at which standards were discussed that clearly would implicate current and pending Rambus patents.³⁸⁷ However, the company purposefully concealed the existence of these patents and patent applications from the other members of the group.³⁸⁸ According to the FTC complaint: "Rambus never disclosed to JEDEC the fact that, throughout the duration of its membership in the organization, Rambus had on file with the PTO, and was actively prosecuting, patent applications that, in its view, either

³⁸² Balto & Prywes, *supra*.

³⁸³ *Id.*

³⁸⁴ *In re Rambus, Inc.*, 2002 FTC LEXIS 31 (F.T.C. Dkt. No. 9302) (complaint) (June 18, 2002).

³⁸⁵ *Id.* at *23-*32.

³⁸⁶ JEDEC is short for the JEDEC Solid State Technology Association (originally known as the Joint Electron Device Engineering Council). The organization's primary purpose is to "promote the development and standardization of terms, definitions, product characterization, test methods, manufacturing support functions and mechanical standards for solid state products." *Id.* at *7.

³⁸⁷ *Id.* at *5.

³⁸⁸ *Id.* at *2.

covered or could easily be amended to cover elements of the existing and future SDRAM standards.”³⁸⁹

The complaint further alleged that in 1999, after JEDEC-compliant DRAM had largely replaced the older technology, Rambus entered into licenses with seven major DRAM manufacturers and initiated patent infringement lawsuits against others (one of which led to an additional license).³⁹⁰ In recompense for these licenses, Rambus would have collected royalties in the range of \$50-\$100 million per year, and if it succeeded in its patent suits, that number could increase to well over \$1 billion per year.³⁹¹

The relief contemplated by the FTC includes that Rambus cease and desist from undertaking infringement litigation for the relevant DRAM patents, and employ an FTC-approved compliance officer “for the purpose of communicating [Rambus’s] patent rights related to any standard under consideration by any standard-setting organization of which [Rambus] is a member.”³⁹²

3. Rambus v. Infineon³⁹³

Many of the issues brought up in the FTC’s Rambus complaint also arose in private litigation between Rambus and Infineon. Rambus brought suit against Infineon for patent infringement on certain DRAM-related technology, but the suit was thrown out as a matter of law.³⁹⁴ Infineon filed a number of counterclaims, including accusing Rambus of fraud for failing to disclose the existence of its DRAM patents to JEDEC.³⁹⁵ At the conclusion of the trial, the jury found Rambus liable for committing fraud in its conduct at JEDEC, and the court upheld this result.³⁹⁶

After the trial the district court granted JMOL on the DDR-SDRAM fraud verdict and denied another JMOL on the SDRAM fraud verdict. Both parties

³⁸⁹ *Id.* at *32.

³⁹⁰ *Rambus*, 2002 FTC LEXIS at *56-*57.

³⁹¹ *Id.* at *57.

³⁹² *Id.* at *78.

³⁹³ *Rambus, Inc. v. Infineon Techs.*, 155 F. Supp. 2d 668 (E.D. Va. 2001).

³⁹⁴ *Id.* at 670.

³⁹⁵ *Id.* at 671.

³⁹⁶ *Id.* at 670-71.

appealed. On January 29, 2003, the Federal Circuit Court of Appeals reversed the district courts ruling which had allowed the SDRAM fraud claim to stand. In Virginia a claim of fraud prevails when all of the following elements are met with clear and convincing evidence: 1) a false representation (or omission in the face of a duty to disclose), 2) of a material fact, 3) made intentionally and knowingly, 4) with the intent to mislead 5) with reasonable reliance by the misled party, and 6) resulting in damages to the misled party.³⁹⁷ The court focused on the first element.

In deciding whether Rambus owed a duty to disclose, the court examined JEDEC patent policy requiring members to disclose related patents during the development of a new standard. The court stated that JEDEC's policy was vague.³⁹⁸ During a meeting in October 1993, JEDEC used viewgraphs on a screen to show the "patent policy."³⁹⁹ The language on the screen did not impose any direct duty on its members it only required the chairman to point members to the duty.⁴⁰⁰ Moreover, there was no evidence that members ever legally agreed to the disclosure duty.⁴⁰¹ Members did not know when the duty would be imposed which could be as soon as a new standard was discussed or once standardization formally began.⁴⁰² "A policy that does not define clearly what, when, how, and to whom the members must disclose does not provide a firm basis from the disclosure duty necessary for a fraud verdict."⁴⁰³

The court found that the duty to disclose "extends only to claims in patents or applications that reasonably might be necessary to practice the standard."⁴⁰⁴ Because Rambus had other patent applications that could not be reasonably needed to practice the SDRAM standard, the court held that Rambus did not breach a duty to disclose. "Rambus' mistaken belief that it had pending claims covering the standard does not substitute for the proof required..." to show Rambus had a duty to disclose.⁴⁰⁵

³⁹⁷ 2003 WL 187265 (Fed. Cir. (Va.)). p. 11.

³⁹⁸ *Id.* at 19.

³⁹⁹ *Id.* at 14.

⁴⁰⁰ *Id.* at 13.

⁴⁰¹ *Id.* at 13.

⁴⁰² *Id.* at 17.

⁴⁰³ *Id.* at 17.

⁴⁰⁴ *Id.* at 16.

⁴⁰⁵ *Id.* at 19.

Following this case, the law concerning standard setting appears to be in a state of flux. The Federal Circuit's decision is in conflict with the FTC's earlier decision to prosecute in *FTC v. Rambus*.⁴⁰⁶

X. ENFORCEMENT OF INTELLECTUAL PROPERTY RIGHTS

Normally, the enforcement of intellectual property rights will not lead to an antitrust violation. However, there are certain exceptions to this rule, most notably the Walker Process doctrine.

A. Walker Process Doctrine

According to the Supreme Court's holding in *Walker Process Equipment, Incorporated v. Food Machinery & Chemical Corporation*,⁴⁰⁷ when a company obtains a patent by committing fraud on the PTO⁴⁰⁸ and then attempts to enforce that patent on its competitor, its actions can constitute purposeful anticompetitive conduct, and therefore lead to a Sherman Act Section 2 violation.⁴⁰⁹ This holding has since been expanded upon in a number of important circuit court cases.⁴¹⁰

Walker Process doctrine holds that a finding of fraud requires clear and convincing proof of the misrepresentation or omission of a material fact with the intent to deceive the patent examiner.⁴¹¹ This must result in the issuance of a patent that would not have been granted absent the fraudulent conduct.⁴¹² The other required elements for a Section 2 offense must also be present. These other elements include proof of power in the

⁴⁰⁶ *Supra*.

⁴⁰⁷ 382 U.S. 172 (1965).

⁴⁰⁸ The fraudulent procurement of a patent can also violate Section 5 of the FTC Act. *American Cyanamid Co. v. FTC*, 363 F.2d 757, 771 (6th Cir. 1966).

⁴⁰⁹ *Walker Process*, 382 U.S. at 174.

⁴¹⁰ See e.g. *Cataphote Corp. v. DeSoto Chemical Coatings, Inc.*, 450 F.2d 769, 771-73 (9th Cir. 1971); *Monsanto Co. v. Rohm & Haas Co.*, 456 F.2d 592, 599-600 (3d Cir. 1972); *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 166 (Fed. Cir. 1985).

⁴¹¹ *Oetiker v. Jurid Werke GMBH*, 671 F.2d 596, 600 (D.C. Cir. 1982). The fraud may consist of either a misstatement or an omission of pertinent information. See *Rohm*, 456 F.2d at 599-600; *Nobelpharma AB v. Implant Innovations, Inc.*, 129 F.3d 1463 (Fed. Cir. 1997), *rev'd*, 141 F.3d 1059, 1068-70 (Fed. Cir. 1998) (Initially holding that *Walker Process* required affirmative misrepresentation, not mere omissions, the same panel four months later reversed, accepting the viability of antitrust claims premised on fraudulent omissions.).

⁴¹² *Litton*, 755 F.2d at 166; *Nobelpharma*, 141 F.3d. at 1071.

relevant market⁴¹³ and injury as a proximate result of the enforcement actions.⁴¹⁴

Walker Process claims generally arise as counterclaims in patent infringement litigation.⁴¹⁵ In these circumstances, the claims will go on appeal to the Federal Circuit, which has exclusive appellate jurisdiction over district court claims involving the patent laws “in whole or in part.”⁴¹⁶ A Section 2 violation can also result where the patent was not secured by fraud but the patentee came to know that the patent was invalid and nevertheless pursued the infringement action.⁴¹⁷

B. Sham Litigation

Sham litigation to enforce intellectual property rights can violate Section 2 of the Sherman Act, or Section 1 of the Sherman Act if the litigation involves collective action. In *Professional Real Estate Investors v. Columbia Pictures Industries*⁴¹⁸ (PRE), the Supreme Court introduced a two-part test for when a suit loses antitrust immunity⁴¹⁹ and can be termed a “sham”:

First, the lawsuit must be objectively baseless in the sense that no reasonable litigant could realistically expect success on the merits. If an objective litigant could conclude that the suit is reasonably calculated to elicit a favorable outcome, the suit is immunized under *Noerr*, and an antitrust claim premised on the sham exception must fail. Only if challenged litigation is objectively meritless may a court examine the litigant's subjective motivation. Under this second part of our definition of sham, the court should focus on whether the baseless lawsuit conceals “an attempt to interfere *directly* with the business relationships of a competitor,” [*E. R.R. Presidents Conf. v. Noerr Motor Freight, Inc.*, 365 U.S. 127, 144 (1961)] (emphasis added), through the

⁴¹³ See *Loctite Corp. v. Ultraseal, Ltd.*, 781 F.2d 861, 875 (Fed. Cir. 1985).

⁴¹⁴ This means that at a minimum the plaintiff was ready, willing, and able to manufacture the patented subject matter. See *Indium Corp. of America v. Semi-Alloys, Inc.*, 611 F. Supp. 379, 385 (N.D.N.Y. 1985), *aff'd*, 781 F.2d 879 (Fed. Cir. 1985).

⁴¹⁵ See Robert J. Hoerner, *Bad Faith Enforcement of Patents – Antitrust Considerations*, 55 Antitrust L.J. 421, 422-23 (1986).

⁴¹⁶ See 28 U.S.C. § 1295(a)(1).

⁴¹⁷ See *Handgards, Inc. v. Ethicon, Inc.*, 601 F.2d 986, 994 (9th Cir. 1979); *Tennant Co. v. Hako Minuteman, Inc.*, 651 F. Supp. 945, 958-59 (N.D. Ill. 1986).

⁴¹⁸ 508 U.S. 49, 60-62 (1993).

⁴¹⁹ Normally lawsuits are immune from antitrust challenge as governmental petitions under the *Noerr-Pennington* doctrine. See, *Eastern Railroad Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127 (1961); *United Mine Workers of America v. Pennington*, 381 U.S. 657 (1965).

"use [of] the governmental *process*—as opposed to the *outcome* of that process—as an anticompetitive weapon," [*City of Columbia v. Omni Outdoor Advert., Inc.*, 499 U.S. 365, 380 (1991)] (emphasis in original).⁴²⁰

The objectively baseless standard has been held to apply to the lawsuit as a whole, so that a suit will not be held to be a sham if some causes of action are baseless and others are well founded.⁴²¹ Sham litigation suits can allege either that the patent holder knew that their relevant patent was invalid or that the patent holder knew that the patent, while valid, was not being infringed. Sham litigation counterclaims are often filed in patent infringement suits, but are seldom successful.⁴²²

In re Buspirone Patent Litigation⁴²³

This case involved six antitrust complaints brought by 30 states, various generic drug makers and purchasers, and consumer protection organizations against Bristol-Myers Squibb ("BMS") for unlawfully maintaining its monopoly for buspirone hydrochloride-based prescription drug products (buspirone).⁴²⁴ Plaintiffs charged BMS with unlawfully maintaining its monopoly over buspirone by improperly listing a patent in the FDA's Orange Book, and with conspiring to restrain trade in the market by settling a patent infringement suit with Danbury Pharmacal, Incorporated and its affiliate Schein Pharmaceuticals, Incorporated, in violation of Sections 1 and 2 of the Sherman Antitrust Act.⁴²⁵

BMS moved to dismiss all of the antitrust claims on both Noerr-Pennington and patent immunity grounds.⁴²⁶ However, the court denied their motions to dismiss.⁴²⁷ In so doing, it decided that the listing of a patent in the Orange Book did not constitute "petitioning" activity according to Noerr-Pennington doctrine because the government's role

⁴²⁰ 508 U.S. at 60-61 (footnote omitted).

⁴²¹ *Eden Hannon & Co. v. Sumitomo Trust & Banking Co.*, 914 F.2d 556, 565 (4th Cir. 1990); *Matsushita Elecs. Corp. v. Loral Corp.*, 974 F. Supp. 345, 357 n.20 (S.D.N.Y. 1997).

⁴²² See Holmes, *supra*, at 38-7 to 38-11.

⁴²³ 185 F. Supp. 2d 363 (S.D.N.Y. 2002).

⁴²⁴ See generally David A. Balto & Jeremy O. Evans, *Antitrust and Regulatory Filings: The Buspirone Patent Litigation*, 4 FDLI Update 37 (July/August 2002).

⁴²⁵ *Buspirone*, 185 F. Supp. 2d at 366.

⁴²⁶ *Id.* at 367-69.

⁴²⁷ *Id.* at 380.

was only ministerial,⁴²⁸ and that the BMS listings in this case were fraudulent under Walker Process doctrine.⁴²⁹ The court went on to say that the subsequent patent litigation arose from "misrepresentations" in the process and was therefore "baseless" and therefore a "sham."⁴³⁰

The district court applied the legal framework from PRE for defining "sham" litigation.⁴³¹ In so doing, the court, found that, objectively speaking, no reasonable litigant could have expected success on the merits of BMS's interpretation of the patent claims.⁴³² The court first clarified that the test under PRE is an objective one, depending on "whether there are, in fact, sufficient objective bases for the positions taken," and not "on the quality of the lawyering."⁴³³ Here, "[t]he language of the [patent] claim, its specification and the prosecution history" showed that the patent did not apply, and "[m]oreover, a straightforward application of governing patent law provisions establishes that the . . . [p]atent would have been invalid if it did."⁴³⁴

The court emphasized that this is "not a case in which there are occasional places in which [BMS] has mischaracterized or mistaken the relevant issues or legal standards. It is a case where [BMS] has repeatedly argued for a position that requires establishing a number of claims, each of which has no basis" ⁴³⁵ The district court also found that "[t]his is not a case in which [BMS] has been arguing for reasonable extensions or developments of the law."⁴³⁶ Thus, the court concluded that BMS's conduct was "objectively baseless."⁴³⁷

The *Buspirone* decision seems to break new ground in important areas.⁴³⁸ The treatment of BMS's conduct under the sham litigation standard makes it clear that apparently inconsistent positions taken by a

⁴²⁸ *Id.* at 369-73.

⁴²⁹ *Id.* at 373-75.

⁴³⁰ *Id.* at 375-76.

⁴³¹ *Buspirone*, 185 F. Supp. 2d at 375.

⁴³² *Id.* at 376.

⁴³³ *Id.* at 375.

⁴³⁴ *Id.* at 376.

⁴³⁵ *Id.* (citing *Cal. Motor Transport Co. v. Trucking Unlimited*, 404 U.S. 508, 513 (1972) for the proposition that "objective baselessness can be established by a 'pattern of baseless, repetitive claims'.").

⁴³⁶ *Buspirone*, 185 F. Supp. 2d at 376.

⁴³⁷ *Id.*

⁴³⁸ See Balto & Evans, *supra*, at 38.

patent holder may serve as a foundation for a court to find an objectively baseless claim. It is also one of very few decisions to suggest that a submission to the government is not petitioning, and therefore not immune under Noerr-Pennington doctrine. Moreover, it is the first decision to apply the Walker Process doctrine outside the context of a filing with the Patent Office.

In re Bristol-Myers Squibb

On April 18, 2003, the FTC approved the issuance of a final consent order in its case against Bristol-Myers Squibb.⁴³⁹ The FTC's complaint in this matter related to the same facts as gave rise to the *In re Buspirone* litigation described above, as well as similar allegations regarding two of BMS's other drugs: Taxol and Platinol (both of which are anti-cancer agents).⁴⁴⁰

The FTC's complaint alleged that BMS improperly listed patents for all three drugs in the Orange Book in order to obtain unwarranted 30-month stays on FDA approval of generic competitors.⁴⁴¹ The complaint stated that BMS violated the anti-monopolization provision of Section 5 of the FTC Act⁴⁴² by intentionally misleading the FDA about the scope, validity, and enforceability of these patents.⁴⁴³ For example, BMS declared that its '365 patent covered a "method of using BuSpar for all of its approved indications", although they knew that it only really covered a method of using a metabolite, as opposed to buspirone itself.⁴⁴⁴ This was significant because only patent claims for BuSpar or methods of use for BuSpar could at that point properly be listed in the Orange Book.⁴⁴⁵

⁴³⁹ See *In the Matter of Bristol-Myers Squibb*, FTC Docket No. C-4076 (decision and order) (2003) <http://www.ftc.gov/os/2003/04/bristolmyerssquibbdo.pdf>.

⁴⁴⁰ See *In the Matter of Bristol-Myers Squibb*, FTC Docket No. C-4076 (complaint) (2003) <http://www.ftc.gov/os/2003/04/bristolmyerssquibbcmp.pdf>.

⁴⁴¹ *Id.*

⁴⁴² 15 U.S.C. § 45.

⁴⁴³ *In the Matter of Bristol-Myers Squibb* (complaint, *supra*) at 24-26.

⁴⁴⁴ *Id.* at 9.

⁴⁴⁵ *Id.* at 10. See listing requirements at 21 U.S.C. §§ 355 (c)(1) and (c)(2).

The FTC concluded that Noerr-Pennington immunity did not apply to Orange Book listings because they do not constitute petitioning behavior.⁴⁴⁶ The FTC also asserted that BMS's filings would fall outside of the Noerr-Pennington doctrine because they involved knowing and material misrepresentations.⁴⁴⁷

The complaint alleged two other actions that were taken by BMS in concert with other firms.⁴⁴⁸ According to the complaint, BMS agreed with Schein to settle patent litigation by paying Schein not to compete until the patent expired, and agreed with ABI to wrongfully list ABI's '331 patent.⁴⁴⁹ These acts were alleged to unreasonably restrain trade in violation of Section 5 of the FTC Act.⁴⁵⁰

The final consent order eliminated BMS's ability to obtain a 30-month stay on later-listed patents.⁴⁵¹ The order also barred a 30-month stay, regardless of when the patent was listed, in cases where Bristol had engaged in misconduct in connection with obtaining and listing the patent.⁴⁵² Relevant misconduct included inequitable actions before the PTO in obtaining the patent, making false or misleading statements to the FDA in connection with listing the patent, and providing patent information to the FDA that was inconsistent with information provided to the PTO.⁴⁵³

C. *Infringement Suits as Part of Scheme to Monopolize*

There is also the possibility that a patent holder may incur antitrust liability when bringing a patent infringement suit even absent bad faith

⁴⁴⁶ *Id.* at 24.

⁴⁴⁷ *Id.*

⁴⁴⁸ *Id.* at 5-7, 18-20.

⁴⁴⁹ *Id.*

⁴⁵⁰ *Id.* at 24, 26.

⁴⁵¹ *In the Matter of Bristol-Myers Squibb* (decision and order, *supra*) at 6. Later-listed patents are those listed by a brand-name manufacturer in the Orange Book after a generic manufacturer has sought FDA approval for a competing generic version. According to an FTC report, later-listed patents lead to substantial delay of FDA approval, often enabling the brand-name manufacturer to obtain multiple 30-month stays. Later-listed patents also frequently present significant questions as to whether they meet the statutory listing criteria. See *Generic Drug Entry Prior to Patent Expiration: An FTC Study* 39-56 (July 2002), (available at <http://www.ftc.gov/os/2002/07/genericdrugstudy.pdf>).

⁴⁵² *In the Matter of Bristol-Myers Squibb* (decision and order, *supra*) at 6-7.

⁴⁵³ *Id.*

where the suit is part of a larger monopolization scheme that would violate Section 2 of the Sherman Act.⁴⁵⁴ Thus, in *Kobe, Incorporated v. Dempsey Pump Corporation*, the court found a monopolization scheme by looking at the company's infringement suits in combination with their acquisitions of all patents relevant to the industry, the signing of covenants not to compete, and threatened suits against companies trading with the alleged patent infringers.⁴⁵⁵ The court noted that the infringement suits themselves would not have been unlawful in isolation from the other activities.⁴⁵⁶

D. Intellectual Property Misuse

The courts have found certain commercial actions by intellectual property owners that do not violate the antitrust laws to be improper and constitute intellectual property misuse. The misuse concept apparently originated in the patent area and is intended to prevent the patentee from extending the power of the patent beyond the grant defined in the patent claims.⁴⁵⁷

Misuse is not a basis for an affirmative damages suit, but rather constitutes a defense in a suit for infringement.⁴⁵⁸ The misuse doctrine is equitable in nature and arises out of the defense of "unclean hands."⁴⁵⁹ A misuse defense does not render a patent invalid but instead renders the patent unenforceable until the patent owner purges him or herself of the misuse.⁴⁶⁰

Some commentators believe that the intellectual property misuse doctrine is unnecessary. Because the antitrust laws are intended to separate procompetitive from anticompetitive conduct, it is not clear what rational

⁴⁵⁴ See *Kobe, Inc. v. Dempsey Pump Co.*, 198 F.2d 416, 422-24 (10th Cir. 1952); *Dairy Foods, Inc. v. Dairy Maid Prods. Coop.*, 297 F.2d 805, 809 (7th Cir. 1961); *Rex Chainbelt, Inc. v. Harco Prods., Inc.*, 512 F.2d 993, 1004-05 (9th Cir. 1975).

⁴⁵⁵ *Kobe*, 198 F.2d at 424-25.

⁴⁵⁶ *Id.* at 425.

⁴⁵⁷ See *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1372 (Fed. Cir. 1998) ("The key inquiry is whether, by imposing conditions that derive their force from the patent, the patentee has impermissibly broadened the scope of the patent grant with anticompetitive effect.").

⁴⁵⁸ See *Windsurfing Int'l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1001 (Fed.Cir.1986)); *Virginia Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 868-669 (Fed. Cir. 1997).

⁴⁵⁹ *C.R. Bard*, 157 F.3d at 1372; *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488, 492 (1942).

⁴⁶⁰ *C. R. Bard*, 157 F.3d at 1372.

economic policy is furthered by using the antitrust misuse doctrine to punish conduct when there is no violation of the antitrust laws.⁴⁶¹

XI. PATENT SETTLEMENTS

Settlements of patent infringement litigation often bring up difficult antitrust issues. Patent infringement settlements sometimes include terms involving cross-licensing, pooling arrangements, agreements not to infringe, agreements not to compete in some way, market divisions and other clauses that can be considered anticompetitive. Each of these terms must be analyzed under appropriate antitrust principles. The Patent Act⁴⁶² mandates that the Patent and Trademark Office be notified of all settlements of patent infringement suits, in order to assess whether the conflicting patent rights are being legitimately resolved.⁴⁶³

According to the Licensing Guidelines, "Settlements involving the cross-licensing of intellectual property rights can be an efficient means to avoid litigation and, in general, courts favor such settlements."⁴⁶⁴ However, the Guidelines advise that, "[w]hen such [settlement] involves horizontal competitors, however, the [government] will consider whether the effect of the settlement is to diminish competition among entities that would have been actual or likely potential competitors" in the absence of the settlement.⁴⁶⁵

Even setting aside the efficiency justification that settlements are vital to avoid costly and time-consuming litigation, most "patent settlements probably are procompetitive or competitively neutral."⁴⁶⁶ "Patent

⁴⁶¹ See Roger B. Andewelt, *Competition Policy and the Patent Misuse Doctrine*, 25 Pat. Trademark & Copy. J. 41, 42 (1982).

⁴⁶² 35 U.S.C. § 135(c).

⁴⁶³ See ABA, Antitrust Section, 2 *Antitrust Law Developments* vol. 2, 1085 (Debra J. Pearlstein 5th ed. ABA 2002). Former Assistant Attorney General Joel Klein has suggested a similar notification system for the antitrust agencies. Joel Klein, Speech, *Cross-Licensing and Antitrust Law* (Am. Intell. Prop. L. Assn., May 2, 1997) (available at <www.usdoj.gov/atr/public/speeches/1123.htm>) (accessed Mar. 7, 2003).

⁴⁶⁴ Licensing Guidelines, *supra* § 5.5.

⁴⁶⁵ *Id.*

⁴⁶⁶ See generally David A. Balto, *Pharmaceutical Patent Settlements: The Antitrust Risks*, 55 Food & Drug L.J. 321, 327-28 (2000). See Klein, *supra*, at 3, stating:

[B]y far most cross-licenses and [patent] pools are, on balance, procompetitive. That means that, at bottom, they help sellers provide consumers with better products and services at lower prices because of

settlements are procompetitive where firms combine their intellectual property to produce a product that otherwise would not exist, or where a patent holder and a new entrant compromise their dispute to allow the new entrant to come to market for compensation paid to the patent holder.”⁴⁶⁷ The latter type of settlement removes uncertainty for the parties surrounding the patent at issue, eliminates a barrier to one firm entering the market, and generally allows both parties to compete in the marketplace, *albeit* with one party typically paying royalties to the other.⁴⁶⁸ These arrangements are not free of competitive concerns, but offer the promise of some additional competition in the market.

The leading case finding an anticompetitive settlement of a patent dispute is the 1963 Supreme Court decision of *United States v. Singer Manufacturing Company*.⁴⁶⁹ In that case, the Court found that the salient purpose of cross-licensing agreements entered into by producers of sewing machines, in which they agreed not to sue each other for infringement, was not to settle disputes among the parties but rather to exclude competition from Japanese manufacturers in violation of the antitrust laws.⁴⁷⁰ As the Singer holding was characterized in the 1976 Fifth Circuit opinion, *Duplan Corporation v. Deering Milliken, Incorporated*⁴⁷¹, the crucial finding in settlement challenges is “not the mere act of settlement but the intent of the parties in entering into that settlement and their actions pursuant thereto.”⁴⁷²

There are a number of potential competitive concerns from these types of settlements. For one thing, as Justice White suggests, there is a public interest in the determination of whether the patent really is valid.⁴⁷³ As he noted in *United States v. Glaxo Group Limited*,⁴⁷⁴ “[i]t is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in

benefits ranging from cost savings--due to more efficient production technologies--to improved product quality--resulting from combining complementary inventions.

⁴⁶⁷ Licensing Guidelines, *supra*, § 5.5; Balto, 55 Food & Drug L.J. at 328.

⁴⁶⁸ *Id.*

⁴⁶⁹ 374 U.S. 174, 195-96 (1963).

⁴⁷⁰ *Id.* at 192-93.

⁴⁷¹ 540 F.2d 1215 (5th Cir. 1976).

⁴⁷² *Id.* at 1221.

⁴⁷³ *United States v. Glaxo Group Limited*, 410 U.S. 52 (1973).

⁴⁷⁴ *Id.*

his monopoly."⁴⁷⁵ Some patents may be invalid or procured improperly. For another, the terms of the settlement may actually delay or prevent the entry of a competing product, or divide a market between competitors.⁴⁷⁶ In addition, as in *Singer*, the settling challenger may have important evidence about the validity of the patent that may be lost in the settlement. So ultimately, a settlement may serve the interests of the parties at the expense of consumers and competitors. As Assistant Attorney General Joel Klein has observed:

[S]ettlements are often based on considerations that lead parties to give up rights that they might well vindicate if they went to the mat. And when intellectual property rights are at stake, the consequences of those compromises can align the settlers' interests against the interests of consumers.⁴⁷⁷

Some courts have asserted that patent litigation settlements are protected from antitrust scrutiny under the Noerr-Pennington doctrine.⁴⁷⁸ However, other cases have held that interim settlements between private parties may be subject to antitrust challenge.⁴⁷⁹

Recently, there has been considerable FTC interest in settlements that are alleged to involve a patent owner paying an alleged infringer in return for an agreement by the infringer not to compete in a particular market.⁴⁸⁰ Three actions have been brought in the pharmaceutical industry in relation to settlements between producers of generic and branded drugs.⁴⁸¹

⁴⁷⁵ *Id.* at 58 (quoting *Pope Mfg. Co. v. Gormully*, 144 U.S. 224, 234 (1892)).

⁴⁷⁶ *See Andrx Pharmaceuticals, Inc. v. Biovail Corp. Intl.*, 256 F.3d 799, 811 (D.C. Cir. 2001) (provisions in the settlement "were not necessarily ancillary restraints but rather could reasonably be viewed as an attempt to allocate market share and preserve monopolistic conditions.").

⁴⁷⁷ Klein, *supra*, at 4.

⁴⁷⁸ *See Columbia Pictures Indus., Inc. v. Prof. Real Est. Investors, Inc.*, 944 F.2d 1525, 1528 (9th Cir. 1991), *aff'd*, 508 U.S. 49 (1993) ("[a] decision to accept or reject an offer of settlement is conduct incidental to the prosecution of the suit" and therefore immunized from antitrust liability).

⁴⁷⁹ *See Andrx Pharmaceuticals*, 256 F.3d at 817-19; *In re Cardizem CD Antitrust Litig.*, 105 F. Supp. 2d 618, 633 (E.D. Mich. 2000) (holding that an interim settlement between private parties can be subject to antitrust challenge).

⁴⁸⁰ *See* Chairman Timothy J. Muris, Prepared Statement, *Prepared Statement of The Federal Trade Commission Before the Committee on Commerce, Science, and Transportation, United States Senate* (Washington, D.C., Apr. 23, 2002), (available at <<http://www.ftc.gov/os/2002/04/pharmtestimony.htm>>) (accessed Mar. 7, 2003).

⁴⁸¹ *See In re Abbott Laboratories.*, 2000 FTC LEXIS 65 (F.T.C. Dkt. Nos., C-3945, C-3946) (complaint) (May 22, 2000); *In re Hoechst Marion Roussel, Inc.*, 2000 FTC Lexis 16 (F.T.C.

These settlements are covered by the regulatory structure of the Hatch-Waxman Act.⁴⁸² There is currently disagreement regarding the issue of whether possibly offensive terms in these settlements should be considered *per se* illegal or should be analyzed under the rule of reason.⁴⁸³ Ultimately, these issues involve difficult choices and the balancing of conflicting interests. According to FTC Commissioner Leary:

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 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 invalid patent.⁴⁸⁴

XII. PROCEDURAL ISSUES

A. Federal Circuit Jurisdiction

The Federal Circuit Court of Appeals was created by Congress in 1982 to centralize patent appeals.⁴⁸⁵ The Federal Circuit's jurisdictional statutes, 28 U.S.C. §§ 1295(a) and 1338(a), give it exclusive appellate jurisdiction in appeals from the PTO with respect to patent applications, and in civil action appeals where district court jurisdiction originally arose under the patent laws, either "in whole or in part."⁴⁸⁶ Federal Circuit jurisdiction is also available where "the plaintiff's right to relief necessarily depends on resolution of a substantial question of federal patent law."⁴⁸⁷ It is

Dkt. No. C-9293) (complaint) (Mar. 16, 2000); *In re Schering-Plough Corp.*, 2001 FTC Lexis 39 (F.T.C. Dkt. No. C-9297) (complaint) (Mar. 30, 2001).

⁴⁸² 21 U.S.C. § 335 (1999).

⁴⁸³ See ABA, Antitrust Section, 2 *Antitrust Law Developments* vol. 2 1087 (Debra J. Pearlstein 5th ed. ABA 2002); compare *Cardizem*, 105 F. Supp. 2d at 676-79 (finding that certain aspects of a settlement between branded and generic drug manufacturers constituted *per se* illegal horizontal market allocation) with *Zeneca Ltd. v. Pharmachemie B.V.*, 37 F. Supp. 2d 85, 93 (D. Mass. 1999) (settlement during pendency of appeal did not extend the physical or temporal scope of patent and was not patent misuse).

⁴⁸⁴ Commissioner Thomas Leary, Prepared Remarks, *Antitrust Issues in Settlement of Pharmaceutical Patent Disputes* (Chicago, Ill., Nov. 3, 2000) (available at <<http://www.ftc.gov/speeches/leary/learypharma.htm>>) (accessed Mar. 7, 2003).

⁴⁸⁵ See generally Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. Rev. 1 (1989).

⁴⁸⁶ 28 U.S.C. § 1295(a)(1).

⁴⁸⁷ *Christianson v. Colt Indus. Operating Corp.*, 486 U.S. 800, 809 (1988).

important to emphasize that the Federal Circuit's jurisdiction does not encompass claims arising under the trademark, copyright, or trade secret laws.

This jurisdictional requirement had until recently been given a fairly broad interpretation by the courts. For example, both the First Circuit and the Federal Circuit have held that the presence of a non-frivolous compulsory counterclaim for patent infringement will give the Federal Circuit exclusive jurisdiction.⁴⁸⁸ The Federal Circuit later expanded this holding to include permissive counterclaims.⁴⁸⁹ However, in the recent Supreme Court case of *Holmes Group, Incorporated v. Vornado Air Circulation Systems, Incorporated*,⁴⁹⁰ the Court held that the Federal Circuit cannot assert jurisdiction over a case in which the complaint does not allege a patent-law claim, but the answer contains a patent-law counterclaim.⁴⁹¹ There, the Court interpreted 28 U.S.C. § 1338(a) as providing Federal Circuit jurisdiction only where the jurisdictional requirements (that the case either arise under the patent laws or depend on the resolution of a substantial question of patent law) appear on the plaintiff's "well pleaded complaint."⁴⁹² The Court did not address the issue of whether actual or constructive amendments to an already filed complaint can create Federal Circuit jurisdiction.⁴⁹³

The Federal Circuit's jurisdiction has been found to encompass state law actions containing a falsity element where the plaintiff is required to prove patent infringement, invalidity, or unenforceability as part of the claim.⁴⁹⁴

Even when the antitrust and patent claims have been severed in the district court proceedings according to Rule 42 of the Federal Rules of Civil Procedure, the antitrust claims will generally go to the Federal

⁴⁸⁸ *Aerojet-General Corp. v. Machine Tool Works*, 895 F.2d 736, 739-45 (Fed. Cir. 1990) (*en banc*); *Xeta, Inc. v. Atex, Inc.*, 825 F.2d 604, 607-08 (1st Cir. 1987).

⁴⁸⁹ *DSC Communs. Corp. v. Pulse Communs., Inc.*, 170 F.3d 1354, 1359 (Fed. Cir. 1999).

⁴⁹⁰ 122 S. Ct. 1889 (2002).

⁴⁹¹ *Id.* at 1894.

⁴⁹² *Id.* at 1893.

⁴⁹³ *Id.* at 1893 n. 1.

⁴⁹⁴ See *Hunter Douglas, Inc. v. Harmonic Design, Inc.*, 153 F.3d 1318, 1331-36 (Fed. Cir. 1998), *rev'd in part on other grounds*, *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1360-61 (Fed. Cir. 1999); *U.S. Valves, Inc. v. Dray*, 190 F.3d 811, 815 (7th Cir. 1999).

Circuit on appeal.⁴⁹⁵ However, when all the patent claims in the proceedings have been voluntarily dismissed without prejudice at the district court level, the Federal Circuit will not have jurisdiction over an appeal of the remaining issues.⁴⁹⁶

Some commentators have concluded that the Federal Circuit has been overly protective of intellectual property at the expense of competition concerns.⁴⁹⁷ However, others view it as a success because it has diminished the uncertainty that used to govern patent law.⁴⁹⁸

B. Choice of Law

In the years since its inception, the Federal Circuit has developed its own case law with respect to the interpretation of patent law. However, before 1998, it applied the law of the originating jurisdiction with respect to non-patent law questions, including antitrust issues. This distinction has been significantly eroded in the last few years, starting with the Federal Circuit's decision in *Pro-Mold & Tool Company v. Great Lakes Plastics, Incorporated*,⁴⁹⁹ which held that Federal Circuit law determined that inequitable conduct in the prosecution of a patent application did not constitute a claim under the Lanham Act.⁵⁰⁰

⁴⁹⁵ ABA, Antitrust Section, 2 *Antitrust Law Developments*, vol. 2, 1109 (Debra J. Pearlstein 5th ed. ABA 2002); see *Korody-Colyer Corp. v. General Motors Corp.*, 828 F.2d 1572, 1574 (Fed. Cir. 1987).

⁴⁹⁶ ABA, Antitrust Section, 2 *Antitrust Law Developments*, vol. 2, 1109 (Debra J. Pearlstein 5th ed. ABA 2002); see *Gronholz v. Sears, Roebuck & Co.*, 836 F.2d 515, 518 (Fed. Cir. 1987); *Nilssen v. Motorola, Inc.*, 203 F.3d 782, 785 (Fed. Cir. 2000).

⁴⁹⁷ See Richard J. Gray & David Banie, *Case Note: Intergraph Corporation v. Intel Corporation*, 16 Computer & High Tech. L.J. 437, 447 (2000) (suggesting that the Federal Circuit's decision in *Intergraph* shows its support for the proposition that the exercise of intellectual property rights will rarely lead to antitrust liability).

⁴⁹⁸ See Gerald J. Mossinghoff, Statement at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy (FTC/DOJ, Feb. 6, 2002) (calling the Federal Circuit an "unqualified success") (available at <<http://www.ftc.gov/opp/intellect>>) (accessed Mar. 7, 2003); James E. Rogan, Prepared Remarks at FTC/DOJ Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy (FTC/DOJ, Feb. 6, 2002) ("The existence of a court of national jurisdiction for cases involving patents has been an invaluable tool. By reducing the jurisdictional conflicts that had preceded the court's formation, the Federal Circuit has made for a more stable patent system.") (available at <<http://www.ftc.gov/opp/intellect/>>) (accessed Mar. 7, 2003).

⁴⁹⁹ 75 F.3d. 1568 (Fed. Cir. 1996).

⁵⁰⁰ *Id.* at 1574-75.

The current law with respect to antitrust appears to be that “whether conduct in procuring or enforcing a patent is sufficient to strip a patentee of its immunity from the antitrust laws is to be decided as a question of Federal Circuit law,”⁵⁰¹ but regional circuit law applies to other aspects of Federal Circuit antitrust claims, such as market definition or proof of market power. It remains for future cases to flesh out the exact boundaries of the area where the Federal Circuit should apply its own law.

C. Remedies

In Department of Justice actions alleging unlawful provisions in copyright and patent licenses, courts have commonly enjoined the defendant from enforcing particular provisions of their licensing agreement, or from entering into similar agreements in the future.⁵⁰²

Compulsory licensing has also been used as a remedy in the past. According to the Supreme Court in *Glaxo*, “[m]andatory selling on specified terms and compulsory patent licensing at reasonable charges are recognized antitrust remedies.”⁵⁰³ Compulsory licensing has been used in particular as a remedy for successful essential facilities claims.⁵⁰⁴ However, in recent years both essential facilities claims and compulsory licensing have fallen out of favor.⁵⁰⁵ According to William Kovacic, economists have generally found compulsory licensing remedies to be ineffective in deconcentrating markets.⁵⁰⁶ Compulsory licensing remedies

⁵⁰¹ *Nobelpharma*, 141 F.3d at 1068.

⁵⁰² See ABA, Antitrust Section, 2 *Antitrust Law Developments* vol. 2, 1112 (Debra J. Pearlstein 5th ed. ABA 2002).

⁵⁰³ 410 U.S. at 64.

⁵⁰⁴ See *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 761 F. Supp. 185, 194 (D. Mass. 1991), *aff’d*, 36 F.3d 1147 (1st Cir. 1994).

⁵⁰⁵ See generally *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d 1322 (Fed. Cir. 2000), *cert. denied*, *CSU, L.L.C. v. Xerox Corp.*, 121 S.Ct. 1077 (2001).

⁵⁰⁶ See William E. Kovacic, *Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration*, 74 Iowa L. Rev. 1105, 1106-07 n. 9 (1989) (“Most commentators have concluded that compulsory licensing decrees generally have contributed little to the accomplishment of deconcentration objectives.”) (quoting F.M. Scherer, *Innovation and Growth: Schumpeterian Perspectives* 207, 220 (MIT Press 1984)).

have also been criticized for involving courts in the difficult determination of what rate should be charged for the relevant license.⁵⁰⁷

XIII. HEARINGS ON INTELLECTUAL PROPERTY

In the spring of 2002, the DOJ and FTC held joint hearings on “Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy.”⁵⁰⁸ The hearings covered a wide range of topics including standard setting, patent pools, specific intellectual property licensing practices such as grant backs and methods of extending the life of intellectual property rights, patent settlements, the relationship between competition and intellectual property in other jurisdictions, and business experience with patents.

In announcing the hearings, FTC Chairman Timothy Muris identified a number of important trends that the agencies felt merited discussion.⁵⁰⁹ Any future policy making in this area is likely to focus, at a minimum, on these important areas.

First, the number of patents has increased substantially in recent years.⁵¹⁰ In 1980, the Patent and Trademark Office issued roughly 66,000 patents, whereas, in 2000, over 175,000 patents were issued.⁵¹¹ It has been observed that in some industries, the proliferation of patents has lead to the creation of a “patent thicket” through which would-be competitors must “hack” in order to commercialize a new product.⁵¹² This new reality raises important questions about how the patent thicket affects barriers to entry, and how standard-setting organizations may stifle entry.⁵¹³ Additionally, if patent pools and cross-licensing are a way around the

⁵⁰⁷ See Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. Chi. L. Rev. 1, 56 n. 226 (2001).

⁵⁰⁸ Transcripts of the DOJ/FTC hearings, along with outlines of the presentations, press releases, and public comments, are available online at <<http://www.ftc.gov/opp/intellect/>>.

⁵⁰⁹ Chairman Timothy Muris, Prepared Remarks Before American Bar Association Antitrust Section Fall Forum, *Competition and Intellectual Property Policy: The Way Ahead* (Washington, D.C., Nov. 15, 2001) (available at <<http://www.ftc.gov/speeches/muris/intellectual.htm>>) (last accessed Mar. 7, 2003).

⁵¹⁰ *Id.*

⁵¹¹ *Id.* (citing U.S. Patent and Trademark Office statistics).

⁵¹² *Id.* (quoting Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in *Innovation Policy and the Economy, Volume 1* (Adam B. Jaffe et al. eds. 2001)).

⁵¹³ Muris, *supra*.

patent thicket, then the agencies' analysis of these mechanisms ought to be rethought.⁵¹⁴

Second, according to Chairman Muris, the length of the patent grant is another issue worthy of reflection.⁵¹⁵ Given that utility patents have a term of 20 years from the date of the filing of the patent application, one can ask whether a patent's economic life diverges from its legal life.⁵¹⁶ Does it matter if a patent's legal life is longer than its economic life in any event?⁵¹⁷ A related issue is whether companies can extend the economic significance of a patent beyond its legal life, for example, through settlements between manufacturers of patented drugs and competing generics.⁵¹⁸

The apparent increase in the scope of patents is another development Chairman Muris considers noteworthy.⁵¹⁹ For example, the increase in the number of business method patents, as well as the expansion of patent rights through judicial and legislative interpretation has been a contentious development. One must ask whether this increase in the scope of patents has led to increased innovation, or whether it has had the opposite effect.⁵²⁰

In Chairman Muris' view, a fourth development that merits reflection is the role of the Federal Circuit in developing intellectual property jurisprudence.⁵²¹ The Federal Circuit has exclusive appellate jurisdiction in matters based "in whole or in part" on patents.⁵²² Where the jurisdictional line is drawn can have important implications for forum shopping with regards to non-patent issues such as antitrust.⁵²³ The divergence of the Federal Circuit in areas such as refusals to deal underscores the significance of this adjudicative body and its influence on antitrust law.

⁵¹⁴ *Id.*

⁵¹⁵ *Id.*

⁵¹⁶ *Id.*

⁵¹⁷ *Id.*

⁵¹⁸ *Id.* See *Abbott Laboratories*, F.T.C. Docket No. C-3945, (final consent order, May 26, 2000) (patent holder attempted to extend life of patent by requiring the generic manufacturer to not waive its statutory exclusivity period in exchange for substantial payments, thereby stifling competition).

⁵¹⁹ Muris, *supra*.

⁵²⁰ *Id.*

⁵²¹ *Id.*

⁵²² *Id.*

⁵²³ *Id.*

This takes us to the final issue that Chairman Muris has identified as of particular interest—the recent jurisprudence on refusals to deal.⁵²⁴ As we have seen, the Federal Circuit has adopted a position that is much more generous to patent holders than the Ninth Circuit. These decisions raise important questions about the intersection of intellectual property and antitrust—whether patent holders’ rights should be absolute, or whether they should be reinterpreted to reflect competition considerations.

⁵²⁴ *Id.*