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***381** THE NEW ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY: A WORKABLE BALANCE OR A PRACTITIONER'S NIGHTMARE?

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***387 Department of Justice**

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**JUSTICE DEPARTMENT RELEASES DRAFT INTELLECTUAL PROPERTY GUIDELINES FOR PUBLIC COMMENT**

WASHINGTON, D.C. -- The Department of Justice proposed new antitrust guidelines for the licensing and acquisition of intellectual property today, recommending for the first time the creation of a "safety zone" to encourage licensing arrangements that do not unfairly inhibit competition.

The draft guidelines, which will be adopted in final form after a 60-day public comment period, cover the licensing and acquisition of intellectual property protected by patent, copyright and trade secret law. They would replace the intellectual property portions of the 1988 Antitrust Enforcement Guidelines for International Operations.

An Antitrust Division task force chaired by Deputy Assistant Attorney General Richard Gilbert wrote the draft guidelines.

Anne K. Bingaman, Assistant Attorney General in charge of the Antitrust Division, said, "The antitrust laws and the intellectual property laws share the common purpose of promoting innovation and enhancing consumer welfare. Our intellectual ***388** property enforcement policy is about keeping American companies strong and innovative.

"The draft guidelines will ensure that sound antitrust enforcement will continue to serve as a catalyst to technological innovation and promote U.S. competition here and abroad by preventing arrangements that inhibit innovation or restrain competition without promoting the development of intellectual property," Bingaman added.

The guidelines include:

. An antitrust "safety zone" in which the Department will not challenge most restraints in licensing arrangements where the licensor and its licensees account for no more than 20 percent of each relevant market affected by the restraints. "This proposal seeks to address widespread concern that small businesses and innovators are hampered by antitrust uncertainty," Gilbert said.

. Methods by which the Department, under certain circumstances, will evaluate the impact of a licensing arrangement or acquisition on research and development.

Several basic principles of antitrust enforcement for intellectual property are unchanged. They include:

. The antitrust laws apply to intellectual property as they apply to other forms of property, with appropriate recognition of the distinguishing characteristics of intellectual property.

. Antitrust enforcement should not unnecessarily interfere with the licensing and transfer of intellectual property rights.

***389** . The existence of an intellectual property right does not,. by itself, give rise to a presumption of market power.

The Department will publish the draft guidelines in the Federal Register for public comment.

"We welcome the views of the business and legal communities and of the general public and, where appropriate, we will modify the draft guidelines in response to comments," Gilbert said.

Comments should be submitted in writing within 60 days of publication of the draft guidelines in the

Federal Register to Richard Gilbert, Deputy Assistant Attorney General, Antitrust Division, Department of Justice, 10th Street and Pennsylvania Avenue, N.W., Washington, D.C. 20530.

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94-451

***391 DRAFT**

**U.S. Department of Justice Antitrust Guidelines for the Licensing and Acquisition of Intellectual Property [FN1]**

**1. Intellectual property protection and the antitrust laws**

These Guidelines state the antitrust enforcement policy of the U.S. Department of Justice with respect to the licensing and acquisition of intellectual property protected by patent, copyright, and trade secret law. [FN2] By stating its general policy, the Department hopes to assist those who need to predict whether the Department will challenge a practice as anticompetitive. However, these Guidelines cannot remove judgment and discretion in antitrust law enforcement. Moreover, the standards set forth in these Guidelines must be applied in unforeseeable circumstances. Each case will be evaluated in light of its own facts, and these Guidelines will be applied reasonably and flexibly.

In the United States, patents confer rights to exclude others from making, using, or selling in the United States the invention claimed by the patent for a period of seventeen years from the date of issue. [FN3] To gain patent protection, an invention (which may be a product, process, machine, or composition of matter) must be novel, nonobvious, and useful. Copyright protection applies to original works of authorship embodied in a tangible medium of expression. [FN4] A copyright protects only the expression, not the underlying ideas. Unlike a patent, which protects an invention not only from copying but also from independent creation, a copyright does not preclude others from independently creating similar expression. Trade secret protection applies to information whose economic value depends on its not being generally known. Trade secret protection is conditioned upon efforts to maintain secrecy and ***392** has no fixed term. As with copyright protection, trade secret protection does not preclude independent creation by others. [FN5]

Although there are clear and important differences in the purpose, extent, and duration of protection provided under the intellectual property regimes of patent, copyright, and trade secret, the governing antitrust principles are the same. Antitrust analysis takes differences among these forms of intellectual property into account in evaluating the specific market circumstances in which transactions occur, just as it does with other particular market circumstances.

The intellectual property laws and the antitrust laws share the common purpose of promoting innovation and enhancing consumer welfare. [FN6] The intellectual property laws provide incentives for innovation and its dissemination and commercialization by establishing enforceable property rights for the creators of new and useful products, more efficient processes, and original works of expression. In the absence of intellectual property rights, imitators could more rapidly exploit the efforts of innovators and investors without compensation, thereby reducing the commercial value of innovation and eroding the incentives to invest. The antitrust laws promote innovation and consumer welfare by prohibiting certain actions by firms that deter those firms and others from competing with respect to either existing or new ways of serving consumers.

**2. General principles**

**2.0** These Guidelines embody three general principles: (a) for the purpose of antitrust analysis, the

Department regards intellectual property as being essentially comparable to any other form of property; (b) the Department does not presume that intellectual property creates market power in the antitrust context; and (c) the Department recognizes that intellectual property licensing allows firms to combine complementary factors of production and is generally procompetitive.

***393 2.1 Standard antitrust analysis applies to intellectual property**

The Department applies the same general antitrust principles to conduct involving intellectual property that it applies to conduct involving any other form of tangible or intangible property. That is not to say that intellectual property is in all respects the same as any other form of property. Intellectual property has important characteristics that distinguish it from many other forms of property. These characteristics can be taken into account by standard antitrust analysis, however, and do not require the application of fundamentally different principles.

Intellectual property law bestows on the owners of intellectual property certain rights to exclude others. These rights help the owners to profit from the use of their property. An intellectual property owner's rights to exclude are similar to the rights enjoyed by owners of other forms of private property. As with other forms of private property, certain acquisitions of intellectual property, and certain types of agreements with respect to such property, may have anticompetitive effects against which the antitrust laws can and do protect. Intellectual property is thus neither particularly free from scrutiny under the antitrust laws, nor particularly suspect under them.

**2.2 Intellectual property and market power**

Market power is the ability profitably to maintain prices above, or output below, competitive levels for a significant period of time. [FN7] The Department will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner. Although the intellectual property right confers the power to exclude with respect to the specific product, process, or work in question, there will often be sufficient actual or potential close substitutes for such product, process, or work to prevent the exercise of market power. [FN8] If a patent or other form of intellectual property does confer market power, that market power does not by itself offend the antitrust laws. As with any other tangible or intangible asset that enables its ***394** owner to obtain significant supracompetitive profits, market power (or even a monopoly) that is solely "a consequence of a superior product, business acumen, or historical accident" does not violate the antitrust laws. [FN9] Nor does such market power impose on the intellectual property owner an obligation to license that technology to others. See, e.g., SCM Corp. v. Xerox Corp., 645 F.2d 1195 (2d Cir. 1981), cert. denied, 455 U.S. 1016 (1982). As in other antitrust contexts, however, market power could be illegally acquired or maintained, or, even if lawfully acquired and maintained, would be relevant to the ability of an intellectual property owner to harm competition through unreasonable conduct in connection with such property.

**2.3 Procompetitive benefits of licensing**

Intellectual property typically is one component among many in a production process and derives value from its combination with complementary factors. Complementary components of production include manufacturing and distribution facilities, workforces, and other items of intellectual property. The owner of intellectual property has to arrange for its combination with other necessary inputs to realize its commercial value. Often, the owner finds it most efficient to contract with others for these inputs, to sell rights to the intellectual property, or to enter into a joint venture arrangement for its development, rather than supplying these complementary inputs itself.

Licensing, cross-licensing, or otherwise transferring intellectual property (hereinafter "licensing") can facilitate its integration with complementary factors of production. This integration can lead to more efficient exploitation of the intellectual property, benefiting consumers through the reduction of costs and the introduction of new products. Such arrangements increase the value of intellectual property to consumers and to the developers of the technology. By potentially increasing the expected returns from intellectual property, licensing also can increase the incentive for its creation and thus promote greater investment in research and development.

Sometimes the use of one item of intellectual property requires access to another. An item of intellectual property "blocks" another when the second cannot be practiced without using the first. For example, an improvement on a patented machine can be blocked by the patent on the machine. Licensing promotes the coordinated development of technologies that are in a blocking relationship.

> Field-of-use, territorial, and other limitations on intellectual property licenses may serve procompetitive ends by allowing the licensor to exploit its property as efficiently and effectively as possible. These various forms of exclusivity can be used to give a licensee an incentive to invest in the commercialization and distribution of products embodying the licensed intellectual property and to develop additional applications for the licensed property. ***395** The restrictions may do so, for example, by protecting the licensee against free-riding on the licensee's investments by other licensees or by the licensor. They may also promote the licensor's incentive to license, by protecting the licensor from competition in the licensor's own technology in a market niche that it prefers to keep to itself. These benefits of licensing restrictions apply to patent, copyright, and trade secret licenses. **Example 1** [FN10]
>
> Situation: Delta, Inc. develops a new software program for inventory management. The program has wide application in the health field. Delta licenses the program in an arrangement that imposes both field of use and territorial limitations. Some of Delta's licenses permit use only in hospitals; others permit use only in group medical practices. Delta charges different royalties for the different uses. All of Delta's licenses permit use only in specified geographic areas. The license contains no provisions that would prevent or discourage licensees from developing, using, or selling any other program. None of the licensees are actual competitors of Delta in the sale of inventory management programs.
>
> Discussion: The key competitive issue raised by the licensing arrangement is whether it harms competition that would likely have taken place in its absence. (See section 3.) Such harm could occur if the licenses foreclose access to competing technologies (in this case, most likely competing computer programs), prevent licensees from developing their own competing technologies (again, in this case most likely computer programs), structure royalties to impose an effective requirements contract upon licensees, or facilitate market allocation or price-fixing for any product or service supplied by the licensees. If the license agreements contained such provisions, the Department would analyze their competitive effects as described in sections 3-5 of these Guidelines. In this hypothetical, there are no such provisions, and there is no apparent harm to competition. The arrangement appears to do no more than increase the value of the licensed technology by subdividing it among different fields of use and territories and charging royalties that differ among licensees. The Department therefore would be unlikely to object to this arrangement. The result would be the same whether the technology was protected by copyright, patent, or trade secret. The Department's conclusion as to competitive effects could differ if, for example, the license barred licensees from using any other inventory management program.

## 3. Antitrust concerns and modes of analysis

### 3.1 Nature of the concerns

While intellectual property licensing arrangements are typically welfare-enhancing and procompetitive, antitrust concerns may arise when licensing arrangements impede competition that likely would have taken place in the absence of the license. Licensing arrangements that may raise antitrust concerns include restrictions on goods or technologies other than the ***396** licensed technology, contractual provisions that penalize licensees for dealing with suppliers of substitute technologies, and acquisitions of intellectual property that lessen competition in a relevant antitrust market.

For example, a licensing agreement that transfers little or no useful intellectual property, but imposes restraints upon entities that otherwise would compete using alternative technologies, might have significant adverse effects in downstream goods markets or in other markets. (See, e.g., Example 5.) An arrangement that effectively merges the research and development activities of two of only a few entities that could plausibly engage in research and development in the relevant field might harm competition for development of new intellectual property. (See section 3.2.3, "Innovation Markets.")

Intellectual property licensing between actual or likely potential competitors [FN11] may raise antitrust concerns by reducing or eliminating competition in the market(s) in which they compete or are likely to compete. In addition, license restrictions with respect to one market may reduce competition in another market by, for example, foreclosing access to or raising the price of an important input (other than as a natural consequence of the licensee acquiring a licensed technology for its own use).

**3.2 Markets affected by licensing arrangements**

A licensing arrangement may affect competition in a variety of markets. In general, for goods markets and technology markets affected by a licensing arrangement, the Department will approach the delineation of relevant market and the measurement of market share in the intellectual property area in the same way that it treats such questions under section 1 of the 1992 Horizontal Merger Guidelines. In addition, the Department may define an innovation market to aid in assessing whether a licensing arrangement would be likely substantially to reduce investment in research and development.

**3.2.1 Technology markets**

Technology markets consist of the intellectual property that is licensed, transferred, or acquired and the technologies that are close substitutes for it. The owner of a process for producing a particular good may be constrained in its conduct with respect to that process not only by other processes for making that good, but also by other goods that compete with the downstream good and by the processes used to produce those other goods.

In many cases, particularly in the case of a product patent, there may be little to be gained by analyzing competitive effects in a separate technology market in addition to analyzing effects in the associated goods market. Moreover, there may be practical problems ***397** in gathering appropriate data to determine "prices" for the technology and its substitute processes. For example, the technology may be licensed royalty-free in exchange for the right to use other technology, or it may be licensed as part of a package license. When complicating factors preclude delineating a relevant market in which the licensed technology competes, the Department may focus its attention on effects in the associated goods markets.

To estimate the market share of a participant using new technology, the Department generally will forecast market acceptance over a two-year period using the best available information. For technologies not yet commercialized, the two-year period will begin with commercial introduction. When market shares or other indicia of market power are not readily available, and it appears that competing technologies are all equally efficient, [FN12] the Department's analysis will treat each participant in the technology market as having an equal market share.

**3.2.2 Goods markets**

A number of different goods markets may be relevant to evaluating the effects of a licensing arrangement. A restraint in a licensing arrangement may have competitive effects in markets for final or intermediate goods made using the intellectual property, or it may have effects upstream, in markets for goods that are used as inputs, along with the intellectual property, to the production of other goods.

**3.2.3 Innovation markets**

Firms compete in research and development that may result in new or improved products or processes. If the capacity for research and development activity that likely will produce innovation in technology is scarce and can be associated with identifiable specialized assets or characteristics of specific firms (which may or may not currently participate in the relevant technology or goods markets), it may be appropriate to consider separately the impact of the conduct in question on competition in research and development among those firms. The firms identified as possessing these specialized assets or characteristics can be thought of as competing in a separate innovation market. See Complaint, United States v. General Motors Corp., Civ. No. 93-530 (D. Del., filed Nov. 16, 1993). Alternatively, innovation markets may be used to assist with the identification of competitive effects in relevant goods and technology markets. See, e.g., Complaint, United States v. Flow International Corp., Civ. No. 94-71320 (E.D. Mich., filed Apr. 4, 1994).

***398 Example 2**

Situation: Two companies agree to cross-license future patents relating to the development of a new component for aircraft jet turbines. Innovation in the development of the component requires the capability to work with very high tensile strength materials. Aspects of the licensing arrangement raise the possibility that competition in research and development of this and related components will be lessened. The Department is considering whether to define an innovation market in which to evaluate the competitive effects of the arrangement.

Discussion: If the firms that have the capability to work with very high tensile strength materials can be reasonably identified, the Department will consider defining a relevant innovation market for development of the new component. If the number of firms with the required capability is small, the Department may employ the concept of an innovation market to analyze the competitive effects of the arrangement in that market, or as an aid in analyzing competitive effects in technology or goods markets. In this analysis, the Department would take into account the specific nature of the restraint, the likelihood that other firms may in the future acquire the requisite capability, other competitive factors, and any efficiency justifications for the licensing arrangement.

If the number of firms with the required capability is very large (either because there are a large number of such firms in the jet turbine industry, or because there are many firms in other industries with the required capability), then the Department will conclude that the innovation market is competitive. Under these circumstances, it is unlikely that any single firm or plausible aggregation of firms could acquire a large enough share of the assets necessary for innovation to have an adverse impact on competition.

If the Department cannot reasonably identify the firms with the required capability, it will not attempt to define an innovation market.

Just as goods markets are improperly defined if the firms in the market, were they to coordinate their decisions, would not profitably increase price above competitive levels, so too innovation markets are improperly defined if hypothetical coordination among the firms in the candidate market would not profitably retard or restrict innovation in the technology.

When a relevant innovation market has been defined, the Department may assess the competitive significance of each participant based on shares of those identifiable assets or characteristics upon which innovation depends, on shares of research and development expenditures, on shares of the related product, or on equal shares assigned to reflect the equal likelihood of innovating, depending on the facts of each case. Cf. 1992 Horizontal Merger Guidelines § 1.41 & n.15. In evaluating competitive effects, the Department would also take into account other factors such as competitive harms from the elimination of alternative research paths and efficiency benefits from the integration of complementary research and development programs.

***399 3.3 Horizontal and vertical relationships**

As with other property transfers, antitrust analysis of intellectual property licensing arrangements examines whether the relationship of the parties to the arrangement is primarily horizontal or vertical in nature, or whether it has substantial aspects of both.

A licensing arrangement has a horizontal component with respect to a technology market if it involves the acquisition of rights to technologies that are economic substitutes for technologies that the licensee owns or controls. For analytical purposes, the Department ordinarily will treat a relationship between a licensor and its licensees as horizontal with respect to a particular goods market when the licensor and its licensees would be actual or likely potential competitors in that market absent the license.

An arrangement has a vertical component when it affects activities that are in a complementary relationship, as is typically the case in a licensing arrangement. Such a relationship exists when the licensor and its licensees stand in a seller-buyer relationship, or operate at different levels of the chain of production and distribution. For example, the licensor's primary line of business may be in research and development, and the licensees, as manufacturers, may be buying the rights to use technology developed by the licensor. Alternatively, the licensor may be a component manufacturer owning intellectual property rights in a product that the licensee manufactures by combining the component with other inputs, or the licensor may manufacture the product, and the licensees may operate primarily in distribution and marketing. Although licensing arrangements typically have a vertical component, the licensor and its licensees may also have a horizontal relationship in the market containing the technology being licensed or in other markets in which they are actual or likely potential competitors.

The existence of a horizontal relationship between a licensor and its licensees is not inherently suspect. Identification of such relationships is merely an aid in determining whether there may be anticompetitive effects arising from a licensing arrangement. Such a relationship need not give rise to an anticompetitive effect, nor does a purely vertical relationship assure that there are no anticompetitive effects.

The following examples illustrate different competitive relationships among a licensor and its licensees.

***400 Example 3**

Situation: Alpha, a manufacturer of farm equipment, develops a new emission control technology for its tractor engines and licenses it to Beta, another farm equipment manufacturer. Alpha's emission control technology is far superior to the technology currently owned and used by Beta, so much so that Beta's technology does not discipline the prices that Alpha could charge for its technology. Beta has no likelihood of developing an improved emissions control technology on its own.

Discussion: Alpha's and Beta's emission control technologies are not economic substitutes for each other. Beta is a consumer of Alpha's technology and is not an actual or likely potential competitor of Alpha in the relevant market for technologically superior emission control devices of the kind licensed by Alpha. This means that the relationship between Alpha and Beta with regard to the supply and use of emissions control technology is vertical. Assuming that Alpha and Beta sell farm equipment products that are economic substitutes for each other, their relationship is horizontal in the relevant markets for farm equipment.

**Example 4**

Situation: Beta develops a new valve technology for its engines and enters into a cross-licensing arrangement with Alpha, whereby Alpha licenses its emission control technology to Beta and Beta licenses its valve technology to Alpha. Alpha already owns an alternative valve technology that is an economic substitute for Beta's valve technology. Before adopting Beta's technology, Alpha was using its own valve technology in its production of engines and was licensing (and continues to license) that technology for use by others. As in Example 3, Beta does not own or control an emission control technology that is an economic substitute for the technology licensed from Alpha.

Discussion: Beta is a consumer and not a competitor of Alpha's emission control technology. As in Example 3, their relationship is vertical with regard to this technology. The relationship between Alpha and Beta in the relevant market that includes engine valve technology is vertical in part and horizontal in part. It is vertical in part because Alpha and Beta stand in a complementary relationship, in which Alpha is a consumer of a technology supplied by Beta. However, the relationship between Alpha and Beta in the relevant market that includes engine valve technology is also horizontal in part, because both firms own valve technologies that are economic substitutes for each other. Whether the firms license their valve technologies to others is not important for the conclusion that the firms have a horizontal relationship in this relevant market. Even if Alpha's use of its valve technology were solely captive to its own production, the fact that the two valve technologies are economic substitutes means that the two firms have a horizontal relationship. For the firms to be in a horizontal relationship, it is also not necessary that Alpha actually uses its valve technology prior to licensing technology from Beta, provided that Alpha's technology is an economic alternative to Beta's.

As in Example 3, the relationship between Alpha and Beta is horizontal in the relevant markets for farm equipment.

***401 3.4 The rule of reason and per se rules**

In the vast majority of cases, restraints in intellectual property licensing arrangements are evaluated under the rule of reason (see section 4). In some cases, however, the courts conclude that 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 purpose and effect. National Society of Professional Engineers v. United States, 435 U.S. 679, 692 (1978). Among the restraints that have been held per se unlawful are naked price-fixing, output restraints, and market division among horizontal competitors, as well as certain group boycotts and resale price maintenance.

To determine whether a particular restraint in a licensing arrangement is given per se or rule of reason treatment, the Department will first determine whether the restraint in question can be expected to contribute to an efficiency-producing integration of economic activity. In general, licensing arrangements promote such integration because they facilitate the combination of the licensor's intellectual property with complementary factors of production owned by the licensee. A restraint in a licensing arrangement may further such integration by, for example, aligning the incentives of the licensor and the licensees to promote the development and marketing of the licensed technology, or by substantially reducing transactions costs.

In assessing whether a particular restraint contributes to an efficiency-producing integration, the

Department briefly will review, inter alia, the business of the parties to the license, the markets in question, and the purpose and effect of the particular restraint. If there is no efficiency-producing integration of economic activity and if the type of restraint is one that otherwise is appropriately accorded per se treatment, the Department will challenge the restraint under the per se rule. Otherwise, the Department will apply a rule of reason analysis.

Because licensing arrangements typically involve vertical relationships that create significant integrative efficiencies, restraints associated with those arrangements usually will have sufficient relationship to an efficiency-producing integration to merit analysis under the rule of reason. An ordinarily suspect restraint incorporated in a licensing agreement will not escape per se treatment, however, if the putative integration itself is a sham or if there is an insufficient relationship between the restraint and an efficiency-producing integration.

***402 Example 5**

Situation: Gamma, which manufactures Product X using its patented process, offers a license for its process technology to every other manufacturer of Product X. The process technology does not represent an economic improvement over the available existing technologies. Indeed, although several manufacturers accept licenses from Gamma, none of the licensees actually uses the licensed technology. The licenses provide that each manufacturer has an exclusive right to sell Product X manufactured using the licensed technology in a designated geographic area and that no manufacturer may sell Product X, however manufactured, outside the designated territory.

Discussion: The manufacturers of Product X are in a horizontal relationship in the goods market for Product X. Those that are licensees of Gamma's process technology would also be in a vertical relationship with Gamma if they actually used Gamma's technology, although in this example, that is not the case. Any manufacturers of Product X that control technologies that are economic substitutes for Gamma's process are also horizontal competitors of Gamma in the relevant technology market.

The licensing arrangement restricts competition in the relevant goods market among manufacturers of Product X. The restriction applies both to Product X that is manufactured with the licensed technology and to Product X manufactured with any other technology. The latter restriction is the key competitive concern because it harms competition that would have taken place in the absence of the licensing agreement. Such a restriction could conceivably benefit competition by promoting the adoption of Gamma's technology (see Example 6). In this example, however, the technology is not being used despite being licensed. If further investigation shows that there is no likelihood that the manufacturers of Product X will use Gamma's technology, the Department is likely to conclude that there are no conceivable benefits from the license restrictions.

If the Department concludes that the restraint does not contribute to an efficiency-producing integration of economic activity, the Department would be likely to challenge the arrangement under the per se rule as a horizontal territorial market allocation scheme and to view the intellectual property aspects of the arrangement as a sham intended to cloak its true nature. Since such a restraint is per se unlawful, the Department likely would challenge the arrangement even absent proof of substantial market power by the licensor and the licensees.

The competitive implications do not generally depend on whether the licensed technology is protected by patent, is a trade secret or other know-how, or is a computer program protected by copyright. Nor do the competitive implications generally depend on whether the allocation of markets is territorial, as in this example, or functional, based on fields of use.

***403 Example 6**

Situation: As in Example 5, Gamma offers a license to every other manufacturer of Product X for the patented process that it uses to manufacture Product X. The license provides that each manufacturer has an exclusive right to sell Product X manufactured using the licensed technology in a designated geographic area, and that no manufacturer may sell Product X, however manufactured, outside its designated territory. As in Example 5, several manufacturers accept licenses. In this example, however, the licensed process is an advance over their previously used process. Furthermore, Gamma's licensed process is the sole technology used by the licensees.

Discussion: The competitive relationships of the firms in this example are the same as in Example 5 and the licensing restraint has a similar effect on competition among the manufacturers of Product X. This example is distinguished from the previous example in that the licensed technology is useful, and, indeed, is used extensively by the licensees. As a consequence, the vertical dimension of the licensing agreement, and the benefits of the licensing restrictions in promoting the adoption of the technology, assume greater importance.

Again, the key competitive issue is the effect of the territorial restraint in the licensing arrangement on competition in the goods market that includes Product X. The restraint applies to all sales of Product X, without regard to whether it was made using the licensed technology. Such a restraint could have a benefit in promoting manufacturing and marketing efforts on behalf of the licensed technology, in part by making it easier for Gamma to monitor use of its licensed technology. The benefits come at the cost of restricting competition that would have taken place in the absence of the licensing arrangement. If the restraint contributes to an efficiency-enhancing integration of economic activity, the Department would evaluate this arrangement under the rule of reason. It would take into account such factors as the share of the licensor and the licensees in the relevant markets affected by the licensing arrangement, the level of concentration and difficulty of entry in these markets, and the promotional benefits to be gained by focusing manufacturing and marketing efforts on the licensed technology.

**4. General principles concerning the Department's evaluation of licensing** arrangements under the rule of reason

**4.1 Antitrust "safety zone"**

Absent extraordinary circumstances, the Department will not challenge a restraint in a licensing arrangement if (1) the restraint is not of a type that normally warrants condemnation under the per se rule and (2) the licensor and its licensees collectively account for no more ***404** than twenty percent of each relevant market affected by the restraint. [FN13] This "safety zone" is designed to provide owners of intellectual property with a degree of certainty, so as to encourage procompetitive licensing arrangements. It is not intended to discourage parties falling outside the safety zone from adopting restrictions in their license arrangements that are reasonably necessary to achieve an efficiency-producing integration of economic activity. The Department will analyze arrangements falling outside the "safety zone" based on the considerations outlined in this section.

This "safety zone" does not apply to transactions that amount to mergers or acquisitions, which are governed by the 1992 Horizontal Merger Guidelines.

The Department will include innovation market shares in its evaluation of whether a licensing arrangement falls within the safety zone only if the assets required to compete in research and development are specialized and identifiable. If not, the Department will confine its analysis to the goods and technology markets affected by the licensing arrangement.

**4.2 General statement of the rule of reason**

In analyzing a restraint in a licensing arrangement under the rule of reason, the Department first inquires whether the restraint has an anticompetitive effect. If so, the Department next inquires whether the restraint is reasonably necessary to achieve procompetitive benefits that outweigh those anticompetitive effects. See NCAA v. Board of Regents of the University of Oklahoma, 468 U.S. 85 (1984); see also 7 Phillip A. Areeda, Antitrust Law, § 1502 (1986). In pursuing these inquiries, the Department will be guided by several general principles. These principles apply to both vertical and horizontal licensing restraints that are analyzed under the rule of reason.

**4.3 Analysis of anticompetitive effects**

The existence of anticompetitive effects resulting from a restraint in a licensing arrangement may be evaluated on the basis of a variety of factors taken together, including the following.

**4.3.1 Market structure, coordination, and foreclosure**

When a licensor and its licensees compete in technology or goods markets, a restraint in a licensing arrangement may increase the risk of coordinated pricing, output restrictions, or the acquisition or maintenance of monopoly power. The potential for competitive harm generally increases with the degree of concentration in, the difficulty of entry into, and the ***405** inelasticities of supply and demand in markets in which the licensor and licensees are in a horizontal relationship. Cf. 1992 Horizontal Merger Guidelines, §§ 1.5, 3.

When the licensor and licensees are in a vertical relationship, harm to competition from a restraint may occur if it forecloses access to, or increases competitors' costs of obtaining, important inputs (other than as a natural consequence of the licensee acquiring a licensed technology for its own use). An example is a licensing arrangement with most of the established manufacturers in an industry preventing those manufacturers from using any other technology. The risk of foreclosing access or increasing competitors' costs is related to the fraction of the markets affected by the licensing restraint and to other characteristics of the input and output markets, such as concentration, difficulty of entry, and elasticities of supply and demand.

Harm to competition from a restraint in a vertical licensing arrangement also may occur if a licensing restraint facilitates coordination to raise prices or reduce output in markets in which one of the parties participates. For example, if owners of competing technologies impose similar restraints on their licensees, the licensors may find it easier to coordinate their pricing. Similarly, licensees that are horizontal competitors may find it easier to coordinate their pricing if they are subject to common license restraints imposed either by a common licensor or by competing licensors. The risk of anticompetitive coordination is increased when the relevant markets are concentrated and difficult to enter.

**4.3.2 Licensing arrangements involving exclusivity**

A licensing arrangement may involve exclusivity in two distinct respects. First, the licensor may grant one or more exclusive licenses, which restrict the right of the licensor to license others and possibly also to practice the technology itself. Generally, such a grant of exclusivity may raise antitrust concerns only if the licensees themselves, or the licensor and its licensees, are actual or potential competitors in a relevant technology or goods market in the absence of the licensing arrangement. Examples of exclusive licenses with possible competitive consequences include cross-licensing by parties collectively possessing market power (see section 5.5), grantbacks (see section 5.6), and acquisitions of intellectual property rights (see section 5.7).

A second form of exclusivity, exclusive dealing, arises when a license prevents or restrains the licensee from using competing technologies. Such restraints can have the effect of denying rivals sufficient outlets for exploiting their technologies and thus be anticompetitive. Exclusivity may be required by the licensor, as in an explicit exclusive dealing arrangement (see section 5.4), or induced through economic incentives. For example, a royalty arrangement based on total sales of a licensee's product, regardless of whether it is made using the licensed technology, may increase the cost to a licensee of substituting alternative technologies, and thus may have effects similar to an exclusive dealing arrangement. See Complaint, United States v. Microsoft, Inc., Civ. No. 94-1564 (D.D.C., filed July 15, 1994); Competitive Impact Statement, id. (filed July 27, 1994). Whether a restraint ***406** of this kind has anticompetitive effects depends, inter alia, on the availability of other outlets for competitively viable exploitation of rival technologies.

Restraints that impose or encourage exclusive dealing may have procompetitive effects. For example, a licensing arrangement that prevents the licensee from dealing in other technologies may encourage the licensee to develop and market the licensed technology or specialized applications of that technology. See, e.g., Example 7. The Department will take into account such procompetitive effects in evaluating the reasonableness of the arrangement. See section 4.4.

The Department will focus on the actual practice and its effects, not on the formal terms of the arrangement. A license denominated as non-exclusive (either in the sense of exclusive licensing or in the sense of exclusive dealing) may nonetheless give rise to the same concerns posed by formal exclusivity. A non-exclusive license may have the effect of exclusive licensing if it is structured so that the licensor is unlikely to license others or to practice the technology itself. A license that does not explicitly require exclusive dealing may have the effect of exclusive dealing if it is structured to make it costly for licensees to use competing technologies. However, a licensing arrangement will not automatically raise these concerns merely because a party chooses to deal with a single licensee or licensor, or confines his activity to a single field of use or location, or because only a single licensee has chosen to take a license.

***407 Example 7**

Situation: Eta, the inventor of a new flat panel display technology, lacking the capability to bring a flat panel display product to market, grants Rho an exclusive license to make and sell a product embodying Eta's technology. Rho does not currently sell a product that would compete with the product embodying the new technology or control rights to another display technology. Several firms offer competing displays, the relevant markets for manufacturing and distribution of such displays are unconcentrated, and entry into these markets is relatively easy. Demand for the new technology is uncertain and successful market penetration will require considerable promotional effort. The license contains an exclusive dealing restriction preventing Rho from selling products that complete with the product embodying the licensed technology.

Discussion: This example illustrates both types of exclusivity in a licensing arrangement. The license is exclusive in that it restricts the right of the licensor to grant other licenses. In addition, the license has an exclusive dealing component in that it restricts the licensee from selling competing products.

The inventor of the display technology and its licensee are in a vertical relationship and do not compete in the manufacture or sale of display products or in the sale of technology. Hence, the grant of an exclusive license does not affect competition between the licensor and the licensee. The exclusive license may promote competition by encouraging Rho to develop and promote the new product in the face of uncertain demand by rewarding Rho for its efforts if they lead to large sales. Although the license bars the licensee from selling competing products, this exclusive dealing aspect is unlikely in this example to harm competition by foreclosing access or facilitating anticompetitive pricing because several firms offer competing products, the relevant manufacturing and distribution markets are unconcentrated, and entry is easy. On these facts, the Department would be unlikely to challenge the arrangement.

**4.3.3 Benefits to the parties from reduction of competition**

In some cases, the benefits of a restraint in a licensing arrangement to the licensor or its licensees may derive primarily from reductions in competition that likely would have occurred absent the license rather than from the restraint's relationship to efficiency-producing objectives of the arrangement. In determining whether to challenge a particular restraint in a licensing arrangement, the Department will assess evidence indicating which of these possibilities better describes the purpose and effect of the restraint.

**4.3.4 Other factors**

Factors such as a history of rivalry and a rapid pace of innovation are also relevant to an analysis of the potential for harm to competition. The presence of these factors may indicate that licensors and licensees are less likely successfully to engage in coordinated behavior to raise prices or restrict output, and their absence may signal a greater likelihood of such behavior.

***408 4.4. Efficiencies and justifications**

If the Department finds that a restraint in a licensing arrangement has an anticompetitive effect, the Department will consider whether the restraint produces offsetting procompetitive effects, such as by facilitating the efficient development and exploitation of intellectual property. If offsetting benefits are established, the Department will determine whether the restraint is reasonably necessary to achieve the efficiencies. If the restraint is reasonably necessary, and if the efficiencies outweigh the anticompetitive effect, the Department will not challenge the licensing arrangement.

The Department's comparison of anticompetitive harms and procompetitive efficiencies is necessarily a qualitative one. The risk of anticompetitive effects in a particular case may be insignificant compared to the expected benefits, or vice versa. As the expected anticompetitive effects in a particular licensing arrangement increase, the Department will look for evidence establishing with greater certainty that the arrangement achieves net benefits.

The existence of practical and significantly less restrictive alternatives is relevant to a determination of whether a restraint is reasonably necessary. If it is clear that the parties could have achieved similar efficiencies by means that are significantly less restrictive, then the Department will not give weight to the parties' efficiency claim. In making this assessment, however, the Department will not engage in a search for a theoretically least restrictive alternative that might be easier to construct in hindsight than in the practical prospective business situation faced by the parties.

When a restraint has an anticompetitive effect, the duration of that restraint can be an important factor in determining whether it is reasonably necessary to achieve the putative procompetitive effect. The effective duration of a restraint may be dependent on a number of factors, including the option of the affected party to terminate the arrangement unilaterally and the presence of contract terms e.g., unpaid balances on minimum purchase commitments) that encourage the licensee to renew a license arrangement. Consistent with its approach to less restrictive alternative analysis generally, the Department will not attempt to draw fine distinctions regarding duration; rather, its focus will be on situations in which the duration clearly exceeds the period needed to achieve the procompetitive effect.

The evaluation of procompetitive efficiencies, of the reasonable necessity of a restraint to achieve them, and of the duration of the restraint may depend on the market context. A restraint that may be justified by the needs of a new entrant, for example, may not have a procompetitive efficiency justification in different market circumstances. Cf. United States v. Jerrold Electronics Corp., 187 F. Supp. 545 (E.D. Pa. 1960), aff'd per curiam, 365 U.S. 567 (1961).

***409 4.5 Restraints subject to a quick-look analysis**

A rule of reason analysis may require no more than a "quick look" at the anticompetitive effects of a particular restraint and the extent to which the restraint is reasonably necessary to achieve an efficiency-producing integration. When the restraint is one that ordinarily warrants per se treatment, and a quick look at the claimed efficiencies reveals that the restraint is not reasonably necessary to achieve procompetitive efficiencies, the Department will likely challenge the restraint without further analysis. See FTC v. Indiana Federation of Dentists, 476 U.S. 447, 459-60 (1986); NCAA v. Board of Regents of the University of Oklahoma, 468 U.S. 85, 109-10 & n.39 (1984).

**5. Application of general principles**

This section illustrates the application of these principles to particular licensing restraints and to arrangements that involve the cross-licensing, pooling, or acquisition of intellectual property. The restraints and arrangements identified are typical of those that are likely to encounter antitrust scrutiny; however, they are not intended as an exhaustive list of practices that could raise competitive concerns.

**5.1 Horizontal restraints**

While licensing arrangements among horizontal competitors, like joint ventures, often promote rather than hinder competition, there are a number of circumstances in which antitrust scrutiny is warranted. Generally speaking, the licensor and the licensee are deemed to be horizontal competitors only if they own or control technologies that are economic substitutes for each other or if they are competitors in a goods market other than through the use by the licensee of the licensed technology. See section 3.3. Consistent with the principles set forth in section 3.4, the Department will challenge certain types of horizontal restraints as per se unlawful in appropriate cases. Horizontal restraints in licensing arrangements that constitute price fixing, allocation of markets or customers, agreements to reduce output, and certain group boycotts may merit per se treatment. In other cases, the restraints will be evaluated under the rule of reason, following the general principles set forth in section 4.

***410 Example 8**

Situation: Two of the leading manufacturers of a consumer electronic product hold patents that cover alternative circuit designs for the product. None of the patents is blocking; that is, each of the patents can be practiced without infringing a patent owned by the other firm. The different circuit designs are economic substitutes. Each permits the manufacture at similar cost of products that consumers consider to be interchangeable. The manufacturers assign their patents to a separate corporation wholly owned by the two firms. That corporation licenses the right to use the circuit designs to other consumer product manufacturers and establishes the license royalties.

Discussion: In this example, the manufacturers are horizontal competitors in the goods market for the consumer product and in the related technology markets. The competitive issue with regard to a joint assignment of patent rights is whether the assignment has an adverse impact on competition in technology and goods markets that is not outweighed by procompetitive benefits in the use or dissemination of the technology. Each of the patent owners has a right to exclude others from practicing its patent. That right does not extend, however, to the agreement to assign rights jointly. To the extent that the patent rights cover technologies that are substitutes, the joint determination of royalties may result in higher royalties and higher goods prices than the owners would have charged on their own. In the absence of evidence establishing efficiencies from the joint assignment of patent rights, the Department may conclude that the joint marketing of competing patent rights constitutes horizontal price fixing and could be challenged as a per se unlawful horizontal restraint of trade. If there are plausible efficiency justifications for the joint marketing arrangement, the Department would evaluate the arrangement under the rule of reason. However, the Department may conclude that the anticompetitive effects are sufficiently apparent, and the proposed integrative efficiencies are sufficiently weak or unrelated to the restraints, to require only a "quick look" rule of reason analysis (see section 4.5).

**5.2 Resale price maintenance**

Resale price maintenance is illegal when "commodities have passed into the channels of trade and are owned by dealers." Dr. Miles Medical Co. v. John D. Park & Sons Co., 220 U.S. 373 (1911). It has been held per se illegal for a licensor of an intellectual property right in a product to fix a licensee's resale price of that product. United States v. Univis Lens Co., 316 U.S. 241, 243-45, 249-51 (1942); Ethyl Gasoline Corp. v. United States, 309 U.S. 436, 446-48, 452, 457 (1940). [FN14] Consistent with the principles set forth in section 3.4, the ***411** Department will enforce the per se rule against resale price maintenance in the intellectual property context.

**5.3 Tying Arrangements**

A transaction is said to involve tying if: (1) there are two separate products, and (2) the sale of one product is conditioned on the purchase of the other. Thus, conditioning the ability of a customer to license one or more items of intellectual property on the customer's purchase of another item of intellectual property or a good or service has been held to constitute illegal tying. See, e.g., United States v. Paramount Pictures, Inc., 334 U.S. 131, 156-58 (1948) (copyrights); International Salt Co. v. United States, 332 U.S. 392 (1947) (patents). Tying can, however, be efficiency-enhancing under some circumstances. See, e.g., Jerrold Electronics Corp. v. Westcoast Broadcasting Co., 341 F.2d 653 (9th Cir.), cert. denied, 382 U.S. 817 (1965). The Department would be likely to challenge a tying arrangement if: (1) the seller has sufficient economic power in the market for the tying product to enable it to restrain trade in the market for the tied 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 effect. [FN15] The Department will not presume market power solely from the existence of a patent or other intellectual property right. [FN16]

Package licensing--the licensing of multiple items of intellectual property in a single license or in a group of related licenses--may be a form of tying arrangement, but only if the items licensed constitute "separate products" and the licensing of one product is used to force the acceptance of a license of another. Such practices can be efficiency enhancing under some circumstances. When multiple licenses are needed to practice any single item of intellectual property, for example, a package license may present such efficiencies. If a package license constitutes a tying arrangement, the Department will evaluate its competitive effects under the same principles it applies to other tying arrangements.

**5.4 Exclusive dealing**

In the intellectual property context, exclusive dealing occurs when a license prevents the licensee from licensing, selling, distributing, or using a competing technology. Although such ***412** restraints can be procompetitive in some circumstances, in other situations they can deny rivals sufficient outlets for competitively viable exploitation of their technologies and thus can be anticompetitive. See section 4.3.2.

**5.5 Cross-licensing and pooling arrangements**

Cross-licensing and pooling arrangements are agreements of two or more owners of different items of intellectual property to license one another or third parties. These arrangements may promote economic welfare by integrating complementary technologies, reducing transaction costs, clearing blocking positions, and avoiding costly infringement litigation. By promoting the dissemination of technology, cross-licensing and pooling arrangements are often procompetitive.

Cross-licensing and pooling arrangements can have anticompetitive effects in certain circumstances. When these arrangements are a mechanism to accomplish price fixing, or market or customer allocation, they can lead to a significant lessening of competition. See United States v. New Wrinkle, Inc., 342 U.S. 371 (1952) (price fixing); United States v. United States Gypsum Co., 333 U.S. 364 (1948) (customer allocation). The joint marketing of pooled intellectual property rights, with collective price setting or coordinated output restrictions, may violate section 1 of the Sherman Act. Compare NCAA v. Board of Regents of the University of Oklahoma, 468 U.S. 85 (1984) (output restriction on college football broadcasting held unlawful because it was not reasonably related to any purported justification) with Broadcast Music, Inc. v. CBS, 441 U.S. 1 (1979) (blanket license for music copyrights upheld because the cooperative price was found necessary to the creation of a new product).

Settlements involving the cross-licensing of intellectual property rights can be an efficient means to avoid litigation over infringement and interference proceedings, and, in general, courts favor such settlements. When such cross-licensing involves horizontal competitors, however, the Department will consider whether the effect of the settlement is to diminish rivalry that would otherwise have occurred. In the absence of offsetting efficiencies, such settlements may be challenged as unlawful restraints of trade. Cf. United States v. Singer Manufacturing Co., 374 U.S. 174 (1963) (cross-license agreement was part of broader combination to exclude competitors).

Pooling arrangements and the like generally need not be open to all who would like to join. Cross-licensing and pooling arrangements among parties that collectively possess market power may, under some circumstances, harm competition by significantly disadvantaging competitors. Cf. Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co., 472 U.S. 284 (1985) (exclusion of a competitor from a purchasing cooperative not unlawful absent a showing of market power).

Another possible anticompetitive effect of pooling arrangements may occur when participation in the arrangement deters or discourages participants from engaging in research and development, thus retarding innovation. A pooling arrangement in which members grant licenses to each other for current and future technology at minimal cost may encourage free-***413** riding and reduce the incentives of its members to compete in their research and development efforts. See generally United States v. Automobile Manufacturers Association, 307 F. Supp. 617 (C.D. Cal 1969), modified sub nom. United States v. Motor Vehicle Manufacturers Association, 1982-83 Trade Cas. (CCH) ¶ 65,088 (C.D. Cal. 1982); United States v. Manufacturers Aircraft Association, 1976-1 Trade Cas. (CCH) ¶ 60,810 (S.D.N.Y. 1975). Such an arrangement is more likely to cause competitive problems where the arrangement includes a large fraction of the potential participants in research and development.

**Example 9**

Situation: As in Example 8, two of the leading manufacturers of a consumer electronic product hold patents that cover alternative circuit designs for the product. The manufacturers assign several of their patents to a separate corporation wholly owned by the two firms. That corporation licenses the right to use the circuit designs to other consumer product manufacturers and establishes the license royalties. In this example, however, the manufacturers assign to the separate corporation only patents that are blocking. None of the patents assigned to the corporation can be practiced without infringing a patent owned by the other firm.

Discussion: Unlike the previous example, the joint assignment of patent rights to the wholly owned corporation in this example can have procompetitive benefits in the use or dissemination of the technology. Because the manufacturers' patents are blocking, the manufacturers are not in a horizontal relationship with respect to those patents. Neither patent can be practiced without the right to a patent owned by the other firm, so the patents are not economic substitutes. (The pooling of patents also would not raise competitive problems in the relevant technology market if the pool involved complementary patents and enabled licensing of a package whose value exceeded the sum of its component patents.)

As in Example 8, the firms are horizontal competitors in the relevant goods market. In the absence of evidence suggesting that the joint assignment of patent rights is also contributing to coordinated pricing of the firms' final products, the Department would be unlikely to challenge this arrangement.

**5.6 Grantbacks**

A grantback is an arrangement under which a licensee agrees to extend to the licensor of intellectual property the right to use the licensee's improvements to the licensed technology. Grantbacks can have procompetitive effects, such as providing a means for the licensee and the licensor to share risks and rewarding the licensor for making possible further innovation based on or informed by the licensed technology. Such arrangements can both promote innovation in the first place and promote the subsequent licensing of the results of the innovation.

Grantbacks may adversely affect competition, however, if they substantially reduce the licensee's incentives to engage in research and development and limit rivalry in innovation ***414** markets. In deciding whether to challenge a grantback, the Department will consider the extent to which, as compared with no license at all, the license with the grantback provision may diminish total research and development investment or lessen competition in innovation or technology markets.

**5.7 Acquisition of intellectual property rights**

The legality of transactions resulting in an actual or effective acquisition of intellectual property rights is analyzed under section 7 of the Clayton Act and sections 1 and 2 of the Sherman Act. SCM Corp. v. Xerox Corp., 645 F.2d 1195, 1210 (2d Cir. 1981) (patents); United States v. Columbia Pictures Corp., 189 F. Supp. 153, 183 (S.D.N.Y. 1960) (copyrights). The Department will analyze such transactions as acquisitions of assets just as it does other asset acquisitions. When a license is non-exclusive, the exclusivity is temporary, or the acquisition is otherwise structured to allow the parties freedom to compete independently in related products, the Department will take these aspects of the arrangement into account, as it does in the case of other asset acquisitions and joint ventures.

With respect to horizontal acquisitions, the Department will apply the analysis contained in the 1992 Horizontal Merger Guidelines. The Department will evaluate the effects of an acquisition of intellectual property in affected technology, innovation, and goods markets. As described in section 4 of the 1992 Horizontal Merger Guidelines, the Department takes into account integrative efficiencies that could not reasonably be achieved without the acquisition as wells as any anticompetitive effects of the acquisition from the lessening of competition among existing technologies or goods or from the lessening of competition to develop new technologies.

***415 Example 10**

Situation: Omega develops a new, patented pharmaceutical for the treatment of a particular disease. The only drug on the market approved for the treatment of this disease is sold by Zeta, which has invested large sums in advertising to achieve brand name recognition. Omega's patented drug has almost completed regulatory approval by the Food and Drug Administration. Omega has invested considerable sums in testing market acceptance for its new drug. However, rather than enter the market as a direct competitor of Zeta, Omega licenses to Zeta the exclusive right to manufacture and sell Omega's patented drug.

Discussion: Assuming that Zeta would manufacture and sell Omega's patented drug, the relationship of Omega and Zeta is in part vertical, because Zeta would be a customer of Omega in the technology market. However, their relationship is also horizontal in part, because Omega is a likely potential competitor of Zeta in the relevant goods market as well as in the relevant technology market. Although the vertical aspects of this arrangement pose no threat to competition in this example, the horizontal aspects would require further analysis. The Department would evaluate Zeta's acquisition of Omega's patent rights as an acquisition of the assets of a likely potential competitor, using the methodology described in the Department's merger guidelines. The Department would consider the impact of the acquisition on market concentration, other factors that affect the likelihood that competition would be affected by the acquisition, and possible efficiency defenses. In this example, Zeta's market position prior to the acquisition as the only seller of a drug for treatment of this disease makes it more likely that the acquisition would have anticompetitive effects.

**6. Enforcement of invalid intellectual property rights**

The Department may challenge the enforcement of invalid intellectual property rights as antitrust violations. The Supreme Court has held that enforcement of a patent obtained by fraud on the Patent and Trademark Office can violate section 2 of the Sherman Act if all the elements otherwise necessary to establish a section 2 monopolization charge are proved. Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp., 382 U.S. 172 (1965). Enforcement of a patent obtained by mere inequitable conduct before the Patent and Trademark Office, however, cannot be the basis of a section 2 claim, because inequitable conduct does not involve knowing and willful patent fraud. Argus Chemical Corp. v. Fibre Glass-Evercoat Co., 812 F.2d 1381 (Fed. Cir. 1987). An objectively baseless infringement action, brought in bad faith, when the complainant knows the intellectual property right to be invalid, may violate section 2 of the Sherman Act. See Professional Real Estate Investors, Inc. v. Columbia Pictures Industries, Inc., 113 S. Ct. 1920, 1928 (1993); Handgards, Inc. v. Ethicon, Inc., 743 F.2d 1282, 1288-89 (9th Cir. 1984), cert. denied, 469 U.S. 1190 (1985) (patents); Handgards, Inc. v. Ethicon, Inc., 601 F.2d 986, 992-96 (9th Cir. 1979), cert. denied, 444 U.S. 1025 (1980) (patents); CVD, Inc. v. Raytheon Co., 769 F.2d 842 (1st Cir. 1985) (trade secrets).

[FN1]. These Guidelines supersede section 3.6 in Part I, "Intellectual Property Licensing Arrangements," and cases 6, 10, 11, and 12 in Part II of the U.S. Department of Justice 1988 Antitrust Enforcement Guidelines for International Operations.

[FN2]. These Guidelines do not cover the antitrust treatment of trademarks. Although the same general antitrust principles that apply to other forms of intellectual property apply to trademarks as well, these Guidelines deal with innovation-related issues that typically arise with respect to patents, copyrights, and trade secrets, rather than with product-differentiation issues that typically arise with respect to trademarks.

[FN3]. See 35 U.S.C. § 154 (1988). In the case of process patents, the protection extends to importation of goods made by a patented process. See 19 U.S.C. § 1337 (1988 & Supp. V 1993); 35 U.S.C. § 271(g)(1988).

[FN4]. See 17 U.S.C. § 102 (1988 & Supp. V 1993). Copyright protection lasts for the author's life plus 50 years, or 75 years from first publication (or 100 years from creation, whichever expires first) for works made for hire. See 17 U.S.C. § 302 (1988).

[FN5]. The principles stated in these Guidelines also apply to protection of mask works fixed in a semiconductor chip product (see 17 U.S.C. § 901 et seq. (1988)), which is analogous to copyright protection for works of authorship. These principles also generally apply to licensing of know-how and other collections of information which may not be protected by intellectual property rights, but which may nonetheless have value to a licensee or transferee because of the form into which they are assembled.

[FN6]. "[T]he aims and objectives of patent and antitrust laws may seem, at first glance, wholly at odds. However, the two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry and competition." Atari Games Corp. v. Nintendo of America, Inc., 897 F.2d 1572, 1576 (Fed. Cir. 1990).

[FN7]. Market power can be exercised in other economic dimensions, such as quality, service and innovation. It is assumed in this definition that all competitive dimensions are held constant except the ones in which power is being exercised; it would not, of course, be indicative of market power that a seller is able to charge higher prices for a higher-quality product. The definition in text is stated in terms of a seller with market power; a buyer could also exercise market power (e.g., by maintaining the price below the competitive level, thereby depressing output).

[FN8]. The Department notes that the law is unclear on this issue. Compare Jefferson Parish Hospital District No. 2 v. Hyde, 466 U.S. 2, 16 (1984) (expressing the view in dictum that if a product is protected by a patent, "it is fair to presume that the inability to buy the product elsewhere gives the seller market power") with id. at 37 n.7 (O'Connor, J., concurring) ("[A] patent holder has no market power in any relevant sense if there are close substitutes for the patented product."). Compare also Abbott Laboratories v. Brennan, 952 F.2d 1346, 1354-55 (Fed. Cir. 1991) (no presumption of market power from intellectual property right) with Digidyne Corp. v. Data General Corp., 734 F.2d 1336, 1341-42 (9th Cir. 1984) (requisite economic power is presumed from copyright), cert. denied, 473 U.S. 908 (1985).

[FN9]. United States v. Grinnell Corp., 384 U.S. 563, 571 (1966); see also United States v. Aluminum Co. of America, 148 F.2d 416, 430 (2d Cir. 1945) (Sherman Act is not violated by the attainment of market power solely through "superior skill, foresight and industry").

[FN10]. The examples in these Guidelines are hypothetical and do not represent judgments about the actual market circumstances of the named industries.

[FN11]. A firm will be treated as a likely potential competitor if its entry is likely under the standards of section 3.3 of the U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines (April 2, 1992), or if there is evidence of likely actual entry by that firm. Competitive concerns are more likely to arise when the number of actual and likely potential competitors is not large.

[FN12]. In this analysis, the Department will regard two technologies as being "equally efficient" if they can be used to produce, at the same cost, goods perceived by consumers to be close substitutes.

[FN13]. As stated in section 1.41 of the 1992 Horizontal Merger Guidelines, market shares for goods markets "can be expressed either in dollar terms through sales, shipments, or production, or in physical terms through measurement of sales, shipments, production, capacity, or reserves." Special considerations affect the measurement of market shares in some technology markets. The measurement of market shares in that context is discussed in section 3.2.1.

[FN14]. But cf. United States v. General Electric Co., 272 U.S. 476 (1926)(holding that an owner of a product patent may condition a license to manufacture the product on the fixing of the first sale price of the patented product). Subsequent lower court decisions have distinguished the GE decision in various contexts. See, e.g., Royal Indus. v. St. Regis Paper Co., 420 F.2d 449, 452 (9th Cir. 1969)(observing that GE involved a restriction by a patentee who also manufactured the patented product and leaving open the question whether a nonmanufacturing patentee may fix the price of the patented product); Newburgh Moire Co. v. Superior Moire Co., 237 F.2d 283, 293-94 (3rd Cir. 1956)(grant of multiple licenses each containing price restrictions does not come within the GE doctrine); Cummer-Graham Co. v. Straight Side Basket Corp., 142 F.2d 646, 647 (5th Cir.) (owner of an intellectual property right in a process to manufacture an unpatented product may not fix the sale price of that product), cert. denied, 323 U.S. 726 (1944); Barber-Colman Co. v. National Tool Co., 136 F.2d 339, 343-44 (6th Cir. 1943) (same).

[FN15]. As is true throughout these Guidelines, the factors listed are those that guide the Department's internal analysis in exercising its prosecutorial discretion. They are not intended to circumscribe how the Department will conduct the litigation of cases that it decides to bring, nor to opine on how the courts should resolve questions that are currently unsettled in the case law.

[FN16]. See section 2.2. This policy is consistent with the requirement that market power be demonstrated to establish patent misuse based on tying. 35 U.S.C. § 271(d) (1988) (as amended by Pub. L. No. 100-703, 201 Stat. 4676 (1988)).

***417** U.S. DEPARTMENT OF JUSTICE
Antitrust Division
**THE 1995 ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY:**
**New Signposts for the Intersection of Intellectual Property and the Antitrust Laws**
Address by
RICHARD J. GILBERT
Deputy Assistant Attorney General
Antitrust Division
U.S. Department of Justice
ABA Section of Antitrust Law
Spring Meeting
Washington, DC
April 6, 1995

***419 The 1995 Guidelines for the Licensing of Intellectual Property**

It is with great pleasure that I announce today the release of the 1995 Department of Justice and Federal Trade Commission Antitrust Guidelines for the Licensing of Intellectual Property. Intellectual property is an increasingly important determinant of U.S. economic growth and international competitiveness. In 1992, six knowledge-intensive industries (aerospace, computers, communications equipment, drugs and medicines, scientific instruments, and electrical machinery) accounted for 27 percent of total manufacturing output in the United States, up from 15 percent in 1981. Royalties and fees collected by U.S. firms from trade in intellectual properties approached $18 billion in 1991, nearly double the amount collected just 5 years earlier. [FN1]

Licensing royalties and fees, although considerable, greatly understate the value of intellectual property to the U.S. economy. Technology licensing and related partnerships are essential in today's economy to remain globally competitive and to market the products that knowledge assets help to create. As the world continues to become a more competitive place, and as firms scattered across the globe develop their own technological advantages, licensing plays an increasingly vital role to ensure that America's industries remain at the technological frontier.

***420** The importance to the U.S. economy of the development, use, and exchange of intellectual property led Assistant Attorney General Anne K. Bingaman to appoint an Antitrust Division task force to examine antitrust enforcement priorities in the licensing of intellectual property. The task force published draft Antitrust Guidelines for the Licensing and Acquisition of Intellectual Property for comment in the Federal Register on August 11, 1994. Shortly thereafter, the Federal Trade Commission joined this effort with the objective of developing the unified antitrust guidelines that we release today.

The new Guidelines share the core principles expressed in the section on technology licensing in the U.S. Department of Justice 1988 Antitrust Enforcement Guidelines for International Operations. These include the generally procompetitive nature of licensing arrangements, the absence of a presumption that intellectual property necessarily creates market power in the antitrust context, and the validity of applying the same general antitrust approach to the analysis of conduct involving intellectual property that the Agencies apply to conduct involving other forms of tangible or intangible property.

These three core principles provide a foundation for the policy statements in the Guidelines. Because licensing often has significant efficiency benefits (for example, by facilitating the integration of the licensed property with complementary factors of production), antitrust concerns that may arise in licensing arrangements normally will be evaluated under the rule of reason. The absence of a presumption that intellectual property ***421** necessarily creates market power implies that an antitrust evaluation of licensing restraints such as tying arrangements normally will require investigation of market circumstances to establish anticompetitive effects. The principle that the Agencies will apply the same general antitrust approach to intellectual property does not mean that intellectual property is the same as other forms of property. There are important differences, but the antitrust laws are sufficiently flexible to take these differences into account and should not impose greater or lesser scrutiny for intellectual property than for other forms of property.

**Key changes from the 1988 Guidelines**

While the new Intellectual Property Guidelines affirm the general approach to antitrust analysis of licensing arrangements described in the 1988 Guidelines for International Operations, there are some differences and refinements. The new Guidelines include a safe harbor for licensing transactions. "Absent extraordinary circumstances, the Agencies will not challenge a restraint in a licensing arrangement if (1) the restraint is not facially anticompetitive and (2) the licensor and its licensees collectively account for no more than twenty percent of each relevant market significantly affected by the restraint." (pp. 22-23) Facially anticompetitive restraints include those that would normally warrant per se treatment under the antitrust laws, such as price fixing and market division, and also agreements not to compete in terms of price or output that the Supreme Court said could be condemned as anticompetitive without an elaborate ***422** inquiry into market circumstances. [FN2]

The new Intellectual Property Guidelines include a section on analysis of competitive effects in research and development and on the use of innovation markets to address such effects. Case 6 of the 1988 International Guidelines referred to the analysis of competitive impacts in a "research and development market" in the context of a research and development joint venture. The discussion of innovation markets in the 1995 Intellectual Property Guidelines, thus, is a refinement of a concept already familiar in antitrust analysis.

Using an innovation market to analyze competitive effects is appropriate if the competitive effects of an arrangement cannot be adequately analyzed in conventional product markets. This threshold condition also applies to the use of technology markets. The 1995 Intellectual Property Guidelines state that "[T]he competitive effects of licensing arrangements often can be adequately assessed within the relevant markets for the goods affected by the arrangements. In such instances, the Agencies will delineate and analyze only goods markets. In other cases, however, the analysis may require the delineation of markets for technology or markets for research and development (innovation markets)." (pp. 7-8)

***423** An innovation market can be useful to identify competitive effects that cannot be adequately analyzed in markets for goods and services when the arrangement may affect the quantities, availabilities or prices of products that do not presently exist, as in a research and development joint venture. [FN3] Innovation markets also may be useful when an arrangement has competitive effects from research and development in geographic markets where product market competition is limited or nonexistent. That situation occurred in the proposed acquisition of the Allison Division of General Motors by ZF Friedrichshafen. [FN4] General Motors and ZF compete in Europe in the supply of automatic transmissions for large trucks and buses and in some but not all relevant product markets in the U.S. The acquisition would have likely affected the development of new transmissions worldwide. In particular, the acquisition would have affected the development of new transmission models for sale in the U.S. by both General Motors and ZF, even if they are neither actual or likely potential competitors in the relevant product markets. The Department of Justice challenged the acquisition, alleging likely adverse effects on competition in the product markets in which General Motors and ZF compete in the U.S., and also in a worldwide ***424** innovation market for the design and development of new and improved heavy-duty transmissions for trucks and buses.

**When does a licensing arrangement warrant antitrust scrutiny?**

The 1995 Intellectual Property Guidelines differ from the 1988 Guidelines for International Operations in their approach to identifying when a licensing arrangement may warrant antitrust scrutiny. The 1988 Guidelines focused on the scope of the intellectual property right and stated that "[T]he owner of intellectual property is entitled to enjoy whatever market power the property itself may confer." (p. 22) The 1988 Guidelines did not provide clear signposts to distinguish market power that is conferred by the intellectual property from market power that is not. As former Assistant Attorney General William Baxter once said, intellectual property may confer the power to license under the condition that the licensee eliminate the licensor's mother-in-law, [FN5] but that does not cause such power to be legal.

In place of the condition that "[T]he owner of intellectual property is entitled to enjoy whatever market power the property itself may confer," the 1995 Intellectual Property Guidelines state the principle that "antitrust concerns may arise when a licensing arrangement harms competition among entities that would have been actual or likely potential competitors in a ***425** relevant market in the absence of the license." (p.7) This principle is offered as a way to identify when antitrust concerns may arise in a licensing arrangement. It should not be interpreted as a "baseline" against which to measure the economic effects of a licensing arrangement. Specifically, it does not mean that in assessing the legality of a licensing arrangement, the antitrust authorities will compare the benefits of the licensing arrangement to a hypothetical baseline in which the intellectual property is not licensed at all.

If entities affected by a licensing arrangement would not have been actual or likely potential competitors in a relevant market in the absence of the license, the arrangement generally cannot result in harm to the economy and therefore should not be considered to have an adverse effect on competition. This is so even if an alternative licensing arrangement could have created more competition. The principle of "harm to competition among entities that would have been actual or likely potential competitors in a relevant market in the absence of the license" parallels the Agencies' approach to the evaluation of a joint venture. If the parties to a joint venture would not have been competitors in the absence of the joint venture, it is unlikely that the joint venture could adversely affect competition among those parties, although it is conceivable that collateral restraints could harm competition with others who are horizontal competitors to one of the parties, or in other markets.

***426** As an example, suppose a manufacturer of jet engines and a firm that develops advanced composite materials enter into a joint venture to produce a new type of turbine blade. The joint venture could include a cross-licensing arrangement in which the parties agree to exchange rights to relevant intellectual property with the objective of developing the new product. In this hypothetical, the parties to the joint venture are not competitors in any relevant market. Normally, the antitrust authorities would not scrutinize the specific arrangement between the parties to this joint venture, because it does not harm competition that would have existed in its absence. For example, the antitrust authorities normally would not be concerned about the particular structure of the joint venture, such as the number of jet engine facilities in which the composite materials may be used.

Concerns about possible adverse impacts on competition may arise if the joint venture included restraints that harmed competition with rivals who are not parties to the joint venture or that harmed competition in other markets. A plausible example of such a restraint is a requirement that the suppliers of composite materials to the joint venture refrain from supplying similar materials to competing jet engine manufacturers. The Agencies likely would examine such a restraint to determine whether it is likely to have an anticompetitive effect and, if so, would assess whether it is reasonably necessary to achieve the benefits of the joint venture.

The principle of "harm to competition among entities that would have been actual or likely potential competitors in a relevant market in the absence of the license" is straightforward to apply when a license involves ***427** competition in a single relevant market, but what about more complex situations such as vertical restraints in a licensing arrangement? Suppose a particular University licenses a breakthrough technology to miniaturize electronic circuitry and includes terms in its license that prohibit licensees from dealing with the supplier of any other present or future technology that may compete with the licensed technology. I doubt that the Agencies' would conclude that the University escapes antitrust scrutiny because the University itself is not an actual or likely potential competitor of its licensees. The terms in the University's licensing arrangement may adversely affect competition in the market for electronics technology that would have occurred in the absence of the license. The Agencies would likely investigate whether there are other practicable licensing arrangements that the University could use that would be less harmful to competition in the market for electronics technology, without hindering the University from developing and marketing its technology.

In words that may be more familiar to antitrust practitioners, the 1995 Intellectual Property Guidelines affirm that the Agencies' approach to technology licensing arrangements is, in most cases, a standard application of the rule of reason. Section 3.4 of the Guidelines state that "[T]he Agencies general approach in analyzing a licensing restraint under the rule of reason is to inquire whether the restraint is likely to have anticompetitive effects and, if so, whether the restraint is reasonably necessary to achieve procompetitive benefits that outweigh those anticompetitive effects." (p. 16) In making this assessment, the Agencies will not engage in a search for a theoretically least restrictive alternative that is not realistic in the practical ***428** prospective business situation faced by the parties. As in the Agencies' approach to the evaluation of a joint venture, if a proposed licensing arrangement includes restraints that have adverse effects on competition that would have occurred in the absence of the license, the Agencies would evaluate whether those restraints are reasonably necessary to achieve the procompetitive benefits of the arrangement. If not, the Agencies would be likely to challenge such restraints. If they are reasonably necessary, the Agencies would inquire whether the procompetitive benefits of the arrangement outweigh any harm to competition.

The principle that "antitrust concerns may arise when a licensing arrangement harms competition among entities that would have been actual or likely potential competitors in a relevant market in the absence of the license" is a refinement of the principle in the 1988 Guidelines that "[T]he owner of intellectual property is entitled to enjoy whatever market power the property itself may confer." It is a useful clarification to identify those situations in which a licensing arrangement may or may not warrant antitrust scrutiny. It is not intended as a new baseline for antitrust analysis or as a replacement for the rule of reason.

**Changes since the August 11, 1994 draft**

The new Intellectual Property Guidelines released today are changed in several respects from the draft U.S. Department of Justice Antitrust Guidelines for the Licensing and Acquisition of Intellectual Property that were published for comment in the Federal Register on August 11, 1994. Most ***429** of the changes are expositional, although a few are more substantive. The word "acquisition" has been deleted from the title of the 1995 Intellectual Property Guidelines to clarify that the Agencies' Merger Guidelines are the operative guidelines for antitrust analysis of acquisitions, including transfers of intellectual property rights. The new Guidelines include specific language noting that they apply to know-how arrangements as well as to patents, copyrights, and trade secrets. They also clarify that the Agencies will apply the same general antitrust principles to a licensor's grant of various forms of exclusivity to and among its licensees that they apply to comparable vertical restraints outside the licensing context, such as exclusive territories and exclusive dealing.

The 1995 Intellectual Property Guidelines include a more definitive statement of the likely absence of anticompetitive effects from non-exclusive licensing arrangements. They recognize that non-exclusive licenses of intellectual property that do not contain any restraints on the competitive conduct of the licensor or the licensee generally do not present antitrust concerns even if the parties to the license are in a horizontal arrangement. In such a non-exclusive license, each party to the arrangement is free to compete using the licensed intellectual property and therefore the non-exclusive license normally does not diminish competition that would occur in its absence. Note, however, that agreements to cross-license technology prospectively (even if non-exclusive) may reduce incentives to develop new technology because each party to the agreement can free ride on the accomplishments of others. Moreover, certain types of cross-licensing arrangements, even if non-exclusive, may reduce competition that would ***430** occur in the absence of the arrangement, for example by levying royalties that increase rivals' costs or by promoting price coordination.

The Intellectual Property Guidelines recognize that a grantback provision in an intellectual property license may have procompetitive effects by promoting the dissemination of new technology, sharing risks, and rewarding the licensor for making possible further innovation based on or informed by the licensed technology, and may be necessary to ensure that the licensor is not prevented from effectively competing because it is denied access to improvements developed with the aid of its own technology. Grantback provisions in licensing arrangements may have anticompetitive effects on total industry innovative effort, however, by reducing incentives to engage in research and development. The new Guidelines note that compared with an exclusive grantback, a non-exclusive grantback, which leaves the licensee free to license improvements technology to others, is less likely to have anticompetitive effects.

Earlier policy statements by the Department of Justice on antitrust analysis of intellectual property licensing arrangements were incorporated in the Department's 1977 and 1988 Guidelines on International Operations. This was appropriate given that the geographic scope of intellectual property licensing is often international. The 1995 Department of Justice and Federal Trade Commission Antitrust Enforcement Guidelines for International Operations focus on the governing principles of antitrust jurisdiction and comity in the global economy and do not address particular commercial practices such as intellectual property licensing arrangements. Recognizing ***431** that licensing is often international, the 1995 Intellectual Property Guidelines include a statement that the antitrust principles described in the Guidelines apply equally to domestic and international licensing arrangements, with appropriate consideration for issues such as jurisdiction and comity that may affect enforcement decisions when the arrangement is in an international context, as described in the 1995 Department of Justice and Federal Trade Commission Antitrust Enforcement Guidelines for International Operations.

The 1995 Intellectual Property Guidelines include more detail on the delineation of technology and innovation markets. As discussed previously, the Agencies will delineate technology or innovation markets only when the competitive effects of a licensing arrangement cannot be adequately addressed within the relevant markets for the goods affected by the arrangement. The Guidelines issued today include an additional example (Example 2) that illustrates a situation in which a technology market permits analysis of competitive effects from a licensing arrangement that cannot be adequately addressed within relevant goods markets.

The new Guidelines state that if the data permit, the Agencies will delineate the relevant technology market following the general approach described in the 1992 Horizontal Merger Guidelines. The Agencies will identify the smallest group of technologies, and goods that may be substitutes for the technologies, over which a hypothetical monopolist of those technologies and goods likely would exercise market power -- for example, by imposing a small but significant and nontransitory price increase. The new Guidelines also recognize that technologies are often ***432** licensed in ways that are not readily quantifiable in monetary terms. For example, technology may be licensed royalty-free in exchange for the right to use other technology, or it may be licensed as part of a package license. In those circumstances, the new Guidelines state that the Agencies will delineate the relevant technology market by identifying the technologies and goods which buyers would substitute at a cost comparable to that of using the licensed technology.

If market share data are unavailable or do not accurately represent competitive significance, a licensing arrangement that may affect competition in a technology market would nonetheless qualify for protection under the safety zone if (1) the restraint is not facially anticompetitive and (2) there are four or more independently controlled technologies in addition to the technologies controlled by the parties to the licensing arrangement that may be substitutable for the licensed technology at a comparable cost to the user.

An innovation market consists of the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development. The Agencies will delineate an innovation market only when the capabilities to engage in the relevant research and development can be associated with specialized assets or characteristics of specific firms. As in the Agencies's approach to the delineation of goods and technology markets, the Agencies will delineate an innovation market by identifying the smallest collection of research and development efforts, technologies, and goods for which a hypothetical ***433** monopolist would have the ability and incentive to exercise market power, for example by retarding the pace of research and development.

Market share data may not be available that accurately reflect the competitive significance of current and likely potential participants in an innovation market. When entities have comparable capabilities and incentives to pursue research and development that is a close substitute for the research and development activities of the parties to a licensing arrangement, the Agencies may assign equal market shares to such entities. The Intellectual Property Guidelines include a new example (Example 4) that illustrates the use of an innovation market in evaluating the competitive effects of a research and development joint venture.

Absent reliable market share data, the market share requirement of the safety zone would be satisfied for a licensing arrangement that may affect competition in an innovation market if four or more independently controlled entities in addition to the parties to the licensing arrangement possess the specialized assets or characteristics and the incentive to engage in research and development that is a close substitute for the research and development activities of the parties to the licensing arrangement.

**A concluding note of appreciation**

Many people within the Antitrust Division and the Federal Trade Commission have worked hard to provide the best advice we can offer on this complex subject. Their input has been essential to the development of ***434** the 1995 Intellectual Property Guidelines and I cannot express enough gratitude for their expertise and dedication to this effort. Among the many in the Agencies who have devoted their time and energy to this project, I would like to call particular attention to the very important contributions made by Will Tom, Greg Werden, Neil Roberts, Mike Tecklenburg, Steve Sunshine, Becky Dick, and David Seidman of the Antitrust Division and by Susan DeSanti, Mark Whitener, Tim Daniel, and Josh Newberg of the Federal Trade Commission. I would also like to thank the many people from industry, academics, and the bar who commented on the draft Intellectual Property Guidelines published in the Federal Register. We developed these Guidelines by following a process of extensive communication and cooperation with interested parties. This close interaction has made it possible to explore challenging antitrust issues related to the licensing of intellectual property and to develop policies that protect the interests of consumers and the intellectual property community.

[FN1]. See National Science Board, Science & Engineering Indicators (1993), Appendix tables 6-4 and 6-6. These six industries were selected based on their high research and development expenditures as a proportion of total sales.

[FN2]. "When there is an agreement not to compete in terms of price or output, 'no elaborate industry analysis is required to demonstrate the anticompetitive character of such an agreement.'" NCAA v.

Board of Regents of Univ. of Okla., 468 U.S. 85, 109 (1984), quoting National Society of Professional Engineers v. United States, 435 U.S. 679, 692 (1978).

[FN3]. See e.g., Sensormatic, FTC Inv. No. 941-0126 (accepted for comment Dec. 28, 1994); Wright Medical Technology, Inc., FTC Inc. No. 951-0015 (accepted for comment Dec. 8, 1994); American Home Products, FTC Inv. No. 941-0116, 59 Fed. Reg. 60,807 (accepted for comment Nov. 28, 1994); Roche Holdings Ltd., FTC Inv. No. 941-0085, 59 Fed. Reg. 46,846 (Sept. 12, 1994); Roche Holdings, Ltd., 113 F.T.C. 1086 (Nov. 28, 1990); United States v. Automobile Mfrs. Assoc., 307 F. Supp. 617 (C.D. Cal. 1969), modified sub nom. United States v. Motor Vehicles Mfrs. Assoc., 1982-83 Trade Cas. (CCH) ¶ 65,088 (C.D. Cal. 1982).

[FN4]. See Complaint, United States v. General Motors Corp., Civ. No. 93- 530 (D. Del., filed Nov. 16, 1993).

[FN5]. "[A] promise by the licensee to murder the patentee's mother-in-law is as much within the 'patent monopoly' as is the sum of $50; and it is not the patent laws which tell us that the former agreement is unenforceable and subjects the parties to criminal sanctions." William F. Baxter, Legal Restrictions of the Patent Monopoly: An Economic Analysis, 76 The Yale Law Journal 267, 277 (1966).

***435 Antitrust Guidelines**
**for the Licensing of**
**Intellectual Property**
**April 6, 1995**
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**and the**
**Federal Trade Commission**

***436 Table of Contents**

***437 1. Intellectual property protection and the antitrust laws**

**1.0** These Guidelines state the antitrust enforcement policy of the U.S. Department of Justice and the Federal Trade Commission (individually, "the Agency," and collectively, "the Agencies") with respect to the licensing of intellectual property protected by patent, copyright, and trade secret law, and of know-how. [FN1] By stating their general policy, the Agencies hope to assist those who need to predict whether the Agencies will challenge a practice as anticompetitive. However, these Guidelines cannot remove judgment and discretion in antitrust law enforcement. Moreover, the standards set forth in these Guidelines must be applied in unforeseeable circumstances. Each case will be evaluated in light of its own facts, and these Guidelines will be applied reasonably and flexibly. [FN2]

In the United States, patents confer rights to exclude others from making, using, or selling in the United States the invention claimed by the patent for a period of seventeen years from the date of issue. [FN3] To gain patent protection, an invention (which may be a product, process, machine, or composition of matter) must be novel, nonobvious, and useful. Copyright protection applies to original works of authorship embodied in a tangible medium of expression. [FN4] A copyright protects only the expression, not the ***438** underlying ideas. [FN5] Unlike a patent, which protects an invention not only from copying but also from independent creation, a copyright does not preclude others from independently creating similar expression. Trade secret protection applies to information whose economic value depends on its not being generally known. [FN6] Trade secret protection is conditioned upon efforts to maintain secrecy and has no fixed term. As with copyright protection, trade secret protection does not preclude independent creation by others.

The intellectual property laws and the antitrust laws share the common purpose of promoting innovation and enhancing consumer welfare. [FN7] The intellectual property laws provide incentives for innovation and its dissemination and commercialization by establishing enforceable property rights for the creators of new and useful products, more efficient processes, and original works of expression. In the absence of intellectual property rights, imitators could more rapidly exploit the efforts of innovators and investors without compensation. Rapid imitation would reduce the commercial value of innovation and erode incentives to invest, ultimately to the detriment of consumers. The antitrust laws promote innovation and consumer welfare by prohibiting certain actions that may harm competition with respect to either existing or new ways of serving consumers.

**2. General principles**

2.0 These Guidelines embody three general principles: (a) for the purpose of antitrust analysis, the Agencies regard intellectual property as being essentially comparable to any other form of property; (b) the Agencies do not presume that intellectual property creates market power in the antitrust context; and (c) the Agencies recognize that intellectual property licensing allows firms to combine complementary factors of production and is generally procompetitive.

***439 2.1 Standard antitrust analysis applies to intellectual property**

The Agencies apply the same general antitrust principles to conduct involving intellectual property that they apply to conduct involving any other form of tangible or intangible property. That is not to say that intellectual property is in all respects the same as any other form of property. Intellectual property has important characteristics, such as ease of misappropriation, that distinguish it from many other forms of property. These characteristics can be taken into account by standard antitrust analysis, however, and do not require the application of fundamentally different principles. [FN8]

Although there are clear and important differences in the purpose, extent, and duration of protection provided under the intellectual property regimes of patent, copyright, and trade secret, the governing antitrust principles are the same. Antitrust analysis takes differences among these forms of intellectual property into account in evaluating the specific market circumstances in which transactions occur, just as it does with other particular market circumstances.

Intellectual property law bestows on the owners of intellectual property certain rights to exclude others. These rights help the owners to profit from the use of their property. An intellectual property owner's rights to exclude are similar to the rights enjoyed by owners of other forms of private property. As with other forms of private property, certain types of conduct with respect to intellectual property may have anticompetitive effects against which the antitrust laws can and do protect. Intellectual property is thus neither particularly free from scrutiny under the antitrust laws, nor particularly suspect under them.

The Agencies recognize that the licensing of intellectual property is often international. The principles of antitrust analysis described in these Guidelines apply equally to domestic and international licensing arrangements. However, as described in the 1995 Department of Justice and Federal Trade Commission Antitrust Enforcement Guidelines for International Operations, considerations particular to international operations, such as jurisdiction and comity, may affect enforcement decisions when the arrangement is in an international context.

***440 2.2 Intellectual property and market power**

Market power is the ability profitably to maintain prices above, or output below, competitive levels for a significant period of time. [FN9] The Agencies will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner. Although the intellectual property right confers the power to exclude with respect to the specific product, process, or work in question, there will often be sufficient actual or potential close substitutes for such product, process, or work to prevent the exercise of market power. [FN10] If a patent or other form of intellectual property does confer market power, that market power does not by itself offend the antitrust laws. As with any other tangible or intangible asset that enables its owner to obtain significant supracompetitive profits, market power (or even a monopoly) that is solely "a consequence of a superior product, business acumen, or historic accident" does not violate the antitrust laws. [FN11] Nor does such market power impose on the intellectual property owner an obligation to license the use of that property to others. As in other antitrust contexts, however, market power could be illegally acquired or maintained, or, even if lawfully acquired and maintained, would be relevant to the ability of an intellectual property owner to harm competition through unreasonable conduct in connection with such property.

***441 2.3 Procompetitive benefits of licensing**

Intellectual property typically is one component among many in a production process and derives value from its combination with complementary factors. Complementary factors of production include manufacturing and distribution facilities, workforces, and other items of intellectual property. The owner of intellectual property has to arrange for its 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.

Licensing, cross-licensing, or otherwise transferring intellectual property (hereinafter "licensing") can facilitate integration of the licensed property with complementary factors of production. This integration can lead to more efficient exploitation of the intellectual property, benefiting consumers through the reduction of costs and the introduction of new products. Such arrangements increase the value of intellectual property to consumers and to the developers of the technology. By potentially increasing the expected returns from intellectual property, licensing also can increase the incentive for its creation and thus promote greater investment in research and development.

Sometimes the use of one item of intellectual property requires access to another. An item of intellectual property "blocks" another when the second cannot be practiced without using the first. For example, an improvement on a patented machine can be blocked by the patent on the machine. Licensing may promote the coordinated development of technologies that are in a blocking relationship.

> Field-of-use, territorial, and other limitations on intellectual property licenses may serve procompetitive ends by allowing the licensor to exploit its property as efficiently and effectively as possible. These various forms of exclusivity can be used to give a licensee an incentive to invest in the commercialization and distribution of products embodying the licensed intellectual property and to develop additional applications for the licensed property. The restrictions may do so, for example, by protecting the licensee against free-riding on the licensee's investments by other licensees or by the licensor. They may also increase the licensor's incentive to license, for example, by protecting the licensor from competition in the licensor's own technology in a market niche that it prefers to keep to itself. These benefits of licensing restrictions apply to patent, copyright, and trade secret licenses, and to know-how agreements. ***442 Example 1** [FN12]
>
> Situation: ComputerCo develops a new, copyrighted software program for inventory management. The program has wide application in the health field. ComputerCo licenses the program in an arrangement that imposes both field of use and territorial limitations. Some of ComputerCo's licenses permit use only in hospitals; others permit use only in group medical practices. ComputerCo charges different royalties for the different uses. All of ComputerCo's licenses permit use only in specified portions of the United States and in specified foreign countries. [FN13] The licenses contain no provisions that would prevent or discourage licensees from developing, using, or selling any other program, or from competing in any other good or service other than in the use of the licensed program. None of the licensees are actual or likely potential competitors of ComputerCo in the sale of inventory management programs.
>
> Discussion: The key competitive issue raised by the licensing arrangement is whether it harms competition among entities that would have been actual or likely potential competitors in the absence of the arrangement. Such harm could occur if, for example, the licenses anticompetitively foreclose access to competing technologies (in this case, most likely competing com-

puter programs), prevent licensees from developing their own competing technologies (again, in this case, most likely computer programs), or facilitate market allocation or price-fixing for any product or service supplied by the licensees. (See section 3.1.) If the license agreements contained such provisions, the Agency evaluating the arrangement would analyze its likely competitive effects as described in parts 3-5 of these Guidelines. In this hypothetical, there are no such provisions and thus the arrangement is merely a subdivision of the licensor's intellectual property among different fields of use and territories. The licensing arrangement does not appear likely to harm competition among entities that would have been actual or likely potential competitors if ComputerCo had chosen not to license the software program. The Agency therefore would be unlikely to object to this arrangement. Based on these facts, the result of the antitrust analysis would be the same whether the technology was protected by patent, copyright, or trade secret. The Agency's conclusion as to likely competitive effects could differ if, for example, the license barred licensees from using any other inventory management program.

***443 3. Antitrust concerns and modes of analysis**

**3.1 Nature of the concerns**

While intellectual property licensing arrangements are typically welfare-enhancing and procompetitive, antitrust concerns may nonetheless arise. For example, a licensing arrangement could include restraints that adversely affect competition in goods markets by dividing the markets among firms that would have competed using different technologies. See, e.g., Example 7. An arrangement that effectively merges the research and development activities of two of only a few entities that could plausibly engage in research and development in the relevant field might harm competition for development of new goods and services. See section 3.2.3. An acquisition of intellectual property may lessen competition in a relevant antitrust market. See section 5.7. The Agencies will focus on the actual effects of an arrangement, not on its formal terms.

The Agencies will not require the owner of intellectual property to create competition in its own technology. However, antitrust concerns may arise when a licensing arrangement harms competition among entities that would have been actual or likely potential competitors [FN14] in a relevant market in the absence of the license (entities in a "horizontal relationship"). A restraint in a licensing arrangement may harm such competition, for example, if it facilitates market division or price-fixing. In addition, license restrictions with respect to one market may harm such competition in another market by anticompetitively foreclosing access to, or significantly raising the price of, an important input, [FN15] or by facilitating coordination to increase price or reduce output. When it appears that such competition may be adversely affected, the Agencies will follow the analysis set forth below. See generally sections 3.4 and 4.2.

**3.2 Markets affected by licensing arrangements**

Licensing arrangements raise concerns under the antitrust laws if they are likely to affect adversely the prices, quantities, qualities, or varieties of goods and services [FN16] either currently or potentially available. The competitive effects of licensing ***444** arrangements often can be adequately assessed within the relevant markets for the goods affected by the arrangements. In such instances, the Agencies will delineate and analyze only goods markets. In other cases, however, the analysis may require the delineation of markets for technology or markets for research and development (innovation markets).

**3.2.1 Goods markets**

A number of different goods markets may be relevant to evaluating the effects of a licensing arrangement. A restraint in a licensing arrangement may have competitive effects in markets for final or intermediate goods made using the intellectual property, or it may have effects upstream, in markets for goods that are used as inputs, along with the intellectual property, to the production of other goods. In general, for goods markets affected by a licensing arrangement, the Agencies will approach the delineation of relevant market and the measurement of market share in the intellectual property area as in section 1 of the U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines. [FN17]

**3.2.2 Technology markets**

Technology markets consist of 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. [FN18] When rights to intellectual property are marketed separately from the products in which they are used, [FN19] the Agencies may rely on technology markets to analyze the competitive effects of a licensing arrangement.

***445 Example 2**

Situation: Firms Alpha and Beta independently develop different patented process technologies to manufacture the same off-patent drug for the treatment of a particular disease. Before the firms use their technologies internally or license them to third parties, they announce plans jointly to manufacture the drug, and to assign their manufacturing processes to the new manufacturing venture. Many firms are capable of using and have the incentive to use the licensed technologies to manufacture and distribute the drug; thus, the market for drug manufacturing and distribution is competitive. One of the Agencies is evaluating the likely competitive effects of the planned venture.

Discussion: The Agency would analyze the competitive effects of the proposed joint venture by first defining the relevant markets in which competition may be affected and then evaluating the likely competitive effects of the joint venture in the identified markets. (See Example 4 for a discussion of the Agencies' approach to joint venture analysis.) In this example, the structural effect of the joint venture in the relevant goods market for the manufacture and distribution of the drug is unlikely to be significant, because many firms in addition to the joint venture compete in that market. The joint venture might, however, increase the prices of the drug produced using Alpha's or Beta's technology by reducing competition in the relevant market for technology to manufacture the drug.

The Agency would delineate a technology market in which to evaluate likely competitive effects of the proposed joint venture. The Agency would identify other technologies that can be used to make the drug with levels of effectiveness and cost per dose comparable to that of the technologies owned by Alpha and Beta. In addition, the Agency would consider the extent to which competition from other drugs that are substitutes for the drug produced using Alpha's or Beta's technology would limit the ability of a hypothetical monopolist that owned both Alpha's and Beta's technology to raise its price.

To identify a technology's close substitutes and thus to delineate the relevant technology market, the Agencies will, if the data permit, identify the smallest group of technologies and goods over which a hypothetical monopolist of those technologies and goods likely would exercise market power--for example, by imposing a small but significant and nontransitory price increase. [FN20] The Agencies recognize that technology ***446** often is licensed in ways that are not readily quantifiable in monetary terms. [FN21] In such circumstances, the Agencies will delineate the relevant market by identifying other technologies and goods which buyers would substitute at a cost comparable to that of using the licensed technology.

In assessing the competitive significance of current and likely potential participants in a technology market, the Agencies will take into account all relevant evidence. When market share data are available and accurately reflect the competitive significance of market participants, the Agencies will include market share data in this assessment. The Agencies also will seek evidence of buyers' and market participants' assessments of the competitive significance of technology market participants. Such evidence is particularly important when market share data are unavailable, or do not accurately represent the competitive significance of market participants. When market share data or other indicia of market power are not available, and it appears that competing technologies are comparably efficient, [FN22] the Agencies will assign each technology the same market share. For new technologies, the Agencies generally will use the best available information to estimate market acceptance over a two-year period, beginning with commercial introduction.

**3.2.3 Research and development: Innovation markets**

If a licensing arrangement may adversely affect competition to develop new or improved goods or processes, the Agencies will analyze such an impact either as a separate competitive effect in relevant goods or technology markets, or as a competitive effect in a separate innovation market. A licensing arrangement may have competitive effects on innovation that cannot be adequately addressed through the analysis of goods or technology markets. For example, the arrangement may affect the development of goods that do not yet exist. [FN23] Alternatively, the arrangement may affect ***447** the development of new or improved goods or processes in geographic markets where there is no actual or likely potential competition in the relevant goods. [FN24]

An innovation market consists of the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development. The close substitutes are research and development efforts, technologies, and goods [FN25] that significantly constrain the exercise of market power with respect to the relevant research and development, for example by limiting the ability and incentive of a hypothetical monopolist to retard the pace of research and development. The Agencies will delineate an innovation market only when the capabilities to engage in the relevant research and development can be associated with specialized assets or characteristics of specific firms.

In assessing the competitive significance of current and likely potential participants in an innovation market, the Agencies will take into account all relevant evidence. When market share data are available and accurately reflect the competitive significance of market participants, the Agencies will include market share data in this assessment. The Agencies also will seek evidence of buyers' and market participants' assessments of the competitive significance of innovation market participants. Such evidence is particularly important when market share data are unavailable or do not accurately represent the competitive significance of market participants. The Agencies may base the market shares of participants in an innovation market on their shares of identifiable assets or characteristics upon which innovation depends, on shares of research and development expenditures, or on shares of a related product. When entities have comparable capabilities and incentives to pursue research and development that is a close substitute for the research and development activities of the parties to a licensing arrangement, the Agencies may assign equal market shares to such entities.

***448 Example 3**

Situation: Two companies that specialize in advanced metallurgy agree to cross-license future patents relating to the development of a new component for aircraft jet turbines. Innovation in the development of the component requires the capability to work with very high tensile strength materials for jet turbines. Aspects of the licensing arrangement raise the possibility that competition in research and development of this and related components will be lessened. One of the Agencies is considering whether to define an innovation market in which to evaluate the competitive effects of the arrangement.

Discussion: If the firms that have the capability and incentive to work with very high tensile strength materials for jet turbines can be reasonably identified, the Agency will consider defining a relevant innovation market for development of the new component. If the number of firms with the required capability and incentive to engage in research and development of very high tensile strength materials for aircraft jet turbines is small, the Agency may employ the concept of an innovation market to analyze the likely competitive effects of the arrangement in that market, or as an aid in analyzing competitive effects in technology or goods markets. The Agency would perform its analysis as described in parts 3-5.

If the number of firms with the required capability and incentive is large (either because there are a large number of such firms in the jet turbine industry, or because there are many firms in other industries with the required capability and incentive), then the Agency will conclude that the innovation market is competitive. Under these circumstances, it is unlikely that any single firm or plausible aggregation of firms could acquire a large enough share of the assets necessary for innovation to have an adverse impact on competition.

If the Agency cannot reasonably identify the firms with the required capability and incentive, it will not attempt to define an innovation market.

**Example 4**

Situation: Three of the largest producers of a plastic used in disposable bottles plan to engage in joint research and development to produce a new type of plastic that is rapidly biodegradable. The joint venture will grant to its partners (but to no one else) licenses to all patent rights and use of know-how. One of the Agencies is evaluating the likely competitive effects of the proposed joint venture.

Discussion: The Agency would analyze the proposed research and development joint venture using an analysis similar to that applied to other joint ventures. [FN26] The Agency ***449** would begin by defining the relevant markets in which to analyze the joint venture's likely competitive effects. In this case, a relevant market is an innovation market--research and development for biodegradable (and other environmentally friendly) containers. The Agency would seek to identify any other entities that would be actual or likely potential competitors with the joint venture in that relevant market. This would include those firms that have the capability and incentive to undertake research and development closely substitutable for the research and development proposed to be undertaken by the joint venture, taking into account such firms' existing technologies and technologies under development, R&D facilities, and other relevant assets and business circumstances. Firms possessing such capabilities and incentives would be included in the research and development market even if they are not competitors in relevant markets for related goods, such as the plastics currently produced by the joint venturers, although competitors in existing goods markets may often also compete in related innovation markets.

Having defined a relevant innovation market, the Agency would assess whether the joint venture is likely to have anticompetitive effects in that market. A starting point in this analysis is the degree of concentration in the relevant market and the market shares of the parties to the joint venture. If, in addition to the parties to the joint venture (taken collectively), there are at least four other independently controlled entities that possess comparable capabilities and incentives to undertake research and development of biodegradable plastics, or other products that would be close substitutes for such new plastics, the joint venture ordinarily would be unlikely to adversely affect competition in the relevant innovation market (cf. section 4.3). If there are fewer than four other independently controlled entities with similar capabilities and incentives, the Agency would consider whether the joint venture would give the parties to the joint venture an incentive and ability collectively to reduce investment in, or otherwise to retard the pace or scope of, research and development efforts. If the joint venture creates a significant risk of anticompetitive effects in the innovation market, the Agency would proceed to consider efficiency justifications for the venture, such as the potential for combining complementary R&D assets in such a way as to make successful innovation more likely, or to bring it about sooner, or to achieve cost reductions in research and development.

The Agency would also assess the likelihood that the joint venture would adversely affect competition in other relevant markets, including markets for products produced by the parties to the joint venture. The risk of such adverse competitive effects would be increased to the extent that, for example, the joint venture facilitates the exchange among the parties of competitively sensitive information relating to goods markets in which the parties currently compete or facilitates the coordination of competitive activities in such markets. The Agency would examine whether the joint venture imposes collateral restraints that might significantly restrict competition among the joint venturers in goods markets, and would examine whether such collateral restraints were reasonably necessary to achieve any efficiencies that are likely to be attained by the venture.

***450 3.3 Horizontal and vertical relationships**

As with other property transfers, antitrust analysis of intellectual property licensing arrangements examines whether the relationship among the parties to the arrangement is primarily horizontal or vertical in nature, or whether it has substantial aspects of both. A licensing arrangement has a vertical component when it affects activities that are in a complementary relationship, as is typically the case in a licensing arrangement. For example, the licensor's primary line of business may be in research and development, and the licensees, as manufacturers, may be buying the rights to use technology developed by the licensor. Alternatively, the licensor may be a component manufacturer owning intellectual property rights in a product that the licensee manufactures by combining the component with other inputs, or the licensor may manufacture the product, and the licensees may operate primarily in distribution and marketing.

In addition to this vertical component, the licensor and its licensees may also have a horizontal relationship. For analytical purposes, the Agencies ordinarily will treat a relationship between a licensor and its licensees, or between licensees, as horizontal when they would have been actual or likely potential competitors in a relevant market in the absence of the license.

The existence of a horizontal relationship between a licensor and its licensees does not, in itself, indicate that the arrangement is anticompetitive. Identification of such relationships is merely an aid in determining whether there may be anticompetitive effects arising from a licensing arrangement. Such a relationship need not give rise to an anticompetitive effect, nor does a purely vertical relationship assure that there are no anticompetitive effects.

The following examples illustrate different competitive relationships among a licensor and its licensees.

**Example 5**

Situation: AgCo, a manufacturer of farm equipment, develops a new, patented emission control technology for its tractor engines and licenses it to FarmCo, another farm equipment manufacturer. AgCo's emission control technology is far superior to the technology currently owned and used by FarmCo, so much so that FarmCo's technology does not significantly constrain the prices that AgCo could charge for its technology. AgCo's emission control patent has a broad scope. It is likely that any improved emissions control technology that FarmCo could develop in the foreseeable future would infringe AgCo's patent.

***451** Discussion: Because FarmCo's emission control technology does not significantly constrain AgCo's competitive conduct with respect to its emission control technology, AgCo's and FarmCo's emission control technologies are not close substitutes for each other. FarmCo is a consumer of AgCo's technology and is not an actual competitor of AgCo in the relevant market for superior emission control technology of the kind licensed by AgCo. Furthermore, FarmCo is not a likely potential competitor of AgCo in the relevant market because, even if FarmCo could develop an improved emission control technology, it is likely that it would infringe AgCo's patent. This means that the relationship between AgCo and FarmCo with regard to the supply and use of emissions control technology is vertical. Assuming that AgCo and FarmCo are actual or likely potential competitors in sales of farm equipment products, their relationship is horizontal in the relevant markets for farm equipment.

**Example 6**

Situation: FarmCo develops a new valve technology for its engines and enters into a cross-licensing arrangement with AgCo, whereby AgCo licenses its emission control technology to FarmCo and FarmCo licenses its valve technology to AgCo. AgCo already owns an alternative valve technology that can be used to achieve engine performance similar to that using FarmCo's valve technology and at a comparable cost to consumers. Before adopting FarmCo's technology. AgCo was using its own valve technology in its production of engines and was licensing (and continues to license) that technology for use by others. As in Example 5, FarmCo does not own or control an emission control technology that is a close substitute for the technology licensed from AgCo. Furthermore, as in Example 5, FarmCo is not likely to develop an improved emission control technology that would be a close substitute for AgCo's technology, because of AgCo's blocking patent.

Discussion: FarmCo is a consumer and not a competitor of AgCo's emission control technology. As in Example 5, their relationship is vertical with regard to this technology. The relationship between AgCo and FarmCo in the relevant market that includes engine valve technology is vertical in part and horizontal in part. It is vertical in part because AgCo and FarmCo stand in a complementary relationship, in which AgCo is a consumer of a technology supplied by FarmCo. However, the relationship between AgCo and FarmCo in the relevant market that includes engine valve technology is also horizontal in part, because FarmCo and AgCo are actual competitors in the licensing of valve technology that can be used to achieve similar engine performance at a comparable cost. Whether the firms license their valve technologies to others is not important for the conclusion that the firms have a horizontal relationship in this relevant market. Even if AgCo's use of its valve technology were solely captive to its own production, the fact that the two valve technologies are substitutable at comparable cost means that the two firms have a horizontal relationship.

As in Example 5, the relationship between AgCo and FarmCo is horizontal in the relevant markets for farm equipment.

***452 3.4 Framework for evaluating licensing restraints**

In the vast majority of cases, restraints in intellectual property licensing arrangements are evaluated under the rule of reason. The Agencies' general approach in analyzing a licensing restraint under the rule of reason is to inquire whether the restraint is likely to have anticompetitive effects and, if so, whether the restraint is reasonably necessary to achieve procompetitive benefits that outweigh those anticompetitive effects. See Federal Trade Commission v. Indiana Federation of Dentists, 476 U.S.

447 (1986); NCAA v. Board of Regents of the University of Oklahoma, 468 U.S. 85 (1984); Broadcast Music, Inc. v. Columbia Broadcasting System, Inc., 441 U.S. 1 (1979); 7 Phillip E. Areeda, Antitrust Law § 1502 (1986). See also part 4.

In some cases, however, the courts conclude that 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. Federal Trade Commission v. Superior Court Trial Lawyers Association, 493 U.S. 411, 433 (1990); National Society of Professional Engineers v. United States, 435 U.S. 679, 692 (1978). Among the restraints that have been held per se unlawful are naked price-fixing, output restraints, and market division among horizontal competitors, as well as certain group boycotts and resale price maintenance.

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. See Broadcast Music, 441 U.S. at 16-24. In general, licensing arrangements promote such integration because they facilitate the combination of the licensor's intellectual property with complementary factors of production owned by the licensee. A restraint in a licensing arrangement may further such integration by, for example, aligning the incentives of the licensor and the licensees to promote the development and marketing of the licensed technology, or by substantially reducing transactions costs. If there is no efficiency-enhancing integration of economic activity and if the type of restraint is one that has been accorded per se treatment, the Agencies will challenge the restraint under the per se rule. Otherwise, the Agencies will apply a rule of reason analysis.

Application of the rule of reason generally requires a comprehensive inquiry into market conditions. (See sections 4.1-4.3.) However, that inquiry may be truncated in certain circumstances. If the Agencies conclude that a restraint has no likely anticompetitive effects, they will treat it as reasonable, without an elaborate analysis of market power or the justifications for the restraint. Similarly, if a restraint facially ***453** appears to be of a kind that would always or almost always tend to reduce output or increase prices, [FN27] and the restraint is not reasonably related to efficiencies, the Agencies will likely challenge the restraint without an elaborate analysis of particular industry circumstances. [FN28] See Indiana Federation of Dentists, 476 U.S. at 459-60; NCAA, 468 U.S. at 109.

**Example 7**

Situation: Gamma, which manufactures Product X using its patented process, offers a license for its process technology to every other manufacturer of Product X, each of which competes world-wide with Gamma in the manufacture and sale of X. The process technology does not represent an economic improvement over the available existing technologies. Indeed, although most manufacturers accept licenses from Gamma, none of the licensees actually uses the licensed technology. The licenses provide that each manufacturer has an exclusive right to sell Product X manufactured using the licensed technology in a designated geographic area and that no manufacturer may sell Product X, however manufactured, outside the designated territory.

Discussion: The manufacturers of Product X are in a horizontal relationship in the goods market for Product X. Any manufacturers of Product X that control technologies that are substitutable at comparable cost for Gamma's process are also horizontal competitors of Gamma in the relevant technology market. The licensees of Gamma's process technology are technically in a vertical relationship, although that is not significant in this example because they do not actually use Gamma's technology.

The licensing arrangement restricts competition in the relevant goods market among manufacturers of Product X by requiring each manufacturer to limit its sales to an exclusive territory. Thus, competition among entities that would be actual competitors in the absence of the licensing arrangement is restricted. Based on the facts set forth above, the licensing arrangement does not involve a useful transfer of technology, and thus it is unlikely that the restraint on sales outside the designated territories contributes to an efficiency-enhancing integration of economic activity. Consequently, the evaluating Agency would ***454** be likely to challenge the arrangement under the per se rule as a horizontal territorial market allocation scheme and to view the intellectual property aspects of the arrangement as a sham intended to cloak its true nature.

If the licensing arrangement could be expected to contribute to an efficiency-enhancing integration of economic activity, as might be the case if the licensed technology were an advance over existing processes and used by the licensees, the Agency would analyze the arrangement under the rule of reason applying the analytical framework described in this section.

In this example, the competitive implications do not generally depend on whether the licensed technology is protected by patent, is a trade secret or other know-how, or is a computer program protected by copyright; nor do the competitive implications generally depend on whether the allocation of markets is territorial, as in this example, or functional, based on fields of use.

**4. General principles concerning the Agencies' evaluation of licensing** arrangements under the rule of reason

**4.1 Analysis of anticompetitive effects**

The existence of anticompetitive effects resulting from a restraint in a licensing arrangement will be evaluated on the basis of the analysis described in this section.

**4.1.1 Market structure, coordination, and foreclosure**

When a licensing arrangement affects parties in a horizontal relationship, a restraint in that arrangement may increase the risk of coordinated pricing, output restrictions, or the acquisition or maintenance of market power. Harm to competition also may occur if the arrangement poses a significant risk of retarding or restricting the development of new or improved goods or processes. The potential for competitive harm depends in part on the degree of concentration in, the difficulty of entry into, and the responsiveness of supply and demand to changes in price in the relevant markets. Cf. 1992 Horizontal Merger Guidelines §§ 1.5, 3.

When the licensor and licensees are in a vertical relationship, the Agencies will analyze whether the licensing arrangement may harm competition among entities in a horizontal relationship at either the level of the licensor or the licensees, or possibly in another relevant market. Harm to competition from a restraint may occur if it anticompetitively forecloses access to, or increases competitors' costs of obtaining, ***455** important inputs, or facilitates coordination to raise price or restrict output. The risk of anticompetitively foreclosing access or increasing competitors' costs is related to the proportion of the markets affected by the licensing restraint; other characteristics of the relevant markets, such as concentration, difficulty of entry, and the responsiveness of supply and demand to changes in price in the relevant markets; and the duration of the restraint. A licensing arrangement does not foreclose competition merely because some or all of the potential licensees in an industry choose to use the licensed technology to the exclusion of other technologies. Exclusive use may be an efficient consequence of the licensed technology having the lowest cost or highest value.

Harm to competition from a restraint in a vertical licensing arrangement also may occur if a licensing restraint facilitates coordination among entities in a horizontal relationship to raise prices or reduce output in a relevant market. For example, if owners of competing technologies impose similar restraints on their licensees, the licensors may find it easier to coordinate their pricing. Similarly, licensees that are competitors may find it easier to coordinate their pricing if they are subject to common restraints in licenses with a common licensor or competing licensors. The risk of anticompetitive coordination is increased when the relevant markets are concentrated and difficult to enter. The use of similar restraints may be common and procompetitive in an industry, however, because they contribute to efficient exploitation of the licensed property.

**4.1.2 Licensing arrangements Involving exclusivity**

A licensing arrangement may involve exclusivity in two distinct respects. First, the licensor may grant one or more exclusive licenses, which restrict the right of the licensor to license others and possibly also to use the technology itself. Generally, an exclusive license may raise antitrust concerns only if the licensees themselves, or the licensor and its licensees, are in a horizontal relationship. Examples of arrangements involving exclusive licensing that may give rise to antitrust concerns include cross-licensing by parties collectively possessing market power (see section 5.5), grantbacks (see section 5.6), and acquisitions of intellectual property rights (see section 5.7).

A non-exclusive license of intellectual property that does not contain any restraints on the competitive conduct of the licensor or the licensee generally does not present antitrust concerns even if the parties to the license are in a horizontal relationship, because the non-exclusive license normally does not diminish competition that would occur in its absence.

A second form of exclusivity, exclusive dealing, arises when a license prevents or restrains the licensee from licensing, selling, distributing, or using competing ***456** technologies. See section 5.4. Exclusivity may be achieved by an explicit exclusive dealing term in the license or by other provisions such as compensation terms or other economic incentives. Such restraints may anticompetitively foreclose access to, or increase competitors' costs of obtaining, important inputs, or facilitate coordination to raise price or reduce output, but they also may have procompetitive effects. For example, a licensing arrangement that prevents the licensee from dealing in other technologies may encourage the licensee to develop and market the licensed technology or specialized applications of that technology. See, e.g., Example 8. The Agencies will take into account such procompetitive effects in evaluating the reasonableness of the arrangement. See section 4.2.

The antitrust principles that apply to a licensor's grant of various forms of exclusivity to and among its licensees are similar to those that apply to comparable vertical restraints outside the licensing context, such as exclusive territories and exclusive dealing. However, the fact that intellectual property may in some cases be misappropriated more easily than other forms of property may justify the use of some restrictions that might be anticompetitive in other contexts.

As noted earlier, the Agencies will focus on the actual practice and its effects, not on the formal terms of the arrangement. A license denominated as non-exclusive (either in the sense of exclusive licensing or in the sense of exclusive dealing) may nonetheless give rise to the same concerns posed by formal exclusivity. A non-exclusive license may have the effect of exclusive licensing if it is structured so that the licensor is unlikely to license others or to practice the technology itself. A license that does not explicitly require exclusive dealing may have the effect of exclusive dealing if it is structured to increase significantly a licensee's cost when it uses competing technologies. However, a licensing arrangement will not automatically raise these concerns merely because a party chooses to deal with a single licensee or licensor, or confines his activity to a single field of use or location, or because only a single licensee has chosen to take a license.

**Example 8**

Situation: NewCo, the inventor and manufacturer of a new flat panel display technology, lacking the capability to bring a flat panel display product to market, grants BigCo an exclusive license to sell a product embodying NewCo's technology. BigCo does not currently sell, and is not developing (or likely to develop), a product that would compete with the product embodying the new technology and does not control rights to another display technology. Several firms offer competing displays, BigCo accounts for only a small proportion of the outlets for distribution of display products, and entry into the ***457** manufacture and distribution of display products is relatively easy. Demand for the new technology is uncertain and successful market penetration will require considerable promotional effort. The license contains an exclusive dealing restriction preventing BigCo from selling products that compete with the product embodying the licensed technology.

Discussion: This example illustrates both types of exclusivity in a licensing arrangement. The license is exclusive in that it restricts the right of the licensor to grant other licenses. In addition, the license has an exclusive dealing component in that it restricts the licensee from selling competing products.

The inventor of the display technology and its licensee are in a vertical relationship and are not actual or likely potential competitors in the manufacture or sale of display products or in the sale or development of technology. Hence, the grant of an exclusive license does not affect competition between the licensor and the licensee. The exclusive license may promote competition in the manufacturing and sale of display products by encouraging BigCo to develop and promote the new product in the face of uncertain demand by rewarding BigCo for its efforts if they lead to large sales. Although the license bars the licensee from selling competing products, this exclusive dealing aspect is unlikely in this example to harm competition by anticompetitively foreclosing access, raising competitors' costs of inputs, or facilitating anticompetitive pricing because the relevant product market is unconcentrated, the exclusive dealing restraint affects only a small proportion of the outlets for distribution of display products, and entry is easy. On these facts, the evaluating Agency would be unlikely to challenge the arrangement.

**4.2 Efficiencies and justifications**

If the Agencies conclude, upon an evaluation of the market factors described in section 4.1, that a restraint in a licensing arrangement is unlikely to have an anticompetitive effect, they will not challenge the restraint. If the Agencies conclude that the restraint has, or is likely to have, an anticompetitive effect, they will consider whether the restraint is reasonably necessary to achieve procompetitive efficiencies. If the restraint is reasonably necessary, the Agencies will balance the procompetitive efficiencies and the anticompetitive effects to determine the probable net effect on competition in each relevant market.

The Agencies' comparison of anticompetitive harms and procompetitive efficiencies is necessarily a qualitative one. The risk of anticompetitive effects in a particular case may be insignificant compared to the expected efficiencies, or vice versa. As the expected anticompetitive effects in a particular licensing arrangement increase, the Agencies will require evidence establishing a greater level of expected efficiencies.

***458** The existence of practical and significantly less restrictive alternatives is relevant to a determination of whether a restraint is reasonably necessary. If it is clear that the parties could have achieved similar efficiencies by means that are significantly less restrictive, then the Agencies will not give weight to the parties' efficiency claim. In making this assessment, however, the Agencies will not engage in a search for a theoretically least restrictive alternative that is not realistic in the practical prospective business situation faced by the parties.

When a restraint has, or is likely to have, an anticompetitive effect, the duration of that restraint can be an important factor in determining whether it is reasonably necessary to achieve the putative procompetitive efficiency. The effective duration of a restraint may depend on a number of factors, including the option of the affected party to terminate the arrangement unilaterally and the presence of contract terms (e.g., unpaid balances on minimum purchase commitments) that encourage the licensee to renew a license arrangement. Consistent with their approach to less restrictive alternative analysis generally, the Agencies will not attempt to draw fine distinctions regarding duration; rather, their focus will be on situations in which the duration clearly exceeds the period needed to achieve the procompetitive efficiency.

The evaluation of procompetitive efficiencies, of the reasonable necessity of a restraint to achieve them, and of the duration of the restraint, may depend on the market context. A restraint that may be justified by the needs of a new entrant, for example, may not have a procompetitive efficiency justification in different market circumstances. Cf. United States v. Jerrold Electronics Corp., 187 F. Supp. 545 (E.D. Pa. 1960), aff'd per curiam, 365 U.S. 567 (1961).

**4.3 Antitrust "safety zone"**

Because licensing arrangements often promote innovation and enhance competition, the Agencies believe that an antitrust "safety zone" is useful in order to provide some degree of certainty and thus to encourage such activity. [FN29] Absent extraordinary circumstances, the Agencies will not challenge a restraint in an intellectual property licensing arrangement if (1) the restraint is not facially anticompetitive [FN30] and (2) the ***459** licensor and its licensees collectively account for no more than twenty percent of each relevant market significantly affected by the restraint. This "safety zone" does not apply to those transfers of intellectual property rights to which a merger analysis is applied. See section 5.7.

Whether a restraint falls within the safety zone will be determined by reference only to goods markets unless the analysis of goods markets alone would inadequately address the effects of the licensing arrangement on competition among technologies or in research and development.

If an examination of the effects on competition among technologies or in research development is required, and if market share data are unavailable or do not accurately represent competitive significance, the following safety zone criteria will apply. Absent extraordinary circumstances, the Agencies will not challenge a restraint in an intellectual property licensing arrangement that may affect competition in a technology market if (1) the restraint is not facially anticompetitive and (2) there are four or more independently controlled technologies in addition to the technologies controlled by the parties to the licensing arrangement that may be substitutable for the licensed technology at a comparable cost to the user. Absent extraordinary circumstances, the Agencies will not challenge a restraint in an intellectual property licensing arrangement that may affect competition in an innovation market if (1) the restraint is not facially anticompetitive and (2) four or more independently controlled entities in addition to the parties to the licensing arrangement possess the required specialized assets or characteristics and the incentive to engage in research and development that is a close substitute of the research and development activities of the parties to the licensing agreement. [FN31]

The Agencies emphasize that licensing arrangements are not anticompetitive merely because they do not fall within the scope of the safety zone. Indeed, it is likely that the great majority of licenses falling outside the safety zone are lawful and procompetitive. The safety zone is designed to provide owners of intellectual property with a degree of certainty in those situations in which anticompetitive effects are so unlikely that the arrangements may be presumed not to be anticompetitive without an inquiry into particular industry circumstances. It is not intended to suggest that parties should conform to the safety zone or to discourage parties falling outside the safety zone from ***460** adopting restrictions in their license arrangements that are reasonably necessary to achieve an efficiency-enhancing integration of economic activity. The Agencies will analyze arrangements falling outside the safety zone based on the considerations outlined in parts 3-5.

The status of a licensing arrangement with respect to the safety zone may change over time. A determination by the Agencies that a restraint in a licensing arrangement qualifies for inclusion in the safety zone is based on the factual circumstances prevailing at the time of the conduct at issue. [FN32]

**5. Application of general principles**

**5.0** This section illustrates the application of the general principles discussed above to particular licensing restraints and to arrangements that involve the cross-licensing, pooling, or acquisition of intellectual property. The restraints and arrangements identified are typical of those that are likely to receive antitrust scrutiny; however, they are not intended as an exhaustive list of practices that could raise competitive concerns.

**5.1 Horizontal restraints**

The existence of a restraint in a licensing arrangement that affects parties in a horizontal relationship (a "horizontal restraint") does not necessarily cause the arrangement to be anticompetitive. As in the case of joint ventures among horizontal competitors, licensing arrangements among such competitors may promote rather than hinder competition if they result in integrative efficiencies. Such efficiencies may arise, for example, from the realization of economies of scale and the integration of complementary research and development, production, and marketing capabilities.

Following the general principles outlined in section 3.4, horizontal restraints often will be evaluated under the rule of reason. In some circumstances, however, that analysis may be truncated; additionally, some restraints may merit per se treatment, including price fixing, allocation of markets or customers, agreements to reduce output, and certain group boycotts.

***461 Example 9**

Situation: Two of the leading manufacturers of a consumer electronic product hold patents that cover alternative circuit designs for the product. The manufacturers assign their patents to a separate corporation wholly owned by the two firms. That corporation licenses the right to use the circuit designs to other consumer product manufacturers and establishes the license royalties. None of the patents is blocking; that is, each of the patents can be used without infringing a patent owned by the other firm. The different circuit designs are substitutable in that each permits the manufacture at comparable cost to consumers of products that consumers consider to be interchangeable. One of the Agencies is analyzing the licensing arrangement.

Discussion: In this example, the manufacturers are horizontal competitors in the goods market for the consumer product and in the related technology markets. The competitive issue with regard to a joint assignment of patent rights is whether the assignment has an adverse impact on competition in technology and goods markets that is not outweighed by procompetitive efficiencies, such as benefits in the use or dissemination of the technology. Each of the patent owners has a right to exclude others from using its patent. That right does not extend, however, to the agreement to assign rights jointly. To the extent that the patent rights cover technologies that are close substitutes, the joint determination of royalties likely would result in higher royalties and higher goods prices than would result if the owners licensed or used their technologies independently. In the absence of evidence establishing efficiency-enhancing integration from the joint assignment of patent rights, the Agency may conclude that the joint marketing of competing patent rights constitutes horizontal price fixing and could be challenged as a per se unlawful horizontal restraint of trade. If the joint marketing arrangement results in an efficiency-enhancing integration, the Agency would evaluate the arrangement under the rule of reason. However, the Agency may conclude that the anticompetitive effects are sufficiently apparent, and the claimed integrative efficiencies are sufficiently weak or not reasonably related to the restraints, to warrant challenge of the arrangement without an elaborate analysis of particular industry circumstances (see section 3.4).

**5.2 Resale price maintenance**

Resale price maintenance is illegal when "commodities have passed into the channels of trade and are owned by dealers." Dr. Miles Medical Co. v. John D. Park & Sons Co., 220 U.S. 373, 408 (1911). It has been held per se illegal for a licensor of an intellectual property right in a product to fix a licensee's resale price of that product. United States v. Univis Lens Co., 316 U.S. 241 (1942); Ethyl Gasoline Corp. v. United ***462** that technology), increases licensors' incentives to develop or refine the licensed technology, or otherwise increases competition and enhances output in a relevant market. (See section 4.2 and Example 8.)

**5.5 Cross-licensing and pooling arrangements**

Cross-licensing and pooling arrangements are agreements of two or more owners of different items of intellectual property to license one another or third parties. These arrangements may provide procompetitive benefits by integrating complementary technologies, reducing transaction costs, clearing blocking positions, and avoiding costly infringement litigation. By promoting the dissemination of technology, cross-licensing and pooling arrangements are often procompetitive.

Cross-licensing and pooling arrangements can have anticompetitive effects in certain circumstances. For example, collective price or output restraints in pooling arrangements, such as the joint marketing of pooled intellectual property rights with collective price setting or coordinated output restrictions, may be deemed unlawful if they do not contribute to an efficiency-enhancing integration of economic activity among the participants. Compare NCAA 468 U.S. at 114 (output restriction on college football broadcasting held unlawful because it was not reasonably related to any purported justification) with Broadcast Music, 441 U.S. at 23 (blanket license for music copyrights found not per se illegal because the cooperative price was necessary to the creation of a new product). When cross-licensing or pooling arrangements are mechanisms to accomplish naked price fixing or market division, they are subject to challenge under the per se rule. See United States v. New Wrinkle, Inc., 342 U.S. 371 (1952) (price fixing).

Settlements involving the cross-licensing of intellectual property rights can be an efficient means to avoid litigation and, in general, courts favor such settlements. When such cross-licensing involves horizontal competitors, however, the Agencies will consider whether the effect of the settlement is to diminish competition among entities that would have been actual or likely potential competitors in a relevant market in the absence of the cross-license. In the absence of offsetting efficiencies, such settlements may be challenged as unlawful restraints of trade. Cf. United States v. Singer Manufacturing Co., 374 U.S. 174 (1963) (cross-license agreement was part of broader combination to exclude competitors).

Pooling arrangements generally need not be open to all who would like to join. However, exclusion from cross-licensing and pooling arrangements among parties that collectively possess market power may, under some circumstances, harm competition. Cf. Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co., 472 U.S. ***463** 284 (1985) (exclusion of a competitor from a purchasing cooperative not per se unlawful absent a showing of market power). In general, exclusion from a pooling or cross-licensing arrangement among competing technologies is unlikely to have anticompetitive effects unless (1) excluded firms cannot effectively compete in the relevant market for the good incorporating the licensed technologies and (2) the pool participants collectively possess market power in the relevant market. If these circumstances exist, the Agencies will evaluate whether the arrangement's limitations on participation are reasonably related to the efficient development and exploitation of the pooled technologies and will assess the net effect of those limitations in the relevant market. See section 4.2.

Another possible anticompetitive effect of pooling arrangements may occur if the arrangement deters or discourages participants from engaging in research and development, thus retarding innovation. For example, a pooling arrangement that requires members to grant licenses to each other for current and future technology at minimal cost may reduce the incentives of its members to engage in research and development because members of the pool have to share their successful research and development and each of the members can free ride on the accomplishments of other pool members. See generally United States v. Mfrs. Aircraft Ass'n, Inc., 1976-1 Trade Cas. (CCH) ¶ 60,810 (S.D.N.Y. 1975); United States v. Automobile Mfrs. Ass'n, 307 F. Supp. 617 (C.D. Cal 1969), appeal dismissed sub nom. City of New York v. United States, 397 U.S. 248 (1970), modified sub nom. United States v. Motor Vehicle Mfrs. Ass'n, 1982-83 Trade Cas. (CCH) ¶ 65,088 (C.D. Cal. 1982). However, such an arrangement can have procompetitive benefits, for example, by exploiting economies of scale and integrating complementary capabilities of the pool members, (including the clearing of blocking positions), and is likely to cause competitive problems only when the arrangement includes a large fraction of the potential research and development in an innovation market. See section 3.2.3 and Example 4.

**Example 10**

Situation: As in Example 9, two of the leading manufacturers of a consumer electronic product hold patents that cover alternative circuit designs for the product. The manufacturers assign several of their patents to a separate corporation wholly owned by the two firms. That corporation licenses the right to use the circuit designs to other consumer product manufacturers and establishes the license royalties. In this example, however, the manufacturers assign to the separate corporation only patents that are blocking. None of the patents assigned to the corporation can be used without infringing a patent owned by the other firm.

***464** Discussion: Unlike the previous example, the joint assignment of patent rights to the wholly owned corporation in this example does not adversely affect competition in the licensed technology among entities that would have been actual or likely potential competitors in the absence of the licensing arrangement. Moreover, the licensing arrangement is likely to have procompetitive benefits in the use of the technology. Because the manufacturers' patents are blocking, the manufacturers are not in a horizontal relationship with respect to those patents. None of the patents can be used without the right to a patent owned by the other firm, so the patents are not substitutable. As in Example 9, the firms are horizontal competitors in the relevant goods market. In the absence of collateral restraints that would likely raise price or reduce output in the relevant goods market or in any other relevant antitrust market and that are not reasonably related to an efficiency-enhancing integration of economic activity, the evaluating Agency would be unlikely to challenge this arrangement.

**5.6 Grantbacks**

A grantback is an arrangement under which a licensee agrees to extend to the licensor of intellectual property the right to use the licensee's improvements to the licensed technology. Grantbacks can have procompetitive effects, especially if they are nonexclusive. Such arrangements provide a means for the licensee and the licensor to share risks and reward the licensor for making possible further innovation based on or informed by the licensed technology, and both promote innovation in the first place and promote the subsequent licensing of the results of the innovation. Grantbacks may adversely affect competition, however, if they substantially reduce the licensee's incentives to engage in research and development and thereby limit rivalry in innovation markets.

A non-exclusive grantback allows the licensee to practice its technology and license it to others. Such a grantback provision may be necessary to ensure that the licensor is not prevented from effectively competing because it is denied access to improvements developed with the aid of its own technology. Compared with an exclusive grantback, a non-exclusive grantback, which leaves the licensee free to license improvements technology to others, is less likely to have anticompetitive effects.

The Agencies will evaluate a grantback provision under the rule of reason, see generally Transparent-Wrap Machine Corp. v. Stokes & Smith Co., 329 U.S. 637, 645-48 (1947) (grantback provision in technology license is not per se unlawful), considering its likely effects in light of the overall structure of the licensing arrangement and conditions in the relevant markets. An important factor in the Agencies' analysis of a grantback will be whether the licensor has market power in a relevant technology ***465** or innovation market. If the Agencies determine that a particular grantback provision is likely to reduce significantly licensees' incentives to invest in improving the licensed technology, the Agencies will consider the extent to which the grantback provision has offsetting procompetitive effects, such as (1) promoting dissemination of licensees' improvements to the licensed technology, (2) increasing the licensors' incentives to disseminate the licensed technology, or (3) otherwise increasing competition and output in a relevant technology or innovation market. See section 4.2. In addition, the Agencies will consider the extent to which grantback provisions in the relevant markets generally increase licensors' incentives to innovate in the first place.

**5.7 Acquisition of intellectual property rights**

Certain transfers of intellectual property rights are most appropriately analyzed by applying the principles and standards used to analyze mergers, particularly those in the 1992 Horizontal Merger Guidelines. The Agencies will apply a merger analysis to an outright sale by an intellectual property owner of all of its rights to that intellectual property and to a transaction in which a person obtains through grant, sale, or other transfer an exclusive license for intellectual property (i.e., a license that precludes all other persons, including the licensor, from using the licensed intellectual property). [FN37] Such transactions may be assessed under section 7 of the Clayton Act, sections 1 and 2 of the Sherman Act, and section 5 of the Federal Trade Commission Act.

**Example 11**

Situation: Omega develops a new, patented pharmaceutical for the treatment of a particular disease. The only drug on the market approved for the treatment of this disease is sold by Delta. Omega's patented drug has almost completed regulatory approval by the Food and Drug Administration. Omega has invested considerable sums in product development and market testing, and initial results show that Omega's drug would be a significant competitor to Delta's. However, rather than enter the market as a direct competitor of Delta. Omega licenses to Delta the right to manufacture and sell Omega's patented drug. The license agreement with Delta is nominally nonexclusive. However, Omega has rejected all requests by other firms to obtain a license to manufacture and sell Omega's patented drug, despite offers by those firms of terms that are reasonable in relation to those in Delta's license.

Discussion: Although Omega's license to Delta is nominally nonexclusive, the circumstances indicate that it is exclusive in fact because Omega has rejected all reasonable ***466** offers by other firms for licenses to manufacture and sell Omega's patented drug. The facts of this example indicate that

Omega would be a likely potential competitor of Delta in the absence of the licensing arrangement, and thus they are in a horizontal relationship in the relevant goods market that includes drugs for the treatment of this particular disease. The evaluating Agency would apply a merger analysis to this transaction, since it involves an acquisition of a likely potential competitor.

**6. Enforcement of invalid intellectual property rights**

The Agencies may challenge the enforcement of invalid intellectual property rights as antitrust violations. Enforcement or attempted enforcement of a patent obtained by fraud on the Patent and Trademark Office or the Copyright Office may violate section 2 of the Sherman Act, if all the elements otherwise necessary to establish a section 2 charge are proved, or section 5 of the Federal Trade Commission Act. Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp., 382 U.S. 172 (1965) (patents); American Cyanamid Co., 72 F.T.C. 623, 684-85 (1967), aff'd sub. nom. Charles Pfizer & Co., 401 F.2d 574 (6th Cir. 1968), cert. denied, 394 U.S. 920 (1969) (patents); Michael Anthony Jewelers, Inc. v. Peacock Jewelry, Inc., 795 F. Supp. 639. 647 (S.D.N.Y. 1992) (copyrights). Inequitable conduct before the Patent and Trademark Office will not be the basis of a section 2 claim unless the conduct also involves knowing and willful fraud and the other elements of a section 2 claim are present. Argus Chemical Corp. v. Fibre Glass-Evercoat, Inc., 812 F.2d 1381, 1384-85 (Fed. Cir. 1987). Actual or attempted enforcement of patents obtained by inequitable conduct that falls short of fraud under some circumstances may violate section 5 of the Federal Trade Commission Act, American Cyanamid Co., supra. Objectively baseless litigation to enforce invalid intellectual property rights may also constitute an element of a violation of the Sherman Act. See Professional Real Estate Investors, Inc. v. Columbia Pictures Industries, Inc., 113 S. Ct. 1920, 1928 (1993) (copyrights); Handgards, Inc. v. Ethicon, Inc., 743 F.2d 1282, 1289 (9th Cir. 1984), cert. denied, 469 U.S. 1190 (1985) (patents); Handgards, Inc. v. Ethicon, Inc., 601 F.2d 986, 992-96 (9th Cir. 1979), cert. denied, 444 U.S. 1025 (1980) (patents); CVD, Inc. v. Raytheon Co., 769 F.2d 842 (1st Cir. 1985) (trade secrets), cert. denied, 475 U.S. 1016 (1986).

[FNa1]. These Guidelines supersede section 3.6 in Part I, "Intellectual Property Licensing Arrangements," and cases 6, 10, 11, and 12 in Part II of the U.S. Department of Justice 1988 Antitrust Enforcement Guidelines for International Operations.

[FN1]. These Guidelines do not cover the antitrust treatment of trademarks. Although the same general antitrust principles that apply to other forms of intellectual property apply to trademarks as well, these Guidelines deal with technology transfer and innovation-related issues that typically arise with respect to patents, copyrights, trade secrets, and know-how agreements, rather than with product-differentiation issues that typically arise with respect to trademarks.

[FN2]. As is the case with all guidelines, users should rely on qualified counsel to assist them in evaluating the antitrust risk associated with any contemplated transaction or activity. No set of guidelines can possibly indicate how the Agencies will assess the particular facts of every case. Parties who wish to know the Agencies' specific enforcement intentions with respect to any particular transaction should consider seeking a Department of Justice business review letter pursuant to 28 C.F.R. § 50.6 or a Federal Trade Commission Advisory Opinion pursuant to 16 C.F.R. §§ 1.1-1.4.

[FN3]. See 35 U.S.C. § 154 (1988). Section 532(a) of the Uruguay Round Agreements Act, Pub. L. No. 103-465, 108 Stat. 4809, 4983 (1994) would change the length of patent protection to a term beginning on the date at which the patent issues and ending twenty years from the date on which the application for the patent was filed.

[FN4]. See 17 U.S.C. § 102 (1988 & Supp. V 1993). Copyright protection lasts for the author's life plus 50 years, or 75 years from first publication (or 100 years from creation, whichever expires first) for works made for hire. See 17 U.S.C. § 302 (1988). The principles stated in these Guidelines also apply to protection of mask works fixed in a semiconductor chip product (see 17 U.S.C. § 901 et seq. (1988)), which is analogous to copyright protection for works of authorship.

[FN5]. See 17 U.S.C. § 102(b) (1988).

[FN6]. Trade secret protection derives from state law. See generally Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470 (1974).

[FN7]. "[T]he aims and objectives of patent and antitrust laws may seem, at first glance, wholly at odds. However, the two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry and competition." Atari Games Corp. v. Nintendo of America, Inc., 897 F.2d 1572, 1576 (Fed. Cir. 1990).

[FN8]. As with other forms of property, the power to exclude others from the use of intellectual property may vary substantially, depending on the nature of the property and its status under federal or state law. The greater or lesser legal power of an owner to exclude others is also taken into account by standard antitrust analysis.

[FN9]. Market power can be exercised in other economic dimensions, such as quality, service, and the development of new or improved goods and processes. It is assumed in this definition that all competitive dimensions are held constant except the ones in which market power is being exercised; that a seller is able to charge higher prices for a higher-quality product does not alone indicate market power. The definition in the text is stated in terms of a seller with market power. A buyer could also exercise market power (e.g., by maintaining the price below the competitive level, thereby depressing output).

[FN10]. The Agencies note that the law is unclear on this issue. Compare Jefferson Parish Hospital District No. 2 v. Hyde, 466 U.S. 2, 16 (1984) (expressing the view in dictum that if a product is protected by a patent, "it is fair to presume that the inability to buy the product elsewhere gives the seller market power") with id. at 37 n.7 (O'Connor, J., concurring) ("[A] patent holder has no market power in any relevant sense if there are close substitutes for the patented product."). Compare also Abbott Laboratories v. Brennan, 952 F.2d 1346, 1354-55 (Fed. Cir. 1991) (no presumption of market power from intellectual property right), cert. denied, 112 S. Ct. 2993 (1992) with Digidyne Corp. v. Data General Corp., 734 F.2d 1336, 1341-42 (9th Cir. 1984) (requisite economic power is presumed from copyright), cert. denied, 473 U.S. 908 (1985).

[FN11]. United States v. Grinnell Corp., 384 U.S. 563, 571 (1966); see also United States v. Aluminum Co. of America, 148 F.2d 416, 430 (2d Cir. 1945) (Sherman Act is not violated by the attainment of market power solely through "superior skill, foresight and industry").

[FN12]. The examples in these Guidelines are hypothetical and do not represent judgments about, or analysis of, any actual market circumstances of the named industries.

[FN13]. These Guidelines do not address the possible application of the antitrust laws of other countries to restraints such as territorial restrictions in international licensing arrangements.

[FN14]. 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.

[FN15]. As used herein, "input" includes outlets for distribution and sales, as well as factors of production. See, e.g., sections 4.1.1 and 5.3-5.5 for further discussion of conditions under which foreclosing access to, or raising the price of, an input may harm competition in a relevant market.

[FN16]. Hereinafter, the term "goods" also includes services.

[FN17]. U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines (April 2, 1992)(hereinafter "1992 Horizontal Merger Guidelines"). As stated in section 1.41 of the 1992 Horizontal Merger Guidelines, market shares for goods markets "can be expressed either in dollar terms through measurement of sales, shipments, or production, or in physical terms through measurement of sales, shipments, production, capacity or reserves."

[FN18]. For example, the owner of a process for producing a particular good may be constrained in its conduct with respect to that process not only by other processes for making that good, but also by other goods that compete with the downstream good and by the processes used to produce those other goods.

[FN19]. Intellectual property is often licensed, sold, or transferred as an integral part of a marketed good. An example is a patented product marketed with an implied license permitting its use. In such circumstances, there is no need for a separate analysis of technology markets to capture relevant competitive effects.

[FN20]. This is conceptually analogous to the analytical approach to goods markets under the 1992 Horizontal Merger Guidelines. Cf. § 1.11. Of course, market power also can be exercised in other dimensions, such as quality, and these dimensions also may be relevant to the definition and analysis of technology markets.

[FN21]. For example, technology may be licensed royalty-free in exchange for the right to use other technology, or it may be licensed as part of a package license.

[FN22]. The Agencies will regard two technologies as "comparably efficient" if they can be used to produce close substitutes at comparable costs.

[FN23]. E.g., Sensormatic, FTC Inv. No. 941-0126, 60 Fed. Reg. 5428 (accepted for comment Dec. 28, 1994); Wright Medical Technology, Inc., FTC Inv. No. 951-0015, 60 Fed. Reg. 460 (accepted for comment Dec. 8, 1994); American Home Products, FTC Inv. No. 941-0116, 59 Fed. Reg. 60,807 (accepted for comment Nov. 28, 1994); Roche Holdings Ltd., 113 F.T.C. 1086 (1990); United States v. Automobile Mfrs. Ass'n, 307 F. Supp. 617 (C.D. Cal. 1969), appeal dismissed sub nom. City of New York v. United States, 397 U.S. 248 (1970), modified sub nom. United States v. Motor Vehicles Mfrs. Ass'n, 1982- 83 Trade Cas. (CCH) ¶ 65,088 (C.D. Cal. 1982).

[FN24]. See Complaint, United States v. General Motors Corp., Civ. No. 93- 530 (D. Del., filed Nov. 16, 1993).

[FN25]. For example, the licensor of research and development may be constrained in its conduct not only by competing research and development efforts but also by other existing goods that would compete with the goods under development.

[FN26]. See, e.g., U.S. Department of Justice and Federal Trade Commission, Statements of Enforcement Policy and Analytical Principles Relating to Health Care and Antitrust 20-23, 37-40, 72-74 (September 27, 1994). This type of transaction may qualify for treatment under the National Cooperative Research and Production Act of 1993, 15 U.S.C.A §§ 4301-05.

[FN27]. Details about the Federal Trade Commission's approach are set forth in Massachusetts Board of Registration in Optometry, 110 F.T.C. 549, 604 (1988). In applying its truncated rule of reason inquiry, the FTC uses the analytical category of "inherently suspect" restraints to denote facially anticompetitive restraints that would always or almost always tend to decrease output or increase prices, but that may be relatively unfamiliar or may not fit neatly into traditional per se categories.

[FN28]. Under the FTC's Mass. Board approach, asserted efficiency justifications for inherently suspect restraints are examined to determine whether they are plausible and, if so, whether they are valid in the context of the market at issue. Mass. Board, 110 F.T.C. at 604.

[FN29]. The antitrust "safety zone" does not apply to restraints that are not in a licensing arrangement, or to restraints that are in a licensing arrangement but are unrelated to the use of the licensed intellectual property.

[FN30]. "Facially anticompetitive" refers to restraints that normally warrant per se treatment, as well as other restraints of a kind that would always or almost always tend to reduce output or increase prices. See section 3.4.

[FN31]. This is consistent with congressional intent in enacting the National Cooperative Research Act. See H.R. Conf. Rpt. No. 1044, 98th Cong., 2d Sess., 10, reprinted in 1984 U.S.C.C.A.N. 3105, 3134-35.

[FN32]. The conduct at issue may be the transaction giving rise to the restraint or the subsequent implementation of the restraint.

[FN37]. The safety zone of section 4.3 does not apply to transfers of intellectual property such as those described in this section.

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