

# United States Court of Appeals for the Federal Circuit

04-1361

U.S. PHILIPS CORPORATION,

Appellant,

v.

INTERNATIONAL TRADE COMMISSION,

Appellee,

and

PRINCO CORPORATION, PRINCO AMERICA CORPORATION,  
GIGASTORAGE CORPORATION TAIWAN,  
GIGASTORAGE CORPORATION USA, and LINBERG ENTERPRISE INC.,

Intervenors.

A. Douglas Melamed, Wilmer Cutler Pickering Hale and Dorr LLP, of Washington, DC, argued for appellant. With him on the brief were William J. Kolasky, Edward C. DuMont, Jonathan G. Cedarbaum, and Barbara R. Blank.

Clara Kuehn, Attorney, Office of General Counsel, United States International Trade Commission, of Washington, DC, argued for appellee. With her on the brief were James M. Lyons, Acting General Counsel, and Wayne W. Herrington, Acting Deputy General Counsel for Litigation.

Alan D. Smith, Fish & Richardson P.C., of Boston, Massachusetts, argued for intervenors. With him on the brief were Charles H. Sanders of Boston, Massachusetts; and Richard G. Green and Tina M. Chappell, of Washington, DC. Of counsel was Ahmed J. Davis, of Washington, DC.

John DeQ. Briggs, III, Howrey Simon Arnold & White, LLP, of Washington, DC, for amicus curiae Intellectual Property Owners Association. With him on the brief were Marc G. Schildkraut and Joseph P. Lavelle. Of counsel on the brief was J. Jeffrey Hawley, President, Intellectual Property Owners Association, of Washington, DC.

David F. Ryan, Fitzpatrick, Cella, Harper & Scinto, of New York, New York, for amicus curiae New York Intellectual Property Law Association. With him on the brief

was Matthew S. Seidner. Of counsel on the brief was John D. Murnane, President, New York Intellectual Property Law Association, of New York, New York. Of counsel was Joseph B. Divinagracia.

Appealed from: United States International Trade Commission

# United States Court of Appeals for the Federal Circuit

04-1361

U.S. PHILIPS CORPORATION,

Appellant,

v.

INTERNATIONAL TRADE COMMISSION,

Appellee,

and

PRINCO CORPORATION, PRINCO AMERICA CORPORATION,  
GIGASTORAGE CORPORATION TAIWAN,  
GIGASTORAGE CORPORATION USA, and LINBERG ENTERPRISE INC.,

Intervenors.

---

DECIDED: September 21, 2005

---

Before BRYSON, GAJARSA, and LINN, Circuit Judges.

BRYSON, Circuit Judge.

U.S. Philips Corporation appeals from a final order of the United States International Trade Commission, in which the Commission held six of Philips's patents for the manufacture of compact discs to be unenforceable because of patent misuse. The Commission ruled that Philips had employed an impermissible tying arrangement because it required prospective licensees to license packages of patents rather than allowing them to choose which individual patents they wished to license and making the licensing fee correspond to the particular patents designated by the licensees. In re

Certain Recordable Compact Discs & Rewritable Compact Discs, Inv. No. 337-TA-474 (Int'l Trade Comm'n Mar. 25, 2004). We reverse and remand.

I

Philips owns patents to technology for manufacturing recordable compact discs (“CD-Rs”) and rewritable compact discs (“CD-RWs”) in accordance with the technical standards set forth in a publication called the Recordable CD Standard (the “Orange Book”), jointly authored by Philips and Sony Corporation. Since the 1990s, Philips has been licensing those patents through package licenses. Philips specified that the same royalty was due for each disc manufactured by the licensee using patents included in the package, regardless of how many of the patents were used. Potential licensees who sought to license patents to the technology for manufacturing CD-Rs or CD-RWs were not allowed to license those patents individually and were not offered a lower royalty rate for licenses to fewer than all the patents in a package.

Initially, Philips offered four different pools of patents for licensing: (1) a joint CD-R patent pool that included patents owned by Philips and two other companies (Sony and Taiyo Yuden); (2) a joint CD-RW patent pool that included patents owned by Philips and two other companies (Sony and Ricoh); (3) a CD-R patent pool that included only patents owned by Philips; and (4) a CD-RW patent pool that included only patents owned by Philips. After 2001, Philips offered additional package options by grouping its patents into two categories, which Philips denominated “essential” and “nonessential” for producing compact discs compliant with the technical standards set forth in the Orange Book.

In the late 1990s, Philips entered into package licensing agreements with Princo Corporation and Princo America Corporation (collectively, "Princo"); GigaStorage Corporation Taiwan and GigaStorage Corporation USA (collectively, "GigaStorage"); and Linberg Enterprise Inc. ("Linberg"). Soon after entering into the agreements, however, Princo, GigaStorage, and Linberg stopped paying the licensing fees. Philips filed a complaint with the International Trade Commission that Princo, GigaStorage, and Linberg, among others, were violating section 337(a)(1)(B) of the Tariff Act of 1930, 19 U.S.C. § 1337(a)(1)(B), by importing into the United States certain CD-Rs and CD-RWs that infringed six of Philips's patents.

The Commission instituted an investigation and identified 19 respondents, including GigaStorage and Linberg. Additional respondents, including Princo, were added through intervention. In the course of the proceedings before an administrative law judge, the respondents raised patent misuse as an affirmative defense, alleging that Philips had improperly forced them, as a condition of licensing patents that were necessary to manufacture CD-Rs or CD-RWs, to take licenses to other patents that were not necessary to manufacture those products. In particular, the respondents argued that a number of the patents that Philips had included in the category of "essential" patents were actually not essential for manufacturing compact discs compliant with the Orange Book standards, because there were commercially viable alternative methods of manufacturing CD-Rs and CD-RWs that did not require the use of the technology covered by those patents. The allegedly nonessential patents included U.S. Patent Nos. 5,001,692 ("the Farla patent"), 5,740,149 ("the Iwasaki patent"), Re. 34,719 ("the Yamamoto patent"), and 5,060,219 ("the Lokhoff patent").

The administrative law judge ruled that the intervenors had infringed various claims of the six asserted Philips patents. The administrative law judge further ruled, however, that all six of the asserted patents were unenforceable by reason of patent misuse. Among the grounds invoked by the administrative law judge for finding patent misuse was his conclusion that the package licensing arrangements constituted tying arrangements that were illegal under analogous antitrust law principles and thus rendered the subject patents unenforceable.

Philips petitioned the Commission for review of the administrative law judge's decision. In an order that addressed only the findings concerning patent misuse, the Commission affirmed the administrative law judge's ruling that Philips's package licensing practice "constitutes patent misuse per se as a tying arrangement between (1) licenses to patents that are essential to manufacture CD-Rs or CD-RWs according to Orange Book standards and (2) licenses to other patents that are not essential to that activity." The Commission found that the Farla, Iwasaki, Yamamoto, and Lokhoff patents were not essential to manufacturing CD-Rs or CD-RWs. Specifically, the Commission found that the Farla and Lokhoff patents were nonessential with respect to the Philips-only CD-RW and CD-R licenses, and that the Farla, Iwasaki, Yamamoto, and Lokhoff patents were nonessential with respect to the joint CD-RW license. The Commission concluded that the four nonessential patents were impermissibly tied to patents that were essential to manufacturing CD-Rs and CD-RWs, because "none of the so-called essential patents could be licensed individually for the manufacture of CD-RWs and CD-Rs apart from the package" that Philips denominated as "essential." The Commission also found, based on the administrative law judge's findings and analysis,

that the joint license for CD-R and CD-RW technology unlawfully tied patents for CD-Rs and CD-RWs in accordance with the Orange Book standards to patents that were not essential to manufacture such discs.

The Commission explained why it concluded that each of the four patents was nonessential. According to the Commission, the Farla and Iwasaki patents were not essential because there was an economically viable alternative method of writing information to discs that did not require the producer to practice those patents; the Yamamoto patent was not essential because there was a potential alternative method of creating master discs that did not require the producer to practice that patent; and the Lokhoff patent was not essential because there were alternative possible methods of accomplishing copy protection that did not require the producer to practice that patent. Based on those findings, the Commission concluded that the four “nonessential” patents constituted separate products from the patents that were essential to the manufacture of the subject discs.

The Commission ruled that Philips’s patent package licensing arrangement constituted per se patent misuse because Philips did not give prospective licensees the option of licensing individual patents (presumably for a lower fee) rather than licensing one or more of the patent packages as a whole. The Commission took no position on the administrative law judge’s ruling that patent pooling arrangements between Philips and its colicensors constituted patent misuse per se based on the theories of price fixing and price discrimination, and it took no position on the administrative law judge’s conclusion that the royalty structure of the patent pools was an unreasonable restraint of trade.

As an alternative ground, the Commission concluded that even if Philips's patent package licensing practice was not per se patent misuse, it constituted patent misuse under the rule of reason. Adopting the administrative law judge's findings, the Commission ruled that the anticompetitive effects of including nonessential patents in the packages of so-called essential patents outweighed the procompetitive effects of that practice. In particular, the Commission held that including such nonessential patents in the licensing packages could foreclose alternative technologies and injure competitors seeking to license such alternative technologies to parties who needed to obtain licenses to Philips's "essential" patents. The Commission took no position with respect to the portion of the administrative law judge's rule of reason analysis in which the administrative law judge concluded that the royalty rate structure of the patent pooling arrangements constituted an unreasonable restraint on competition.

Philips took this appeal from the Commission's order.

## II

Patent misuse is an equitable defense to patent infringement. It "arose to restrain practices that did not in themselves violate any law, but that drew anticompetitive strength from the patent right, and thus were deemed to be contrary to public policy." Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700, 704 (Fed. Cir. 1992). The purpose of the patent misuse defense "was to prevent a patentee from using the patent to obtain market benefit beyond that which inheres in the statutory patent right." Id. As the Supreme Court has explained, the doctrine of patent misuse bars a patentee from using the "patent's leverage" to "extend the monopoly of his patent to derive a benefit not attributable to the use of the patent's teachings," such as requiring a licensee

to pay a royalty on products that do not use the teaching of the patent. Zenith Radio Corp. v. Hazeltine Res., Inc., 395 U.S. 100, 135-36 (1969). The “key inquiry is whether, by imposing conditions that derive their force from the patent, the patentee has impermissibly broadened the scope of the patent grant with anticompetitive effect.” C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1372 (Fed. Cir. 1998); Windsurfing Int’l, Inc. v. AMF, Inc., 782 F.2d 995, 1001 (Fed. Cir. 1986).

This court summarized the principles of patent misuse as applied to “tying” arrangements in Virginia Panel Corp. v. MAC Panel Co., 133 F.3d 860, 868-69 (Fed. Cir. 1997). The court there explained that because of the importance of anticompetitive effects in shaping the defense of patent misuse, the analysis of tying arrangements in the context of patent misuse is closely related to the analysis of tying arrangements in antitrust law. The court further explained that, depending on the circumstances, tying arrangements can be viewed as per se patent misuse or can be analyzed under the rule of reason. Id. The court noted that certain specific practices have been identified as constituting per se patent misuse, “including so-called ‘tying’ arrangements in which a patentee conditions a license under the patent on the purchase of a separable, staple good, and arrangements in which a patentee effectively extends the term of its patent by requiring post-expiration royalties.” Id. at 869 (citations omitted). If the particular licensing arrangement in question is not one of those specific practices that has been held to constitute per se misuse, it will be analyzed under the rule of reason. Id. We have held that under the rule of reason, a practice is impermissible only if its effect is to restrain competition in a relevant market. Monsanto Co. v. McFarling, 363 F.3d 1336, 1341 (Fed. Cir. 2004); Windsurfing Int’l, 782 F.2d at 1001-02.

The Supreme Court's decisions analyzing tying arrangements under antitrust law principles are to the same effect. The Court has made clear that tying arrangements are deemed to be per se unlawful only if they constitute a "naked restrain[t] of trade with no purpose except stifling of competition" and "always or almost always tend to restrict competition and decrease output" in some substantial portion of a market. Broad. Music, Inc. v. Columbia Broad. Sys., Inc., 441 U.S. 1, 19-20 (1979). The Supreme Court has applied the per se rule only when "experience with a particular kind of restraint enables the Court to predict with confidence that the rule of reason will condemn it . . . ." Arizona v. Maricopa County Med. Soc'y, 457 U.S. 332, 344 (1982); see Broad. Music, 441 U.S. at 9-10 ("It is only after considerable experience with certain business relationships that courts classify them as per se violations."), quoting United States v. Topco Assocs., 405 U.S. 596, 607-08 (1972); Cont'l T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36, 49-50 (1977) (per se rules are "appropriate only when they relate to conduct that is manifestly anticompetitive"); see also Jefferson Parish Hosp. Dist. v. Hyde, 466 U.S. 2, 14 (1983) ("[T]he law draws a distinction between the exploitation of market power by merely enhancing the price of the tying product, on the one hand, and by attempting to impose restraints on competition in the market for a tied product, on the other."). Conduct is not considered per se anticompetitive if it has "redeeming competitive virtues and . . . the search for those values is not almost sure to be in vain." Broad. Music, 441 U.S. at 13; Nat'l Collegiate Athletic Ass'n v. Bd. of Regents of the Univ. of Okla., 468 U.S. 85, 104 n. 26 (1983) ("[W]hile the court has spoken of a 'per se' rule against tying arrangements, it has also recognized that tying may have

procompetitive justifications that make it inappropriate to condemn without considerable market analysis.”).

While the doctrine of patent misuse closely tracks antitrust law principles in many respects, Congress has declared certain practices not to be patent misuse even though those practices might otherwise be subject to scrutiny under antitrust law principles. In 35 U.S.C. § 271(d), Congress designated several specific practices as not constituting patent misuse. The designated practices include “condition[ing] the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product,” unless, in view of the circumstances, the patent owner “has market power for the patent or patented product on which the license or sale is conditioned.” Id. § 271(d)(5). Because the statute is phrased in the negative, it does not require that patent misuse be found in the case of all such conditional licenses in which the patent owner has market power; instead, the statute simply excludes such conditional licenses in which the patent owner lacks market power from the category of arrangements that may be found to constitute patent misuse.

Although section 271(d)(5) does not define the scope of the defense of patent misuse, but merely provides a safe harbor against the charge of patent misuse for certain kinds of conduct by patentees, the statute makes clear that the defense of patent misuse differs from traditional antitrust law principles in an important respect, as applied to tying arrangements involving patent rights. In the case of an antitrust claim based on a tying arrangement involving patent rights, this court has held that ownership of a patent on the tying good is presumed to give the patentee monopoly power. See

Indep. Ink, Inc. v. Ill. Tool Works, Inc., 396 F.3d 1342, 1349 n.7 (Fed. Cir.), cert. granted, 125 S. Ct. 2937 (2005). Section 271(d)(5) makes clear, however, that such a presumption does not apply in the case of patent misuse. To establish the defense of patent misuse, the accused infringer must show that the patentee has power in the market for the tying product. See id. at 1349 n.7.

Philips argues briefly that it lacks market power and that it is thus shielded from liability by section 271(d)(5). Based on detailed analysis by the administrative law judge, however, the Commission found that Philips has market power in the relevant market and that section 271(d)(5) is therefore inapplicable to this case. We sustain that ruling.

Philips contends that at the time Philips and Sony first created their package license arrangements, CDs had significant competition among computer data storage devices and thus Philips lacked market power in the market for computer data storage discs. However, Philips first created the package licenses long before GigaStorage and Princo entered into their agreements. According to the administrative law judge, the patent package arrangements were instituted in the early 1990s. Yet Princo did not enter into its agreement until June of 1997, and GigaStorage did not enter into its licensing agreement until October of 1999. Thus, any lack of market power that Philips and its colicensors may have had in the early 1990s is irrelevant to the situation in the late 1990s, when the parties entered into the agreements at issue in this case. At that time, according to the administrative law judge's well-supported finding, compact discs had become "unique products [with] no close practice substitutes." Philips's argument about lack of market power is therefore unpersuasive, and for that reason section

271(d)(5) does not provide Philips a statutory safe haven from the judicially created defense of patent misuse.<sup>1</sup>

Apart from its specific challenge to the Commission's ruling on the market power issue, Philips launches a more broad-based attack on the Commission's conclusion that Philips's patent licensing policies constitute per se patent misuse. In so doing, Philips makes essentially two arguments: first, that the Commission was wrong as a legal matter in ruling that the package licensing arrangements at issue in this case are among those few practices that the courts have identified as so clearly anticompetitive as to warrant being condemned as per se illegal; and second, that the Commission erred as a factual matter in concluding that Philips's package licensing arrangements reflect the use of market power in one market to foreclose competition in a separate market. We address the two arguments separately.

#### A

In its brief, the Commission argues that it is "hornbook law" that mandatory package licensing has been held to be patent misuse. While that broad characterization can be found in some treatises, see 6 Donald S. Chisum, Chisum on Patents § 19.04[3] (2003), cited in C.R. Bard, Inc., 157 F.3d at 1373; 8 Ernest B. Lipscomb III, Lipscomb's

---

<sup>1</sup> Before the Commission, Philips argued that section 271(d)(5) abolished the doctrine of per se patent misuse as applied to tying arrangements. In making that argument, Philips relied heavily on the legislative history of the 1988 Act that adopted section 271(d)(5). Because Philips has not renewed that argument in this court, we do not address it, although we note that the legislative history cited by Philips before the Commission indicates congressional skepticism about treating tying arrangements in the context of patent licensing as per se patent misuse, rather than analyzing such arrangements under the rule of reason. See 134 Cong. Rec. 32,294-95 (1988) (statement of Rep. Kastenmeier); id. at 32,471 (statement of Sen. DeConcini); id. at 32,471-72 (statement of Sen. Leahy).

Walter on Patents § 28:27 (3d ed. 1989 & Supp. 2003), Philips invites us to consider whether that broad proposition is sound. Upon consideration, we conclude that the proposition as applied to the circumstances of this case is not supported by precedent or reason.

In its opinion, the Commission acknowledged that the Virginia Panel case and many other patent tying cases “involve a tying patent and a tied product, rather than a tying patent and a tied patent.” (emphasis in original). The Commission nonetheless concluded that “finding patent misuse based on a tying arrangement between patents in a mandatory package license is a reasonable application of Supreme Court precedent.” In so ruling, the Commission relied primarily on two Supreme Court cases: United States v. Paramount Pictures, Inc., 334 U.S. 131, 156-59 (1948), and United States v. Loew’s, Inc., 371 U.S. 38, 44-51 (1962). Those cases condemned the practice of “block-booking” movies to theaters (in the Paramount case) and to television stations (in the Loew’s case) as antitrust violations.

Block-booking is the practice in which a distributor licenses one feature or group of features to exhibitors on the condition that the exhibitors agree to license another (presumably inferior) feature or group of features released by the distributor during a given period. In Paramount and Loew’s, the Court held that block-booking, as practiced in those cases, was per se illegal. The Commission reasoned that the practice of block-booking that was the focus of the Court’s condemnation in Paramount and Loew’s is similar to the package licensing agreements at issue in this case and that under the analysis employed in Paramount and Loew’s, Philips’s package licensing agreements must be condemned as per se patent misuse.

We do not agree with the Commission that the decisions in Paramount and Loew's govern this case. In Paramount, the district court held that the defendant movie distributor had engaged in unlawful conduct because it offered to permit exhibitors to show the films they wished to license only if they agreed to license and exhibit other films that they were not interested in licensing. The Supreme Court affirmed that ruling. The Court held that block-booking was illegal because it “prevents competitors from bidding for single features on their individual merits,” and because it “adds to the monopoly of a single copyrighted picture that of another copyrighted picture which must be taken and exhibited in order to secure the first.” 334 U.S. at 156-57. The result, the Court explained, “is to add to the monopoly of the copyright in violation of the principle of the patent cases involving tying clauses.” Id. at 158.

Because the block-booking arrangement at issue in Paramount required the licensee to exhibit all of the films in the group for which a license was taken, the Paramount block-booking was more akin to a tying arrangement in which a patent license is tied to the purchase of a separate product, rather than to an arrangement in which a patent license is tied to another patent license. Indeed, all of the patent tying cases to which the Supreme Court referred in Paramount involved tying arrangements in which, as the Court described them, “the owner of a patent [conditioned] its use on the purchase or use of patented or unpatented materials.” 334 U.S. at 157. Because the arrangement in the Paramount case was equivalent in substance to a patent-to-product tying arrangement, Paramount does not stand for the proposition that a pure

patent-to-patent tying arrangement, such as Philips's package licensing agreement, is per se unlawful.<sup>2</sup>

Philips gives its licensees the option of using any of the patents in the package, at the licensee's option. Philips charges a uniform licensing fee to manufacture discs covered by its patented technology, regardless of which, or how many, of the patents in the package the licensee chooses to use in its manufacturing process. In particular, Philips's package licenses do not require that licensees actually use the technology covered by any of the patents that the Commission characterized as nonessential. In that respect, Philips's licensing agreements are different from the agreements at issue in Paramount, which imposed an obligation on the purchasers of package licenses to exhibit films they did not wish to license. That obligation not only extended the exclusive right in one product to products in which the distributor did not have exclusive rights, but it also precluded exhibitors, as a practical matter, from exhibiting other films that they may have preferred over the tied films they were required to exhibit. Because Philips's package licensing agreements do not compel the licensees to use any particular technology covered by any of the licensed patents, the Paramount case is not a sound basis from which to conclude that the package licensing arrangements at issue in this case constitute patent misuse per se.

---

<sup>2</sup> The Commission argues that the Supreme Court's later decision in Automatic Radio Co. v. Hazeltine, 339 U.S. 827 (1950), supports its broad interpretation of the Paramount case because the Supreme Court in Automatic Radio characterized Paramount as having "condemned" an arrangement "conditioning the granting of a license under one patent upon the acceptance of another and different license." Id. at 830-31. We do not, however, interpret that shorthand characterization of Paramount as effecting a broadening of the holding of the earlier case and an extension of its rationale to a class of cases far beyond Paramount's facts.

In the Loew's case, the district court determined that the licensee television stations were required to pay fees not only for the feature films they wanted, but also for additional, inferior films. As in Paramount, the fact that the package arrangement required the television stations to purchase exhibition rights for the package at a price that was greater than the price attributable to the desired films made the tying arrangement very much like a tying arrangement involving products. Thus, the Supreme Court explained that a "substantial portion of the licensing fees represented the cost of the inferior films which the stations were required to accept." Lowe's, 371 U.S. at 49. Following the approach employed in Paramount, the Supreme Court applied the principles of cases involving tying arrangements between patents and unpatented products and concluded that the tying arrangements in the case before it had all the anticompetitive features of the block-booking arrangements in Paramount and no redeeming procompetitive features.

In this case, unlike in Loew's, there is no evidence that a portion of the royalty was attributable to the patents that the Commission characterized as nonessential. While the administrative law judge found that GigaStorage "inquired into obtaining a license to less than all of the patents on Philips's patent list," the administrative law judge noted that GigaStorage did so because it "hoped that by eliminating some patents the royalty rate would be lower." There is no evidence that GigaStorage had any basis for its expectation that a smaller patent package might result in a lower royalty rate. In fact, the administrative law judge found that Philips had responded to that overture from GigaStorage by explaining that "the royalty is the same regardless of the number of patents used." Moreover, the administrative law judge found that the royalty rate for

licensing Philips's patents "remains the same regardless of which option(s) in the agreement one selects," and that the royalty rate "does not increase or decrease if more or fewer patents are used." Thus, it is clear that the royalty charged by Philips was not increased because of the inclusion of the Farla, Iwasaki, Yamamoto, and Lokhoff patents. There is therefore no basis for conjecture that a hypothetical licensing fee would have been lower if Philips had offered to license the patents on an individual basis or in smaller packages.

Aside from Paramount and Loew's, the Commission relies on cases involving tying arrangements in which the patent owner conditions the availability of a patent license on the patentee's agreement to purchase a staple item of commerce from the patentee. See Va. Panel, 133 F.3d at 869; Senza-Gel Corp. v. Seiffhart, 803 F.2d 661 (Fed. Cir. 1986). Those cases, however, are readily distinguishable because of the fundamental difference between an obligation to purchase a product and the extension of a nonexclusive license to practice a patent.

A nonexclusive patent license is simply a promise not to sue for infringement. See Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1552 (Fed. Cir. 1995) (en banc); Spindelfabrik Suessen-Schurr Stahlecker & Grill GmbH v. Schubert & Salzer Maschinenfabrik Atkiengesellschaft, 829 F.2d 1075, 1081 (Fed. Cir. 1987). The conveyance of such a license does not obligate the licensee to do anything; it simply provides the licensee with a guarantee that it will not be sued for engaging in conduct that would infringe the patent in question.

In the case of patent-to-product tying, the patent owner uses the market power conferred by the patent to compel customers to purchase a product in a separate

market that the customer might otherwise purchase from a competitor. United States v. U.S. Gypsum Co., 333 U.S. 364, 400 (1948); Int'l Salt Co. v. United States, 332 U.S. 392, 395 (1947); Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488, 493 (1942). The patent owner is thus able to use the market power conferred by the patent to foreclose competition in the market for the product.

By contrast, a package licensing agreement that includes both essential and nonessential patents does not impose any requirement on the licensee. It does not bar the licensee from using any alternative technology that may be offered by a competitor of the licensor. Nor does it foreclose the competitor from licensing his alternative technology; it merely puts the competitor in the same position he would be in if he were competing with unpatented technology.

A package license is in effect a promise by the patentee not to sue his customer for infringing any patents on whatever technology the customer employs in making commercial use of the licensed patent. That surrender of rights might mean that the customer will choose not to license the alternative technology offered by the patentee's competition, but it does not compel the customer to use the patentee's technology. The package license is thus not anticompetitive in the way that a compelled purchase of a tied product would be.

Contrary to the Commission's characterization, the intervenors were not "forced" to "take" anything from Philips that they did not want, nor were they restricted from obtaining licenses from other sources to produce the relevant technology. Philips simply provided that for a fixed licensing fee, it would not sue any licensee for engaging in any conduct covered by the entire group of patents in the package. By analogy, if

Philips had decided to surrender its “nonessential” patents or had simply announced that it did not intend to enforce them, there would have been no way for the manufacturers to decline or reject Philips’s decision. Yet the economic effect of the package licensing arrangement for Philips’s patents is not fundamentally different from the effect that such decisions would have had on third parties seeking to compete with the technology covered by those “nonessential” patents. Thus, we conclude that the Commission erred when it characterized the package license agreements as a way of forcing the intervenors to license technology that they did not want in order to obtain patent rights that they did.<sup>3</sup>

The Commission stated that it would not have found the package licenses to constitute improper tying if Philips had offered to license its patents on an individual basis, as an alternative to licensing them in packages. The Commission’s position, however, must necessarily be based on an assumption that, if the patents were offered on an individual basis, individual patents would be offered for a lower price than the patent packages as a whole. If that assumption were not implicit in the Commission’s conclusion, the Commission would be saying in effect that it would be unlawful for

---

<sup>3</sup> The effect of a nonexclusive license was different before the Supreme Court, in Lear, Inc. v. Adkins, 395 U.S. 653 (1969), abolished the patent doctrine of licensee estoppel. Before Lear, a nonexclusive license had a legal effect that made it more than a mere covenant by the licensee not to sue. Acceptance of the license barred the licensee from challenging the validity of the patent. Some of the early decisions regarding patent-to-patent tying arrangements appear to have been based, at least in part, on that feature of pre-Lear patent licenses. See, e.g., Am. Securit Co. v. Shatterproof Glass Corp., 268 F.2d 769, 777 (3d Cir. 1959); Int’l Mfg. Co. v. Landon, 336 F.2d 723, 731 (9th Cir. 1964); see also Duplan Corp. v. Deering Milliken, Inc., 444 F. Supp. 648, 699 (D.S.C. 1977), aff’d in pertinent part, 594 F.2d 979 (4th Cir. 1979). In the post-Lear era, the “acceptance” of a license has no such restrictive effect on the licensee’s freedom.

Philips to charge the same royalty for its essential patents that it charges for its patent packages and to offer the nonessential patents for free. Yet that sort of pricing policy plainly would not be unlawful. See Directory Sales Mgmt. Corp. v. Ohio Bell Tel. Co., 833 F.2d 606, 609-10 (6th Cir. 1987).<sup>4</sup>

To the extent that the Commission's decision is based on an assumption that individual licenses would necessarily be available for a lower price than package licenses, that assumption is directly contrary to the evidence and even to the administrative law judge's findings of fact. As noted above, the administrative law judge found that the royalty rate under Philips's package licenses depended on the number of discs the manufacturer produced under the authority of the license, not the number of individual patents the manufacturer used to produce those discs. That is, the royalty rate did not vary depending on whether the licensees used only the essential patents or used all of the patents in the package. Thus, it seems evident that if Philips were forced to offer licenses on an individual basis, it would continue to charge the same per unit royalty regardless of the number of patents the manufacturer chose to license. That alteration in Philips's practice would have absolutely no effect on the would-be competitors who wished to offer alternatives to the technology represented by Philips's

---

<sup>4</sup> Of course, in a tying case if the evidence shows that the price of a bundled product reflects any of the cost of the tied product, "customers are purchasing the tied product, even if it is touted as being free." Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal & Prof'l Publ'ns, Inc., 63 F.3d 1540, 1548 (10th Cir. 1995), citing 3 Phillip E. Areeda & Donald F. Turner, Antitrust Law ¶ 733a (1978) (tying may exist "when a machine is sold or leased at a price that covers 'free' servicing"); see also United States v. Microsoft Corp., 253 F.3d 34, 68 (D.C. Cir. 2001) ("the antitrust laws do not condemn even a monopolist for offering its product at an attractive price, and we therefore have no warrant to condemn Microsoft for offering either IE or the IEAK free of charge"). The evidence in this case, however, does not indicate that there is a hidden charge for the so-called nonessential patents in the Philips patent packages.

so-called nonessential patents, since those patents would effectively be offered for free, and the competitors would therefore still have to face exactly the same barriers—the availability of a free alternative to the technology that they were trying to license for a fee.

More generally, the Commission's assumption that a license to fewer than all the patents in a package would presumably carry a lower fee than the package itself ignores the reality that the value of any patent package is largely, if not entirely, based on the patents that are essential to the technology in question. A patent that is nonessential because it covers technology that can be fully replaced by alternative technology that is available for free is essentially valueless. A patent that is nonessential because it covers technology that can be fully replaced by alternative technology that is available through a license from another patent owner has value, but its value is limited by the price of the alternative technology. Short of imposing an obligation on the licensor to make some sort of allocation of fees across a group of licenses, there is no basis for the Commission to conclude that a smaller group of the licenses—the so-called “essential” licenses—would have been available for a lower fee if they had not been “tied to” the so-called nonessential patents.

It is entirely rational for a patentee who has a patent that is essential to particular technology, as well as other patents that are not essential, to charge what the market will bear for the essential patent and to offer the others for free. Because a license to the essential patent is, by definition, a prerequisite to practice the technology in question, the patentee can charge whatever maximum amount a willing licensee is able to pay to practice the technology in question. If the patentee allocates royalty fees

between its essential and nonessential patents, it runs the risk that licensees will take a license to the essential patent but not to the nonessential patents. The effect of that choice will be that the patentee will not be able to obtain the full royalty value of the essential patent. For the patentee in this situation to offer its nonessential patents as part of a package with the essential patent at no additional charge is no more anticompetitive than if it had surrendered the nonessential patents or had simply announced a policy that it would not enforce them against persons who licensed the essential patent. In either case, those offering technology that competed with the nonessential patents would be unhappy, because they would be competing against free technology. But the patentee would not be using his essential patent to obtain power in the market for the technology covered by the nonessential patents. This package licensing arrangement cannot fairly be characterized as an exploitation of power in one market to obtain a competitive advantage in another.<sup>5</sup>

Aside from the absence of evidence that the package licensing arrangements in this case had the effect of impermissibly broadening the scope of the “essential” patents with anticompetitive effect, Philips argues that the Commission failed to acknowledge the unique procompetitive benefits associated with package licensing. Philips points to

---

<sup>5</sup> The implication of the Commission’s decision is that a party with both an essential patent and a nonessential patent is not allowed to package the two together and only offer the package for a single price. That would have the perverse effect of potentially putting a party owning both an essential patent and a nonessential but related patent in a worse position than a party owning only the essential patent. The party owning only the essential patent would be free to charge any licensing fee up to the maximum that a manufacturer would be willing to pay to practice the patented technology, while a party owning both the essential patent and a nonessential patent would be barred from extracting that maximum licensing fee for its essential patent and assuring the manufacturer that it would not be subject to suit on the nonessential patent.

the federal government's guidelines for licensing intellectual property, which recognize that patent packages "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." U.S. Department of Justice and Federal Trade Commission, Antitrust Guidelines for the Licensing of Intellectual Property § 5.5 (1995); see also Herbert Hovenkamp, IP and Antitrust § 34.2c, at 34-7 (2004).

Philips introduced evidence that package licensing reduces transaction costs by eliminating the need for multiple contracts and reducing licensors' administrative and monitoring costs. See Tex. Instruments, Inc. v. Hyundai Elecs., 49 F. Supp. 2d 893, 901 (E.D. Tex. 1999) (describing how "extremely expensive and time-consuming" it is for parties to license and manage the licensing of technology by using individual patents and how it is preferable to employ a patent portfolio). Package licensing can also obviate any potential patent disputes between a licensor and a licensee and thus reduce the likelihood that a licensee will find itself involved in costly litigation over unlicensed patents with potentially adverse consequences for both parties, such as a finding that the licensee infringed the unlicensed patents or that the unlicensed patents were invalid. See Steven C. Carlson, Patent Pools and the Antitrust Dilemma, 16 Yale J. on Reg. 359, 379-81 (1999). Thus, package licensing provides the parties a way of ensuring that a single licensing fee will cover all the patents needed to practice a particular technology and protecting against the unpleasant surprise for a licensee who learns, after making a substantial investment, that he needed a license to more patents

than he originally obtained. Finally, grouping licenses in a package allows the parties to price the package based on their estimate of what it is worth to practice a particular technology, which is typically much easier to calculate than determining the marginal benefit provided by a license to each individual patent. In short, package licensing has the procompetitive effect of reducing the degree of uncertainty associated with investment decisions.

The package licenses in this case have some of the same advantages as the package licenses at issue in the Broadcast Music case. The Supreme Court determined in that case that the blanket copyright package licenses at issue had useful, procompetitive purposes because they gave the licensees “unplanned, rapid, and indemnified access to any and all of the repertory of [musical] compositions, and [they gave the owners] a reliable method of collecting for the use of the their copyrights.” 441 U.S. at 20. While “[i]ndividual sales transactions [would be] quite expensive, as would be individual monitoring and enforcement,” a package licensing agreement would ensure access and save costs. Id. Hence, the Supreme Court determined that such conduct should fall under “a more discriminating examination under the rule of reason.” Id. at 24.

In light of the efficiencies of package patent licensing and the important differences between product-to-patent tying arrangements and arrangements involving group licensing of patents, we reject the Commission’s conclusion that Phillips’s conduct shows a “lack of any redeeming virtue” and should be “conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use.” N. Pac. Ry. Co. v. United States,

356 U.S. 1, 5 (1958). We therefore hold that the analysis that led the Commission to apply the rule of per se illegality to Philips's package licensing agreements was legally flawed.<sup>6</sup>

## B

In the alternative, Philips argues that the Commission's finding of per se patent misuse was not justified by the facts of this case. In particular, Philips contends that the evidence did not show that there were commercially viable alternatives to the technology covered by the so-called "nonessential" patents in the Philips licensing packages that any of its licensees would have preferred to use.

In order to show that a tying arrangement is per se unlawful, a complaining party must demonstrate that it links two separate products and has an anticompetitive effect in the market for the second product. The Supreme Court explained that the "essential characteristic" of an invalid tying arrangement

lies in the seller's exploitation of its control over the tying product to force the buyer in to the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms. When such "forcing" is present, competition on the merits in the market for the tied item is restrained . . . .

Jefferson Parish, 466 U.S. at 12; id. at 20-21 ("[A] tying arrangement cannot exist unless two separate markets have been linked."); B. Braun Med., Inc. v. Abbott Labs.,

---

<sup>6</sup> The Supreme Court recently granted certiorari in Independent Ink, Inc. v. Illinois Tool Works, Inc., 396 F.3d 1342 (Fed. Cir.), cert granted, 125 S. Ct. 2937 (2005), a case involving a tying arrangement involving a patent and an unpatented product. It is possible that the Supreme Court's decision in that case will offer some guidance with respect to the patent misuse issue presented by this case, but because the circumstances of the two cases are quite different, we have determined that the proper course is to resolve this appeal without waiting for the Supreme Court's decision in Independent Ink.

124 F.3d 1419, 1426 (Fed. Cir. 1997) (impermissible tying in the context of patent misuse if patentee uses a patent “which enjoys market power in the relevant market . . . to restrain competition in an unpatented product”). The Commission found that the “nonessential” patents, i.e., the Farla, Iwasaki, Yamamoto, and Lokhoff patents, constituted separate products from the “essential” patents in the package and that the package licensing agreements adversely affected competition in the market for the nonessential technology.<sup>7</sup> The Commission’s analysis of that factual issue was flawed, however.

Patents within a patent package can be regarded as “nonessential” only if there are “commercially feasible” alternatives to those patents. See Int’l Mfg. Co. v. Landon, 336 F.2d 723, 729 (9th Cir. 1964). If there are no commercially practicable alternatives to the allegedly nonessential patents, packaging those patents together with so-called essential patents can have no anticompetitive effect in the marketplace, because no competition for a viable alternative product is foreclosed. In such a case, the only effect of finding per se patent misuse is to give licensees a way of avoiding their obligations under the licensing agreements, with no corresponding benefit to competition in any real-world market.

The Department of Justice has recognized that the availability of commercially viable alternative technology is relevant to the analysis of package licensing

---

<sup>7</sup> The intervenors note that “there existed a number of commercially-available CD-R discs utilizing alternative technology that did not infringe these supposedly essential patents.” For support, intervenors cite the opinion of the administrative law judge, who determined that two patents held by Taiyo Yuden were not essential. Because the Commission did not address those patents, however, they are not relevant to this appeal.

agreements. In particular, the Department has stated that patent packages do not have the undesirable effects of tying if they include patents to technology for which there is no practical or realistic alternative. See, e.g., Business Review Letter, U.S. Department of Justice, Antitrust Division (Dec. 16, 1998). That principle is consistent with the main purpose of the separate-products inquiry in tying cases generally, which is to ensure that conduct is not condemned as anticompetitive “unless there is sufficient demand for the purchase of [the tied product] separate from the [tying product] to identify a distinct product market in which it is efficient to offer [the tied product].” Jefferson Parish, 466 U.S. at 21-22; see Mallinckrodt, 976 F.2d at 704 (tying is misuse only when the patentee uses its patent to obtain “market benefit” beyond that conferred by the patent).

In this case, the evidence did not show that there were commercially viable substitutes for the Farla, Iwasaki, Yamamoto, and Lokhoff patents that disc manufacturers wished to use in making compact discs compliant with the Orange Book standards. There was thus insufficient evidence that including the four “nonessential” patents in the Philips patent packages had an actual anticompetitive effect. That is, the evidence did not show that there were commercially viable substitutes for those four “nonessential” patents that disc manufacturers wished to use in making compact discs compliant with the Orange Book standards.

Two of those four patents, the Farla and Iwasaki patents, cover a method of controlling the recording of information onto compact discs, i.e., a “write strategy,” including an “optimum power control procedure.”<sup>8</sup> The Commission found that another

---

<sup>8</sup> In its amicus curiae brief, the New York Intellectual Property Association notes that, unlike the other three allegedly nonessential patents, the Iwasaki patent

company, Calimetrics, Inc., had developed a commercially viable, alternative method of performing the write strategy and the optimum power control procedure that is not covered by the Farla and Iwasaki patents. In making that finding, the Commission relied solely on the testimony of Dr. Stephen McLaughlin, Calimetrics's principal scientist, who had helped to create the technology in question. Dr. McLaughlin testified that Calimetrics had created a general write strategy; that "in the development of [that] technology [Calimetrics] determined that this write strategy was applicable to CD-R and CD-RW systems"; and that the company has "spent an enormous amount of effort promoting [its] idea . . . ." While that testimony was sufficient to support the Commission's finding that there was an alternative technology to the Farla and Iwasaki patents, it did not show that the Calimetrics technology was an alternative that Philips's licensees wished to use in place of the technology covered by the Farla and Iwasaki patents. The Commission did not point to any evidence that any licensee or potential licensee asked to have any of the four "nonessential" patents removed from the package license and that Philips refused to do so. Although, as noted, GigaStorage asked about obtaining a license to only certain patents, in the hope that by eliminating some patents the royalty rate would be lower, the evidence did not show that

---

would expire after all of the undisputedly essential patents. As a result, the presence of the Iwasaki patent in a patent licensing package could have the effect of extending the obligation to pay royalties beyond the expiration date of the "essential" patents. A provision requiring that royalties be paid beyond the life of a patent has been held to be unenforceable. See *Brulotte v. Thys Co.*, 379 U.S. 29, 30 (1964). However, because neither the Commission nor the administrative law judge addressed the impact of that potential temporal extension of the royalty obligation, and none of the parties addressed that issue on appeal in their briefs, we do not address the issue here.

GigaStorage's request related to the four "nonessential" patents or that GigaStorage had any interest in licensing Calimetrics's technology.

Dr. McLaughlin testified, regarding a hypothetical situation, that "[w]hen we go and try to license this technology, the companies say we have technology that performs a function of this type, and . . . I presume they would be referring to [the nonessential CD-R/CD-RW] patents." That testimony, however, falls short of showing that any of Philips's licensees were forced by the package license agreements to license the Farla and Iwasaki patents when they would have preferred to use Calimetrics's technology. Dr. McLaughlin did not testify as to even a single specific instance on which a disc manufacturer expressed a preference for the Calimetrics technology but was dissuaded from licensing it by Philips's insistence on licensing the Farla and Iwasaki patents as part of its package license arrangements. The evidence thus did not show that there was a demand for the Calimetrics technology that went unmet because of the coercive effect of Philips's inclusion of the Farla and Iwasaki patents in its package licensing agreements.

As for the Yamamoto patent, which covers a method of creating master discs by using one laser beam, the Commission again relied on the testimony of Dr. McLaughlin. The Commission found that Calimetrics had developed a commercially viable alternative method of creating master discs by using two laser beams. Dr. McLaughlin's testimony, however, does not support the Commission's finding. Dr. McLaughlin stated that it was "fairly easy to conceive of alternative methods for implementing the functionality of the intention of . . . what [the Yamamoto] patent is directed towards" and that it would "certainly [be] possible to do this using two beams . . . ." Yet the mere possibility that

alternative technology might at some point become available is not sufficient to support a finding that at the time the Philips licenses were executed, there was actually a commercially available alternative to the technology claimed in the Yamamoto patent.

Finally, the Commission found that the Lokhoff patent was not “technically essential” to manufacturing discs compliant with the Orange Book standard. The Lokhoff patent covers a system for providing copy protection by placing a “copy bit” into a compact disc for the purpose of determining the type of information that may be received for recording. The Commission found that an alternative exists to the Lokhoff patent. In so doing, the Commission again relied on testimony by Dr. McLaughlin, who stated that copy protection could be achieved by “embedding copy protection and user data,” instead of by using a copy bit. Dr. McLaughlin’s testimony, however, does not establish that the alternative technology was commercially available to be substituted for the technology of the Lokhoff patent. He stated that the alternative embedding method was a “very wide area of research. There’s a lot of activity going on these days in using this general approach . . . .” That testimony indicates research interest in a possible approach to solving the problem of embedding, but it does not establish the existence of an available, commercially practicable alternative to Philips’s technology.

Beyond the absence of factual support for the Commission’s findings, the Commission’s analysis of the four “nonessential” patents demonstrates a more fundamental problem with applying the per se rule of illegality to patent packages such as the ones at issue in this case. If a patentholder has a package of patents, all of which are necessary to enable a licensee to practice particular technology, it is well established that the patentee may lawfully insist on licensing the patents as a package

and may refuse to license them individually, since the group of patents could not reasonably be viewed as distinct products. See Landon, 336 F.2d at 729. Yet over time, the development of alternative technology may raise questions whether some of the patents in the package are essential or whether, as in this case, there are alternatives available for the technology covered by some of the patents. Indeed, in a fast-developing field such as the one at issue in this case, it seems quite likely that questions will arise over time, such as what constitutes an “essential” patent for purposes of manufacturing compact discs compliant with the Orange Book standard. Roger B. Andewelt, Analyzing Patent Pools Under the Antitrust Laws, 53 Antitrust L.J. 611, 616 (1985) (“the line between competitive patents and blocking or complementary patents is frequently very difficult to draw”). Under the Commission’s approach, an agreement that was perfectly lawful when executed could be challenged as per se patent misuse due to developments in the technology of which the patentees are unaware, or which have just become commercially viable. Such a rule would make patents subject to being declared unenforceable due to developments that occurred after execution of the license or were unknown to the parties at the time of licensing. Not only would such a rule render licenses subject to invalidation on grounds unknown at the time of licensing, but it would also provide a strong incentive to litigation by any licensee, since the reward for showing that even a single license in a package was “nonessential” would be to render all the patents in the package unenforceable. For that reason as well, we reject the Commission’s ruling that package agreements of the sort entered into by Philips and the intervenors must be invalidated on the ground that they constitute per se patent misuse.

### III

In the alternative, the Commission held that Philips's package licensing agreements constituted patent misuse under the rule of reason. The Commission's analysis under the rule of reason largely tracked the analysis that led it to conclude that the package licensing agreements constituted per se patent misuse.

As in the case of its ruling on per se patent misuse, the fulcrum of the Commission's conclusion that Philips was guilty of patent misuse under the rule of reason was its conclusion that the package licenses at issue in this case had "the anticompetitive effect of foreclosing competition in the alternative technology that competes with the technology covered by a nonessential patent that was included as a so-called 'essential' patent." On that issue, the Commission adopted the administrative law judge's analysis and conclusions with respect to the Farla, Iwasaki, Yamamoto, and Lokhoff patents, but it took no position with respect to other patents that the administrative law judge found to be nonessential.

Focusing particularly on the Farla and Iwasaki patents, the Commission found that those patents were not essential to manufacturing CD-Rs and CD-RWs compliant with the Orange Book standards and that including those patents in the patent packages foreclosed competition by Calimetrics. The Commission briefly addressed the assertedly procompetitive effects of the package licensing arrangements but upheld the administrative law judge's conclusion that those arrangements had a net anticompetitive effect because "the convenience to manufacturers of a broad package of patents was outweighed by the anticompetitive effect on alternative technologies of packaging nonessential patents with essential patents."

Under the rule of reason, the finder of fact must determine if the practice at issue is “reasonably within the patent grant, i.e., that it relates to subject matter within the scope of the patent claims.” Va. Panel, 133 F.3d at 869, quoting Mallinckrodt, 976 F.2d at 708. If the practice does not “broaden the scope of the patent, either in terms of covered subject matter or temporally,” then the patentee is not chargeable with patent misuse. Va. Panel, 133 F.3d at 869. More specifically, “the finder of fact must decide whether the questioned practice imposes an unreasonable restraint on competition, taking into account a variety of factors, including specific information about the relevant business, its condition before and after the restraint was imposed, and the restraint’s history, nature and effect.” Va. Panel, 133 F.3d at 869, quoting State Oil Co. v. Khan, 522 U.S. 3, 10 (1997); see also Monsanto Co., 363 F.3d at 1341.

The Commission’s rule of reason analysis is flawed for two reasons. Most importantly, its conclusion was largely predicated on the anticompetitive effect on competitors offering alternatives to the four so-called nonessential patents in the Philips patent packages. Yet, as we have already held, the evidence did not show that including those patents in the patent packages had a negative effect on commercially available technology. The Commission assumed that there was a foreclosure of competition because compact disc manufacturers would be induced to accept licenses to the technology covered by the Farla and Iwasaki patents and therefore would be unwilling to consider alternatives. As noted, however, there was no evidence before the Commission that any manufacturer had actually refused to consider alternatives to the technology covered by those patents or for that matter that any commercially viable alternative actually existed.

In addition, as in its per se analysis, the Commission did not acknowledge the problems with licensing patents individually, such as the transaction costs associated with making individual patent-by-patent royalty determinations and monitoring possible infringement of patents that particular licensees chose not to license. The Commission also did not address the problem, noted above, that changes in the technology for manufacturing compact discs could render some patents that were indisputably essential at the time of licensing arguably nonessential at some later point in the life of the license. To hold that a licensing agreement that satisfied the rule of reason when executed became unreasonable at some later point because of technological development would introduce substantial uncertainty into the market and displace settled commercial arrangements in favor of uncertainty that could only be resolved through expensive litigation.

Finally, the Commission failed to consider the efficiencies that package licensing may produce because of the innovative character of the technology at hand. Given that the technology surrounding the Orange Book standard was still evolving, there were many uncertainties regarding what patents might be needed to produce the compact discs. As noted, package license agreements in which the royalty was based on the number of units produced, not the number of patents used to produce them, can resolve in advance all potential patent disputes between the licensor and the licensee, whereas licensing patent rights on a patent-by-patent basis can result in continuing disputes over whether the licensee's technology infringes certain ancillary patents owned by the licensor that are not part of the group elected by the licensee.

We therefore conclude that the line of analysis that the Commission employed in reaching its conclusion that Philips's package licensing agreements are more anticompetitive than procompetitive, and thus are unlawful under the rule of reason, was predicated on legal errors and on factual findings that were not supported by substantial evidence. For these reasons, we cannot uphold the Commission's decision that Philips's patents are unenforceable because of patent misuse under the rule of reason.

Because the Commission did not address all of the issues presented by the administrative law judge's decision under both the per se and rule of reason analysis, further proceedings before the Commission may be necessary with respect to whether Philips's patents are enforceable and, if so, whether Philips is entitled to any relief from the Commission. Accordingly, we reverse the Commission's ruling on patent misuse for the reasons stated, and we remand this case to the Commission for further proceedings consistent with this opinion.

REVERSED AND REMANDED.