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COMPUTERS, COPYRIGHT & TYING AGREEMENTS: AN ARGUMENT FOR THE ABANDONMENT OF THE PRESUMPTION OF MARKET POWER†

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INTRODUCTION

Intellectual property, by its very nature, is an area of law in which new factual and legal issues will always be present.¹ The development of the computer is one example of a new technology creating new legal questions in the law of intellectual property.

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¹The term intellectual property describes patents, copyrights, trademarks and trade secrets. For an individual's work to be eligible for patent or copyright protection the work must have a certain degree of newness. 35 U.S.C. §§ 102, 103 (1982) (the subject matter of a patent must be novel and non-obvious); 17 U.S.C. § 102(a) (1982) (the subject matter of a copyright must be original). The federal statute concerning patents describes the availability of patents: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101 (1982). The statute further provides that patents are not available for an invention that is obvious:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Id. § 103. With respect to copyrights, the statute clearly requires originality: "Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. § 102(a).

Additionally, unlike real property, patents and copyrights have limited durations. 35 U.S.C. § 154 (1982) (seventeen years for a patent); 17 U.S.C. § 302(a) (1982) (the life of the author plus fifty years for a copyright). On the other hand, trademarks and trade secrets can theoretically exist forever. 3 R. MILGRIM, MILGRIM ON TRADE SECRETS A1-33, A1-36 app. (1984). Thus, trademarks and trade secrets can protect old works, for example Coca-Cola's trademark and formula. Nevertheless, when the work is first created a certain amount of newness is required to entitle it to either trademark or trade secret protection. *Id.* at A1-23. For a trademark to be protected it does not have to be novel or non-obvious, as a copyright or patent would require, but it must be distinct enough from other marks in the area to avoid a likelihood of consumer confusion. *Id.* A trade secret must be sufficiently new so that it can be distinguished from everyday knowledge. *Id.* Because of this general requirement that intellectual property have some degree of newness to acquire protection, this area of law will always be presented with unique and different subject matter. Moreover, as new works are created the law must adapt to deal with such works. See, e.g., *Diamond v. Chakrabarty*, 447 U.S. 303 (1980) (extending patent protection to a living human-made micro-organism); NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT 3 (1978) (discussing the inability of the pre-1976 copyright laws to cope with changing technology) [hereinafter CONTU].

Although certain issues regarding the scope of legal protection afforded to intellectual property rights in computer programs remain unresolved,² the general means of protection available to computer programs are well defined. Copyright,³ trade secret,⁴ and to a limited extent, patent protection⁵ are all available for computer programs. Yet, affording protection to computer programs is only the first phase in the development

² For example, it is unclear how the fair use exception, 17 U.S.C. § 107 (1982), will apply to copyrighted computer programs. See Grogan, Williams & Johnston, *Implications of the Betamax Decision in the Computer Software Industry*, COMPUTER LAW., March, 1984, at 9. Under the fair use provision, use of a copyrighted material that is deemed "fair use" is not an infringement of a copyright. 17 U.S.C. § 107.

³ See *Apple Computer, Inc. v. Formula Int'l Inc.*, 725 F.2d 521 (9th Cir. 1984) (extending copyright protection to computer operating systems program); *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240; (3d Cir. 1983) (extending copyright protection to computer operating systems programs), *cert. denied*, 464 U.S. 1033 (1984); *Williams Elecs., Inc. v. Arctic Int'l, Inc.*, 685 F.2d 870 (3d Cir. 1982) (enforcing copyright on application program); see generally I. D. BENDER, COMPUTER LAW §§ 4.01-4.04 (1986) (discussing statutory basis of copyright protection for computer programs and recent cases dealing with copyright on computer programs); I. M. NIMMER, NIMMER ON COPYRIGHT § 2.04[C] (1986) (discussing copyright protection for computer data bases and programs).

⁴ *Technicon Medical Information Sys. Corp. v. Green Bay Packaging Inc.*, 687 F.2d 1032 (7th Cir. 1982) (trade secret protection not preempted by 1909 Copyright Act), *cert. denied*, 459 U.S. 1106 (1983); *Warrington Assoc., Inc. v. Real-Time Eng'g Sys. Inc.*, 522 F. Supp. 367 (N.D. Ill. 1981) (trade secret protection not preempted by 1976 Copyright Act); CONTU *supra* note 1, at 18 ("The availability of copyright for computer programs does not, of course, affect the availability of trade secret protection."); see generally I. D. BENDER, *supra* note 3, at § 4A.01 (discussing case law, status, and practical considerations regarding trade secret protection of software); M. JAGER 1984 TRADE SECRETS LAW HANDBOOK §§ 9.01-9.04 (discussing relevant case law that extended trade secret protection to software). *But see* Laurie & Everett, *Protection of Trade Secrets In Object Form Software: The Case for Reverse Engineering*, Computer Law., July, 1984, at 1, 4 (asserting that trade secret protection for software is preempted by copyright law). See *infra* note 189 for a discussion of preemption analysis as it relates to copyright and trade secret law.

⁵ A computer program is considered a process for the purpose of patent law. See 35 U.S.C. § 101 (1982). A "process" is a patentable invention provided it is new and useful. See *supra* note 1 for the text of 35 U.S.C. § 101. Process is defined in the statute as a "process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material." *Id.* § 100(b) (1982). There are four major Supreme Court decisions which offer authority for affording patent protection to computer programs but emphasize that the patentable program must be new, unobvious and more than simply a mathematical formula. *Diamond v. Diehr*, 450 U.S. 175 (1981) (holding that a mathematical formula or a computer program is patentable if it is claimed in connection with a physical process); *Parker v. Flook*, 437 U.S. 584 (1978) (holding a particular computer program unpatentable because the only novel element of the program was the mathematical algorithm used and mathematical formulas are not patentable); *Dann v. Johnston*, 425 U.S. 219 (1976) (holding computer program to be used in check processing by banks unpatentable because obvious); *Gottschalk v. Benson*, 409 U.S. 63 (1972) (refusing a patent to a program if the patent would preempt a mathematical algorithm, but stating that its decision does not preclude patents for other computer programs).

Protection might also be obtained by patenting a programmed computer as a new machine. See *In re Bernhart*, 417 F.2d 1395 (C.C.P.A. 1969). This alternative avoids the problems such as . . . associated with patenting the program as a process. Nevertheless, it is unlikely that patenting programmed computers would be an effective method of protecting computer programs because most programmed computers would be obvious. 35 U.S.C. § 103 (1982) (one cannot obtain a patent if the invention is obvious to a person, having ordinary skill in the art).

For a general discussion of the patentability of computer programs see I. D. BENDER, *supra* note 3, at §§ 3A.01-3A.07; J. Landis, *Mechanics of Patent Claim Drafting* § 41 (2d ed. 1974).

of the law in response to this new technology. The second phase will be to determine what effect these new rights, arising out of legal protection for computer programs, have on other areas of the law. Any area of law that deals directly or indirectly with property rights will be affected. For example, courts and legislatures will have to address the effect that a property right in a computer program will have on criminal,⁶ commercial,⁷ tax,⁸ and antitrust law.⁹

In antitrust law, the most significant issue raised by the recognition of a property right in a computer program concerns the use of tying agreements. A tying agreement exists whenever the seller conditions the purchase of one product (the tying product) on the purchase of another product (the tied product).¹⁰ Courts often have found that tying agreements restrain competition and violate the antitrust laws.¹¹ Under a three-part test, a tying arrangement is per se illegal if the plaintiff proves that two separate products are involved, the seller has sufficient market power in the tying product to restrain competition in the tied product, and the arrangement affects substantial commerce in the tied market.¹²

Computer programs have raised new issues in connection with tying agreements which the courts have not yet resolved successfully. Many sellers of computer software (computer programs) and hardware (the computers) sell their products in software/hardware packages. In such arrangements, the software would be a tying product and

⁶ See, e.g., ILL. REV. STAT. ch. 38, § 16-9(b)(2) (1986) (criminal penalties for wrongfully destroying or altering a computer program); ILL. REV. STAT. ch. 38, § 15-1 (1986) (includes computer programs in definition of property for criminal provisions); 18 U.S.C. § 1905 (1982) (federal criminal trade secret statute); 17 U.S.C. § 506 (1982) (criminal liability for copyright infringement).

⁷ A computer program can serve as consideration for stock. The Model Business Corporation Act states: "[t]he consideration for the issuance of shares may be paid, in whole or in part, in money, in other property, tangible or intangible . . ." MODEL BUSINESS CORP. ACT § 19 (1979). Watered stock problems can arise when computer programs are used as consideration for stock. In a watered stock situation the value of the computer program exchanged for the stock is less than the stock's stated consideration. The one who exchanged the computer program then could become personally liable to the corporation's creditors for the difference between the computer program's value and the stated consideration of the stock. *Id.* § 25; cf. *Trotta v. Metalnold Corp.*, 139 Conn. 668, 96 A.2d 798, 97 U.S.P.Q. 239 (1953) (undervalued trade secret created a watered stock problem).

⁸ See generally TAXATION COMMITTEE OF THE PATENT LAW ASSOCIATION OF CHICAGO, TAX GUIDE FOR PATENTS, TRADEMARKS & COPYRIGHTS §§ 1.01-4.03, 9.01-12.02 (1984) (general discussion of the tax consequences of patent and copyright acquisition, ownership, and litigation); 1 R. MILGRIM, *supra* note 1, at § 6.04 (general discussion of taxability of trade secrets).

⁹ The primary impact in antitrust law of the recognition of a property right in a computer program concerns the use of tying agreements under which the purchase of a computer program or software is conditioned on the purchase of a computer or hardware. For a discussion of the antitrust ramifications of copyright protection on a computer program, see *infra* notes 67-115 and accompanying text. For a general discussion of the interaction of antitrust law and trade secret protection, see W. HOLMES, INTELLECTUAL PROPERTY AND ANTITRUST LAW §§ 25.01-29.03 (1985). For a discussion of the interaction between patent and antitrust law, see Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1815 (1984); see also W. HOLMES, *supra* at §§ 16.01-24.05 (general discussion of patent-antitrust law).

¹⁰ *Northern Pac. Ry. Co. v. United States*, 356 U.S. 1, 5-6 (1958); *Bell v. Cherokee Aviation Corp.*, 660 F.2d 1123, 1126 (6th Cir. 1981); L. SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST § 150, at 431 (1977). A tying agreement also occurs when the buyer is forced to agree not to buy the tied product from another supplier. *Northern Pac.*, 356 U.S. at 5-6.

¹¹ See *infra* notes 13-15 and accompanying text.

¹² See *infra* notes 16-21 and accompanying text.

hardware would be a tied product. By selling these products as packages, however, many companies are opening themselves up to claims that their package arrangements are *per se* illegal.

In software/hardware packages, the first and third elements of the three-part test for an illegal tying arrangement — separate products and a substantial effect on commerce — are almost always present. The second element — market power in the computer program's market — therefore is the central issue in most software/hardware tying cases.

This article argues that to determine whether sufficient market power exists in the program's market to restrain competition in hardware, courts should examine the program's market to see if functional equivalents of the program exist or if the seller has a monopoly on the product. Instead of making such an inquiry, however, courts have borrowed inappropriately from patent law and copyright law pertaining to films to presume the presence of market power in any case where the computer program in question is copyrighted. Part I briefly outlines the three requirements to establish *per se* illegality of a tying agreement: separate products, market power, and a substantial effect on commerce. This part then reviews the second requirement, market power, in the context of intellectual property law. From this general analysis, the article then analyzes the rule that a copyright creates a presumption of market power. Specifically, Part I evaluates the reasoning and rationale of the United States Supreme Court cases establishing that rule.

Part II of this article evaluates the application of the law prohibiting tying agreements to computer hardware and software, concluding that in most situations involving a seller of a package of hardware and software, the second requirement, market power, will be the pivotal issue. Part II then considers the two cases that have thus far addressed the issue of tying hardware to software; one holds that the presumption of market power applies to a copyrighted computer program and the other holds that no such presumption applies.

Part III of this article argues that a copyright on a computer program should not create a presumption of market power for three reasons. First, in light of the differences between the rights associated with patents and copyrights, the extension of the presumption of market power from patents to copyrights was incorrect. Specifically, the rights associated with a patent create far greater market power than the rights associated with a copyright.

Second, the presumption of market power for a copyright should not be extended beyond the fact situation before the Supreme Court when it adopted that presumption. When the Supreme Court adopted the presumption, the copyrighted works at issue were movies. A copyright on a movie is likely to protect the value of the movie far more than a copyright on a computer program protects the value of the program. The market power derived from a copyright on a computer program is substantially less than the market power derived from a copyright on a movie.

Third, courts should not presume market power where a computer program is copyrighted because such a presumption will deter individuals from seeking copyright protection for computer programs. Part III will illustrate that presumption's deterrent effect on seeking copyright protection will not increase pro-competitive activity. Moreover, forcing individuals to seek trade secret protection rather than copyright protection will decrease the amount of knowledge available to the public and harm the public interest. Thus, Part III concludes that this deterrent effect on seeking copyright protec-

tion and the subsequent harm to the public, coupled with the failure of the presumption to aid competition, and the minimal market power derived from a copyright on a computer program support an argument for abandoning the presumption.

I. TYING AGREEMENTS AND COPYRIGHT LAW

From an early point in the development of antitrust law, courts have observed that a tying agreement serves little purpose, except to restrain competition.¹³ Because most tying agreements have anti-competitive effects, they are per se illegal.¹⁴ Thus, tying agreements may violate the Sherman or the Clayton antitrust laws.¹⁵

¹³ A tying agreement can violate either section 1 of the Sherman Act or section 3 of the Clayton Act. Section 1 of the Sherman Act provides in pertinent part: "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal." 15 U.S.C. § 1 (1982). Section 3 of the Clayton Act provides in pertinent part:

It shall be unlawful for any person engaged in commerce, in the course of such commerce, to lease or make a sale or contract for sale of goods, wares, merchandise, machinery, supplies, or other commodities, whether patented or unpatented, for use, consumption, or resale within the United States or any Territory thereof or the District of Columbia or any insular possession or other place under the jurisdiction of the United States, or fix a price charged therefor, or discount from, or rebate upon, such price, on the condition, agreement, or understanding that the lessee or purchaser thereof shall not use or deal in the goods, wares, merchandise, machinery, supplies, or other commodities of a competitor or competitors of the lessor or seller, where the effect of such lease, sale, or contract for sale or such condition, agreement, or understanding may be to substantially lessen competition or tend to create a monopoly in any line of commerce.

15 U.S.C. § 14 (1982). Although section 3 of the Clayton Act does not explicitly refer to tying agreements, the Supreme Court held that this provision applies to such agreements. *International Business Mach. Corp. v. United States*, 298 U.S. 131, 134-36 (1936).

Courts once held that the definition of a tying agreement under the Sherman Act was different from the definition of a tying agreement under the Clayton Act, but have now abandoned this distinction. See *ILC Peripherals Leasing Corp. v. International Business Mach. Corp.*, 448 F. Supp. 228, 230 (N.D. Cal. 1978) (discussing old distinctions but noting that definitions are now the same), *aff'd*, 636 F.2d 1188 (9th Cir. 1980) (per curiam). Despite this differentiation, presently the definition of a tying agreement is the same under both Acts. *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 23-24 n.39 (1984). One important distinction between the two acts must be noted. The Clayton Act only applies to tangible articles — "goods, wares, merchandise, machinery, supplies, or other commodities"; it does not apply to services or intangibles. 15 U.S.C. § 14; *Crossland v. Canteen Corp.*, 711 F.2d 714, 718 n.1 (5th Cir. 1983) ("The Clayton Act requires that both the tying and the tied products be goods"). On the other hand, the Sherman Act applies to intangibles, services, and tangibles. 15 U.S.C. § 1; *Crossland*, 711 F.2d at 718 n.1. See also *Jefferson Parish*, 466 U.S. at 4-5.

A private party can bring suit under either the Sherman Act or the Clayton Act. 15 U.S.C. § 15 (1982). This section also provides for the mandatory recovery of treble damages, costs, and attorney's fees. *Id.* Additionally, under this section a court may award interest running from the date that the suit was filed. *Id.*

¹⁴ *Northern Pac.*, 356 U.S. at 6 ("Tying agreements serve hardly any purpose beyond the suppression of competition") (quoting *Standard Oil Co. of Calif. v. United States*, 337 U.S. 293, 305-06 (1949)).

¹⁵ *Jefferson Parish*, 466 U.S. at 9 ("It is far too late in the history of our antitrust jurisprudence to question the proposition that certain tying arrangements pose an unacceptable risk of stifling competition and therefore are unreasonable 'per se.'"). See W. HOLMES, *supra* note 9, at § 8.02. In recent years the per se rule has come under considerable criticism. See, e.g., *Jefferson Parish*, 466

When a tying agreement is challenged, however, the first question is not whether the agreement has pro- or anti-competitive effects but rather, whether the agreement is the type of agreement that gives rise to per se illegality. To establish that a tying agreement is per se illegal, three elements must be present.¹⁶ First, the agreement must involve two different products,¹⁷ the purchase of one of which is conditioned on the purchase of the other.¹⁸ Second, the tying product must have enough market power to restrain competition in the tied product.¹⁹ The ability to raise prices above what could be charged in a competitive market may evidence market or economic power.²⁰ Third, the agreement must affect a substantial amount of commerce in the tied product.²¹

U.S. at 34-35 (O'Connor, J., concurring) (the concurrence joined by three other Justices urged the abandonment of the per se rule for tying agreements).

¹⁶ Some courts have subdivided the elements to create as many as five requirements. See, e.g., *Yentsch v. Texaco, Inc.*, 630 F.2d 46, 56-57 (2d Cir. 1980) (court found five elements necessary to the proof of an illegal tying agreement including a tying and tied product, evidence of actual coercion, market power, anticompetitive effects in the tied market, and involvement of a substantial amount of interstate commerce in tied market).

¹⁷ Compare *ILC Peripherals*, 448 F. Supp. at 233-34 (incorporation of head/disk assembly into disk drive is a single product), with *Advance Business Sys. & Supply Co. v. SCM Corp.*, 415 F.2d 55, 61 (4th Cir. 1969) (copy machines and copy supplies are different products), cert. denied, 397 U.S. 920 (1970). The *Jefferson Parish* Court stated that whether one or two products existed depended upon the character of the consumer demand for those items. 466 U.S. at 19. See *infra* notes 78-85 and accompanying text.

¹⁸ Conditioning, sometimes referred to as coercion, may be evidenced in several ways. It may be shown by a written agreement that requires the purchase of one product before another can be bought. See *Foremost Pro Color, Inc. v. Eastman Kodak Co.*, 703 F.2d 534, 541-42 (9th Cir. 1983), cert. denied, 465 U.S. 1038 (1984). Threats that require the buyer to take a certain product or else be terminated also may constitute conditioning. See *id.* In addition to the above two clear examples of conditioning, conditioning may also occur in a more subtle form. Technological conditioning occurs when the manufacturer specifically designs two items so they cannot be sold separately. To establish this type of conditioning, it must be shown that the products were specifically designed to create a tie and that the design served no technological purpose. See *id.* at 542-43. Economic conditioning occurs when the seller offers the items separately and as a package but the price of the separate items is such that a buyer would only realistically purchase the package. See *Advanced Business Sys.*, 415 F.2d at 62. For further discussion of the conditioning requirement, see *Response of Carolina, Inc. v. Leasco Response, Inc.*, 527 F.2d 1307, 1327-28 (5th Cir. 1976); *Davis v. Marathon Oil Co.*, 528 F.2d 395, 398, 401 (6th Cir. 1976).

¹⁹ See *Northern Pac.*, 356 U.S. at 6-7. An often used example of market power was first given by the *Northern Pac.* Court. To illustrate the absence of market power that Court stated: "[I]f one of a dozen food stores in a community were to refuse to sell flour unless the buyer also took sugar it would hardly tend to restrain competition in sugar if its competitors were ready and able to sell flour by itself." *Id.* at 7.

²⁰ *United States Steel Corp. v. Fortner Enterprises, Inc.*, 429 U.S. 610, 620 (1977) (*Fortner II*). The *Fortner II* case is the leading case in the area of defining market power. In *Fortner II*, the plaintiff alleged that the defendant improperly tied the sale of prefabricated houses to credit. *Id.* at 611. The Court held that the defendant did not have the requisite economic power in the credit market. *Id.* at 622. In discussing market power, the Court noted that:

[The market power element does] not require that the defendant have a monopoly or even a dominant position throughout the market for a tying product. [It does], however, focus attention on the question whether the seller has the power, within the market for the tying product, to raise prices or to require purchasers to accept burdensome terms that could not be exacted in a completely competitive market.

Id. at 620.

²¹ *Jefferson Parish*, 466 U.S. at 16; *Northern Pac.*, 356 U.S. at 6. This element is easily established. Rather than looking to market shares for the tied product, courts simply require a sufficient amount

If these three elements are established, courts will hold a tying agreement per se illegal. In such a case, the courts will not inquire into market shares and the pro- and anti-competitive effects of the agreement.²² If, however, any of the three elements are absent, the tying agreement would not be illegal per se. A court might nevertheless find such an agreement to be illegal under a rule of reason analysis.²³ This analysis balances the tying agreement's beneficial and detrimental effects on competition²⁴ and requires an in depth look into market shares. Therefore, to avoid the uncertainties, expense, and difficulty of a rule of reason case, antitrust plaintiffs usually allege that the agreement at issue falls under the per se classification rather than the rule of reason.²⁵ To establish that a tying agreement fits into the per se classification, plaintiffs must show that the three aforementioned elements are present.

While the first and third elements required to render a tying agreement per se illegal — two different products sold only together and a substantial effect on commerce — are relatively straightforward, the second element — market power — may be more complex. There are three different ways to establish market power in a tying product. First, market power exists when the defendant has a dominant position in the tying market.²⁶ Such a situation would be present, for example, with a company like Eastman Kodak in the photographic film industry.²⁷ Second, a plaintiff can demonstrate the defendant's market power when a substantial number of individuals accept the tie and there is no logical reason for that acceptance other than the tying agreement itself.²⁸

of commerce of the tied product in dollar terms. The dollar amount required to establish this element is usually small in comparison with the total sales of the parties involved in the litigation. See, e.g., *Fortner Enterprises, Inc. v. United States Steel Corp.*, 394 U.S. 495, 502 (1969) (*Fortner I*) (\$200,000 established third element); *United States v. Loew's, Inc.*, 371 U.S. 38, 49 (1962) (\$60,000 established third element); *International Salt Co. v. United States*, 332 U.S. 392, 395 (1947) (\$500,000 established third element). From a practical standpoint, it is unlikely that anyone would expend the time and money to bring suit against a party whose conduct was not affecting a substantial amount of commerce. Even with treble damages and attorney's fees, the award would probably not be great enough to induce a party to sue in light of the large expense associated with litigation.

²² *Northern Pac.*, 356 U.S. at 5.

²³ *Jefferson Parish*, 466 U.S. at 29; *Foremost*, 703 F.2d at 541.

²⁴ *Columbia Broadcasting Sys., Inc. v. American Soc'y of Composers, Authors, and Publishers*, 620 F.2d 930, 934 (2d Cir. 1980), *cert. denied*, 450 U.S. 970 (1981) ("A rule of reason analysis requires a determination of whether an agreement is on balance an unreasonable restraint of trade, that is, whether its anti-competitive effects outweigh its pro-competitive effects."). See also *Jefferson Parish*, 466 U.S. at 29.

²⁵ See *Northern Pac.*, 356 U.S. at 5. Frequently a plaintiff will not even allege a rule of reason violation. See, e.g., *Foremost*, 703 F.2d at 541.

²⁶ *Jefferson Parish*, 466 U.S. at 26. In *Jefferson Parish*, the Court found that a 30% market share was insufficient to establish market power. *Id.* at 26-27. See *Kingsport Motors, Inc. v. Chrysler Motors Corp.*, 644 F.2d 566, 571 (6th Cir. 1981) (court found that Chrysler did not have sufficient dominance in medium priced automobile market to show market power); see also *Moore v. James H. Mathews & Co.*, 550 F.2d 1207, 1215 (9th Cir. 1977) (noting that market dominance can establish the market power element of per se illegality). Although monopoly power or even market dominance are not prerequisites for tying, their presence will establish the first element of per se illegality. See *supra* note 20.

²⁷ Cf. *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 269 (2d Cir. 1979) (discussing Kodak's market power in monopolization context rather than tying context), *cert. denied*, 444 U.S. 1093 (1980).

²⁸ *Fortner II*, 429 U.S. at 618 n.10; *Carpa, Inc. v. Ward Foods, Inc.*, 536 F.2d 39, 48 (5th Cir. 1976).

Third, a plaintiff can establish market power when the tying product is unique and competitors are unable to offer a similar product.²⁹

Under the third method of establishing uniqueness in order to show market power, price and practical or legal reasons can make a tying product unique and thus establish market power. If a tying product is substantially cheaper than competing products, it is unique.³⁰ Additionally, a product is unique if there are no substitutes for it because the defendant's competition lacks the technical ability to produce any.³¹ Finally, a product is also unique when potential competitors are legally precluded from making a substitute product. Because this situation occurs when the tying product is patented or copyrighted,³² courts have held that a patent or copyright on the tying product raises a presumption that there is sufficient market power in the tying product to meet the market power requirement (the second element) of the per se illegality test.³³

Although there are numerous cases in which courts have found market power where the tying product was patented,³⁴ very few cases involving copyrights exist.³⁵ In 1948 in *United States v. Paramount Pictures, Inc.*,³⁶ the Supreme Court first addressed a challenge to a tying agreement in which the tying product was copyrighted. The defendant in *Paramount* had engaged in block-booking.³⁷ Block-booking involves the sale of a block or group of films. The group of film in *Paramount* contained some very good films and some very poor films. Under the block-booking arrangement, in order to get the good films an exhibitor had to buy the entire group; individual films were not available.³⁸ Thus, Paramount conditioned the purchase of good films, the tying product, on the purchase of poor films, the tied product. Because the films were copyrighted, the lower court analogized the situation to patent misuse cases where courts have held that a patent owner tying the use of a patent in the purchase of nonpatented products misuses the

²⁹ *Jefferson Parish*, 466 U.S. at 17; *Fortner II*, 429 U.S. at 621.

³⁰ See *Fortner II*, 429 U.S. at 622 (a unique product gives rise to market power if the seller had a cost advantage over its competitors or is able to offer the product on terms that competitors could not offer if they so desired). See *supra* note 20.

³¹ See *supra* note 20. This situation can occur when the defendant has a trade secret. See M. JAGER, *supra* note 4, at § 11.03[6].

³² *Jefferson Parish*, 466 U.S. at 16; *Fortner I*, 394 U.S. at 505 n.2.

³³ *Jefferson Parish*, 466 U.S. at 16. The concurrence in *Jefferson Parish* stated that such a presumption did not arise. *Id.* at 37 n.7 (O'Connor, J., concurring). Trade secrets have never given rise to a presumption of market power. *3 P.M., Inc. v. Basic Four Corp.*, 591 F. Supp. 1350, 1359 (E.D. Mich. 1984). See M. JAGER, *supra* note 4, at 11.03[6]. Jager asserts that because trade secret protection does not preclude anyone from practicing the secret, but only prevents a wrongful taking, it should not give rise to a presumption of market power. *Id.*

The vast majority of cases hold that a trademark does not create a presumption of economic power. *3 P.M., Inc.*, 591 F. Supp. at 1359; see generally W. HOLMES, *supra* note 9, at §§ 34.01-34.03 (discussion of per se illegality and defenses). In *Siegel v. Chicken Delight, Inc.*, 448 F.2d 43, 50 (9th Cir. 1971), cert. denied, 405 U.S. 955 (1972), the Ninth Circuit held that a trademark did create a presumption of market power. This decision has been severely criticized. See, e.g., W. LIEBELER, ANTITRUST ADVISER § 2.13 (Supp. 1984). The presumption of market power has also been applied to land. See *Northern Pac.*, 356 U.S. at 7.

³⁴ See, e.g., *International Salt Co. v. United States*, 332 U.S. 392 (1947); *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502 (1917) (overruling *Henry v. A.B. Dick Co.*, 224 U.S. 1 (1912)); 2 R. NORDHAUS, PATENT-ANTITRUST LAW § 65 (3d ed. 1984).

³⁵ See W. HOLMES, *supra* note 9, at § 36.01.

³⁶ 334 U.S. 131 (1948).

³⁷ *Id.* at 156.

³⁸ *Id.* at 156-57.

patent because the patent owner in effect has extended the patent to an unpatented product.³⁹ Based on this analogy, the lower court found Paramount's block-booking arrangement to be an illegal tie because the copyright established Paramount's sufficient market power in the good films to restrain competition in the poor films.⁴⁰

The Supreme Court approved this analogy.⁴¹ The Court, however, did not focus on the scope of a copyright holder's exclusive rights or whether those rights created greater or lesser economic power than a patent's rights. Rather, the Court focused on the underlying purpose of copyright law.⁴² The Court noted that "[t]he sole interest of the United States and the primary object in conferring the [copyright] monopoly lie in the general benefits derived by the public from the labors of authors."⁴³ The Court further noted that, like the patent statute, the reward to authors was only a secondary objective of copyright law.⁴⁴ The Court then stated that "the reward does not serve its public purpose if it is not related to the quality of the copyright."⁴⁵ Essentially, the *Paramount* Court condemned the block-booking arrangement because it extended the scope and value of one copyright to another copyright.⁴⁶ The limitation that the Court placed on its holding further supports this conclusion: "All we hold to be illegal is a refusal to license one or more copyrights unless another copyright is accepted."⁴⁷

The Court's analysis resembles the analysis of courts in patent package license agreement cases.⁴⁸ A package license agreement involves the collective licensing of several

³⁹ See *id.* at 157 (quoting from lower court's opinion). As examples of patent misuse cases the Supreme Court cited *Mercoide Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 665 (1944); *Morton Salt Co. v. Suppiger Co.*, 314 U.S. 488, 491 (1942); *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436, 459 (1940).

In *Ethyl Gasoline* the patentee had entered into license agreements that fixed the resale price of the patentee's products. 309 U.S. at 458. The license agreements were used to regulate prices and markets of the retailers. *Id.* at 458.

In *Morton Salt* the Court was not presented with an antitrust claim, but rather, only with a patent infringement action. 314 U.S. at 490. The Court held that when a patent owner tied the use of a patent to the purchase of nonpatented articles, the patent owner misuses the patent. *Id.* at 494. The Court further held that misuse prevented the patent owner from enforcing the patent against anyone regardless of whether that person suffered from the misuse. Moreover, the Court specifically declined to decide whether the antitrust laws were violated. *Id.*

In *Mercoide*, the Supreme Court addressed a patent dispute involving the allegation that the patent in question was improperly extended by an exclusive licensing agreement. *Mercoide*, 320 U.S. at 662-63. The specific holding in *Mercoide* has been legislatively overturned. See 35 U.S.C. § 271(c), (d) (1982); *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 199-202 (1980) (discussing *Mercoide* in light of § 271(d)). Nevertheless, the portion of the *Mercoide* decision relied upon by the *Paramount* Court remains viable. In this section, the Court stated that the dominant interest in the patent system was the public interest. *Mercoide*, 320 U.S. at 665. The Court also explained that any extension of the patent's rights would deny the patent owner the right to enforce the patent. *Id.* at 665-66.

⁴⁰ *Id.*

⁴¹ 334 U.S. at 158.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.* at 159.

⁴⁸ For a good discussion of package license agreements, see 2 R. NORDHAUS, *supra* note 34, at §§ 71-74.

patents under one agreement. Plaintiffs have challenged some of these agreements as patent misuse when one or more of the patents expire before the license agreements do. If the royalty rate under the license agreement does not decrease as the patents expire, arguably the patent owner is using the non-expired patents to extend the scope of the expired patents.⁴⁹ Such an extension constitutes patent misuse if the licensee was forced into the agreement and the agreement was not necessary for the convenience of the parties.⁵⁰ Therefore, the same basic wrong — the use of one item's exclusive right to expand another item's exclusive right — is at the base of both the package license cases and the *Paramount* Court's copyright analysis.

Patent misuse, however, only renders the patent and the license agreement unenforceable; it does not automatically give rise to an antitrust violation.⁵¹ Rather, after a

⁴⁹ The Supreme Court ruled, in *Brulotte v. Thys Co.*, 379 U.S. 29, 32 (1964), that "a patentee's use of a royalty agreement that projects beyond the expiration date of the patent is unlawful *per se*," and that royalties accrued after the last of the patents used in the machines expired could not be collected. In *Brulotte*, the owner of patents for hop-picking devices sold machines incorporating some of those patents to farmers for a flat sum and issued a license with each sale requiring payment of royalties for a period continuing after the last patent on the machines expired. *Id.* at 29-30.

The owner of the patents sued when the farmers refused to pay royalties accruing both before and after the expiration of the patents. The farmers raised the defense of patent misuse based on the licensor's extension of the license agreements beyond the expiration date of the patents. The license agreements listed twelve patents, although only seven were used in the machines. Of those seven, all expired on or before 1957, although the license agreements extended beyond that date. *Id.* at 30. The Supreme Court specifically noted that the *Brulotte* licenses drew no line between the term of the patent and the post-expiration period and that the provisions regarding royalties and use remained the same. *Id.* at 31-32. Therefore, the Court found that the agreements were "a bald attempt to exact the same terms and conditions for the period after the patents have expired as they do for the monopoly period" and held such a royalty agreement illegal. *Id.* at 32.

Brulotte, however, does not stand for the proposition that all package license agreements constitute misuse. In *Brulotte* all the patents expired before the license agreement ended; the Court, however, stated no objection to a royalty rate remaining the same when some, but less than all, of the patents used in the machine expired before the license agreement. *See id.* at 33. *See also* Hensley Equip. Co. v. Esco Corp., 383 F.2d 55, 61 (5th Cir. 1967); Beckman Instruments, Inc. v. Technical Dev. Corp., 433 F.2d 55, 61 (7th Cir. 1970) (upholding package license agreement with fixed royalty rate that expired when the last patent covered by the agreement expired), *cert. denied*, 401 U.S. 976 (1971); McCullough Tool Co. v. Well Surveys, Inc., 343 F.2d 381 (10th Cir. 1965) (same); Leeson Corp. v. Varta Batteries, Inc., 522 F. Supp. 1304 (S.D.N.Y. 1981) (same).

⁵⁰ *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 135 (1969) (Forced package licensing gives rise to patent misuse even if the agreement expires before the last patent.). *Rocform Corp. v. Acitelli-Standard Concrete Wall, Inc.*, 367 F.2d 678, 681 (6th Cir. 1966); *American Sec. Co. v. Shatterproof Glass Corp.*, 268 F.2d 769, 771 (3rd Cir. 1959), *cert. denied*, 361 U.S. 902 (1959); *Duplan Corp. v. Deering Milliken, Inc.*, 444 F. Supp. 648, 697-98 (D.S.C. 1977), *cert. denied*, 444 U.S. 1015 (1980).

⁵¹ Misuse is only used as a defense to a patent infringement action. It does not give rise to an independent cause of action. *Transitron Elec. Corp. v. Hughes Aircraft Co.*, 487 F. Supp. 885, 892-93 (D. Mass. 1980), *aff'd*, 649 F.2d 871 (1st Cir. 1981) (on appeal the court dealt with issues of contract fraud and recovery of royalties).

The starting point for an analysis of the relationship between antitrust and patent law is *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965). The *Walker Process* Court held that enforcing a fraudulently procured patent could result in a violation of 15 U.S.C. § 2 (Sherman Act monopolization section). *Id.* at 174. The Court reasoned that proof of a fraudulently procured patent would strip the patentee of his exemption from the antitrust laws. *Id.* at 177.

In addition to proving fraud, the *Walker Process* Court stated that the accusing party must

court finds patent misuse it must subject the agreement to a separate antitrust analysis to determine if it is illegal.⁵² In essence, the *Paramount* Court used the underlying rationale of patent misuse, a doctrine that prevents a patent owner from enforcing a patent when the patent owner uses the patent in a manner contrary to public policy, to impose antitrust liability and treble damages in a copyright case.⁵³ Moreover, the *Paramount* Court subjected the defendant to antitrust liability without going through a separate antitrust analysis — a determination of whether the copyright on the tying film prevented competitors from offering similar films.⁵⁴

The Supreme Court, in its 1962 decision in *United States v. Loew's Inc.*,⁵⁵ did not forego an independent antitrust analysis as had the *Paramount* Court. In *Loew's* the Court was again presented with a block-booking arrangement.⁵⁶ The facts differed from those in *Paramount* because the films were being licensed to television stations rather than movie theaters.⁵⁷ The Court found that this difference was immaterial, however, and held that the block-booking arrangements were illegal tying agreements under the second part of the three part test.⁵⁸ In imposing antitrust liability, the *Loew's* Court did not rely

establish the other elements of a § 2 claim. *Id.* at 174. Those elements consist of: 1) monopoly power in the relevant market, and 2) willful acquisition or maintenance of that power — monopolistic intent. *U.S. Indus., Inc. v. Norton Co.*, 210 U.S.P.Q. 94, 114–15 (N.D.N.Y. 1980) (citing *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1973)). Additionally, the accusing party must be damaged by the enforcement of the fraudulently procured patent. *Walker Process*, 382 U.S. at 178.

Finally, the *Walker Process* Court declined to classify enforcement of a fraudulently procured patent as a per se antitrust violation. *Id.* at 178. Nevertheless, it has been argued that *Walker Process* left the question of per se illegality open. The Federal Circuit reflected this argument in *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1367 (Fed. Cir. 1984) stating:

The patent system, which antedated the Sherman Act by a century, is not an "exception" to the antitrust laws, and patent rights are not *legal monopolies* in the antitrust sense of that word. Accordingly, if a patent is held to have been obtained illegally, it is not properly said, *ipso facto*, that it was all along an *illegal monopoly* and, thus, that its procurement and attempted enforcement was a *per se* violation of the antitrust laws. A holding that monopoly analysis should end in favor of liability on a determination of fraud, without more, would signal a fundamental misunderstanding of the substance and purposes of both the patent and the antitrust laws.

(emphasis in original). This statement evidences the Federal Circuit's pro-patent position. The statement is also noteworthy because the Federal Circuit disregards the "exception to the antitrust law" language of *Walker Process*. See *Walker Process*, 382 U.S. at 177. While *Walker Process* and *American Hoist & Derrick* both address patent fraud and not misuse, their rationale can nevertheless be applied to misuse situations.

The court in *Transitron* discussed the two differences between misuse and antitrust violations. 487 F. Supp. at 892. First, to show misuse a party does not have to prove anticompetitive effects. Second, to establish misuse, a party does not have to prove that it was harmed. These distinctions make proving misuse easier than proving an antitrust violation. *Id.*; see *Duplan Corp. v. Deering Milliken, Inc.*, 444 F. Supp. 648, 673 (D.S.C. 1977) (finding misuse but no antitrust violation), *modified*, 594 F.2d 979 (4th Cir. 1979), *cert. denied*, 444 U.S. 1015 (1980).

⁵² It is not uncommon in a case having both antitrust and patent infringement issues for those issues to be tried separately. See, e.g., *Brandt, Inc. v. Crane*, 97 F.R.D. 707 (D.D. Ill. 1983).

⁵³ See *supra* note 13.

⁵⁴ See *supra* note 20.

⁵⁵ 371 U.S. 38, 44–45 (1962).

⁵⁶ *Id.* at 39.

⁵⁷ *Id.* at 40.

⁵⁸ *Id.* at 48.

directly on the fact that the defendant's actions were convoluting the policy behind copyrights.⁵⁹ Rather, the Court scrutinized the agreement in an antitrust context.

The *Loew's* Court initially observed that it disfavored tying agreements for two reasons. First, tying agreements "may force buyers into giving up the purchase of substitutes for the tied product."⁶⁰ Second, tying agreements "may destroy the free access of competing suppliers of the tied product to the consuming market."⁶¹ The Court next stated that to impose liability for a tying agreement, however, the seller must have sufficient market power in the tying product to restrain appreciably free competition in the tied product's market.⁶² The Court held that this market power was presumed present when the tying product was patented or copyrighted.⁶³ The Court justified this presumption as a natural extension of the patent misuse doctrine.⁶⁴ The Court further noted that the presumption of uniqueness for patented products logically flows from the patent law's objective of rewarding uniqueness.⁶⁵ The *Loew's* Court then reaffirmed the *Paramount* Court's application of the patent misuse rationale to copyright antitrust cases.⁶⁶ Like *Paramount*, the *Loew's* Court never compared the scope of patent rights with the scope of copyright rights. Therefore, the Court offered no grounds for its assumption that a copyright creates the same coercive economic power as a patent. Nevertheless, in light of *Loew's* and *Paramount*, courts now presume that when the tying product is copyrighted, the requisite market power to establish per se illegality is present.

In summary, a tying agreement occurs whenever the purchase of one product is conditioned on the purchase of another. Such agreements are per se antitrust violations if three elements are present: the agreements involve two separate products and the purchase of one product is conditioned on the purchase of the other, sufficient market power in the tying product exists such that the tying agreement restrains competition in the tied product, and the agreement affects a substantial amount of commerce in the tied product's market. Furthermore, when the tying product is copyrighted, courts presume the necessary market power is present in the tying product. Thus, if the tying product is copyrighted, an antitrust plaintiff must establish only the first and third elements to render the agreement illegal per se.

II. COPYRIGHT PROTECTION FOR COMPUTER PROGRAMS — ANTITRUST EFFECTS

In light of the foregoing analysis, a company selling software (computer programs) and hardware (computers, video games, robots, or toys) only as an integrated unit or

⁵⁹ The Court, nevertheless, did use the policy behind copyright law to justify the presumption of market power. *Id.* at 46.

⁶⁰ *Id.* at 45.

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.* at 45-46. Interestingly, the *Paramount* Court never stated that a copyright raised the presumption of market power.

⁶⁴ *Id.* at 46.

⁶⁵ *Id.* at 46. The Court reasoned that because an item must be unique to be patentable, 35 U.S.C. § 102 (1982), the item should also be unique for the purposes of antitrust laws. *Id.* This reasoning ignores the fact that an item can be unique in the patent sense of the word and yet totally worthless because of similar non-infringing substitutes, from an economic point of view. Moreover, it is the economic worth that is crucial to an antitrust analysis and determination of uniqueness. *Cf. Walker Process*, 382 U.S. at 177-78 (declining to find that a patent was a relevant market in itself because there could have been non-infringing substitutes for the patent).

⁶⁶ 371 U.S. at 46-47 (quoting *Paramount*, 334 U.S. at 158).

package, must consider seriously the antitrust ramifications of copyrighting its programs.⁶⁷ In such packages, the software would be the tying product and the hardware would be the tied product. Thus, a copyright on the company's computer programs would establish the presumption of market power in the tying product. The presumption would then force the company to base its defense in an antitrust suit on either the absence of the first element for per se illegality — separate products with one's purchase conditioned on the other's — or on the absence of the third element for per se illegality — substantial effect on commerce in the tied product.

At first glance, this situation does not appear to create any great inequity for the company with a copyright on a computer program. It still has two means to show that per se illegality is not established. A brief examination of the first and third elements in the per se illegality test illustrates, however, that few companies selling computer hardware and software as packages could effectively defend themselves by establishing the absence of either of these elements. After a close analysis of the interrelation of software and hardware and the rationale behind extending copyright protection to software, it is apparent that in the vast majority of software/hardware packages offered for sale, two separate products exist. Thus, a plaintiff could easily establish the first element of per se illegality, that the defendant is selling two products with the purchase of one conditioned on the purchase of the other. Moreover, although the language of the third element — requiring the tying agreement to affect a *substantial* amount of commerce — creates the impression of demanding large volumes of sales in the tied product's market, courts have required relatively small amounts of sales to establish that element.⁶⁸ Thus, it is likely that this element also will be present in a software/hardware package arrangement. With the first and third elements of per se illegality established rather easily, the presumption of market power by virtue of the copyright, which establishes the second element of per se illegality, becomes critical.⁶⁹

In evaluating whether software and hardware are two separate products under the first element of the per se illegality test, it initially appears that the products are so interrelated that they are not two products, but rather, one. A computer without a program is a lifeless mass of wires and circuits that performs no function,⁷⁰ other than taking up space on your desk. Likewise a program is nothing more than a series of strange words⁷¹ or magnetic impulses representing open and closed switches.⁷² The program is valueless and functionless unless it is used in a computer. Thus, the conclusion

⁶⁷ Tying problems only arise when the seller refuses to offer the items in the package separately. Thus, there is nothing illegal in offering a package of items, if the items are also available individually. *Jefferson Parish*, 466 U.S. at 12 & n.18.

⁶⁸ See *supra* note 21.

⁶⁹ However, one other means of defending a tying claim exists. The business justification defense provides that when the two products will not properly work independently of one another or if they can not be made independently then there is no antitrust violation. See, e.g., *Dehydrating Process Co. v. A.O. Smith Corp.*, 292 F.2d 653 (1st Cir.) (applying defense to manufacturer of patented silo unloading devices), *cert. denied*, 368 U.S. 931 (1961). This defense is applied only in very unique situations, see *W. Holmes supra* note 9, at § 20.93, and was rejected in both cases dealing with computer program copyrights discussed *infra* notes 87-115 and accompanying text.

⁷⁰ Gemignani, *Legal Protection for Computer Software: the view from '79*, 7 *COMPUTERS, TECH. L.* 269, 271, 273 (1980).

⁷¹ For example, higher-level languages such as BASIC, FORTRAN, and PL1 appear similar to a set of instructions expressed in literary form. *Id.* at 272.

⁷² See *id.* at 271.

seems inescapable that a computer and its program are one product inexplicably united. Such a conclusion would prevent a finding of per se illegality because the first element requires that two different products be involved.

The argument that a computer and its program are one product is flawed, however, in two respects. First, a key hurdle that the courts and the legislature overcame in granting copyright protection to computer programs was the determination that the program was separate and distinct from the computer.⁷³ If the program was only a part of the computer, analogous to a cam in a machine, it would not be copyrightable.⁷⁴ Copyright only protects works of authorship fixed in a tangible medium.⁷⁵ Parts of a machine and processes are not protectable because such protection would give rise to the protection of ideas, which the copyright statute expressly prohibits.⁷⁶ Thus, Congress and the courts in granting copyright protection to programs implicitly established that programs were distinct products from computers.

Second, even if the implication that software and hardware are separate products for copyright purposes cannot be applied in an antitrust context, courts would find a program and a computer to be different products for tying purposes. The test to determine whether there are different products in a tying situation is not based upon the functional relationship of the products. That a computer is worthless without a program and vice versa⁷⁷ is irrelevant to the judicial determination of whether two different products exist in the context of a tying agreement. Rather, courts base the test for determining whether one product or different products are present upon the character of the demand for those products.

The Supreme Court announced the character of the demand test in 1984 in *Jefferson Parish Hospital District No. 2 v. Hyde*.⁷⁸ In *Jefferson Parish*, the Court found that hospital operating room services and anesthesiological services were different services for anti-trust purposes.⁷⁹ In so finding, the Court specifically rejected the argument that only one service existed because they were functionally integrated;⁸⁰ no one would undergo surgery without an anesthetic. The Court instead adopted the character of demand test.⁸¹ Under that test, the Court considers whether purchasers of the items perceive the items as one product or two. In applying the test, the Court examined the actual practices of the health care industry. The Court noted that hospitals bill operating room and anesthesiological services separately and that surgeons often request specific anes-

⁷³ See, e.g., *Williams Elecs., Inc. v. Arctic Int'l, Inc.*, 685 F.2d 870, 874-75 (3d Cir. 1982); *CONTU*, *supra* note 1, at 21. .R.

⁷⁴ *CONTU*, *supra* note 1, at 29 (Hersey, Comm'r, dissenting).

⁷⁵ 17 U.S.C. § 102(a) (1982).

⁷⁶ *Id.* § 102(b); 37 C.F.R. § 202.1(b) (1986); see 1 *NIMMER*, *supra* note 3, at § 2.03[D].

⁷⁷ *Supra* notes 70-72 and accompanying text.

⁷⁸ 466 U.S. 2, 19 (1984).

⁷⁹ *Id.* at 23.

⁸⁰ *Id.* at 19. In a footnote the Court affirmatively cited a number of cases where it found illegal tying agreements "involving functionally linked products at least one of which is useless without the other . . ." *Id.* at 19 n.30. For example, the Court cited "International Business Machines Corp. v. United States, 298 U.S. 131, 56 S. Ct. 701, 80 L.ed. 1085 (1936) (computer and computer punch cards)." 466 U.S. at 19 n.30.

⁸¹ *Id.* at 19.

siologists.⁸² Even though one service was useless without the other, the Court concluded that the two services were different under the antitrust laws.⁸³

Thus, under the *Jefferson Parish* character of demand test, software and hardware would be different products because consumers purchase hardware and software from different sources; they therefore would perceive the items as two products.⁸⁴ In addition, evidence of the large number of firms that only produce software⁸⁵ would further support the conclusion that consumers regard software and hardware as two separate products. In sum, a plaintiff suing a company that sells packages of hardware and software could show easily that two separate products are involved, thereby establishing the first element of per se illegality of the tying arrangement.

Interestingly, although the *Jefferson Parish* case concerned health care services, the Court noted in dicta that a copyright presumptively establishes market power.⁸⁶ Therefore, after *Jefferson Parish*, a company that markets its copyrighted programs and hardware as a package would have difficulty avoiding per se illegality. The program and the computer would be two different products. The copyright on the program would create the presumption that the program had the requisite market power to establish per se illegality. In all likelihood, the hardware sales would be sufficient to establish a substantial effect on commerce.

The seller's only remaining way to avoid per se illegality would be not to condition the purchase of its software on its hardware. The lack of conditioning would avoid the first element of per se illegality, which has two components: different products and conditioning. Nevertheless, this solution is no solution at all. By not conditioning the purchase of software on the purchase of hardware, the company would lose any economic or strategic value it sought to establish by marketing the items as a package. At best, the company could market the package until a customer requested one of the products without the other. The company would then have to sell the single item or run the substantial risk of an antitrust violation with its attendant treble damage awards.⁸⁷

Data General Corporation elected to take that risk and lost. In 1984 in *Digidyne Corp. v. Data General Corp.*,⁸⁸ the Court of Appeals for the Ninth Circuit held that Data General's marketing policies were per se illegal. Data General had refused to license its copyrighted programs without its hardware.⁸⁹ The Ninth Circuit in *Data General ap-*

⁸² *Id.* at 22. The practices of the seller, separate billing and bookkeeping, would be relevant to the character of demand because those practices would help shape the purchasers perception of the products.

⁸³ *Id.* at 24.

⁸⁴ See, e.g., Gilburne, *The Use of Escrow for Source Code and Technical Design Specifications in OEM Transactions*, COMPUTER LAW., March, 1984, at 1 (discussion of OEM's (Original Equipment Manufacturers) buying practices); Davis, *IBM PC Software and Hardware Compatibility*, COMPUTER LAW., July, 1984, at 11 (discussing how to legally make IBM PC compatible software).

⁸⁵ See MacGrady, *Protection of Computer Software — an Update and Practical Synthesis*, 20 HOUS. L. REV. 1033, 1033 (1983).

⁸⁶ 466 U.S. at 16 (citing *United States v. Loew's*, 371 U.S. 38, 45-47 (1962)). The concurrence, however, rejected this proposition. *Id.* at 37 n.7 (O'Connor, J., dissenting).

⁸⁷ See *supra* note 13.

⁸⁸ 734 F.2d 1336, 1338 (9th Cir. 1984), cert. denied, 105 S. Ct. 3534 (1985) (White, J., and Blackman, J., dissenting) (noting that substantial questions existed regarding the effect legal monopolies had on market power and the importance of this question to the computer industry), *rev'g In re Data Gen. Corp. Antitrust Litig.*, 529 F. Supp. 801 (N.D. Cal. 1981) (*Data II*).

⁸⁹ *Id.*

proved an earlier decision by the United States District Court for the Northern District of California (*Data I*)⁹⁰ that granted summary judgment against Data General on the first and third elements of a per se claim.⁹¹ After granting summary judgment on those two counts, the district court then held a trial on the second element.⁹²

The jury found that Data General had the requisite market power in the tying product, operating systems software, and thus found the tying agreement illegal per se.⁹³ The district court, however, in a subsequent opinion (*Data II*) overturned the jury verdict and granted Data General a judgment notwithstanding the verdict.⁹⁴ The district court found that the presumption of market power, which arises when a product is copyrighted, did not apply to copyrighted computer programs.⁹⁵ The district court decided this case prior to the cases that extended copyright protection to operating systems programs.⁹⁶ Thus, the district court was uncertain if copyright law protected the programs at issue, which were operating systems programs. If the programs' copyrights were invalid, they would not give rise to a presumption of market power.⁹⁷ Furthermore, the district court held that the plaintiffs did not meet their burden of proving that the

⁹⁰ *In re Data Gen. Corp. Antitrust Litig.*, 490 F. Supp. 1089 (N.D. Cal. 1980) (*Data I*).

⁹¹ 734 F.2d at 1338-39 (citing *Data I*, 490 F. Supp. 1089). In *Data I* the district court granted summary judgment on the issue of separate products finding that Data General's programs and hardware were distinct products. *Data I*, 490 F. Supp. at 1106. The court termed the test it used to make that determination the "function of the aggregation." *Id.* at 1104. This would appear to be rejected by *Jefferson Parish*, see *supra* note 79-82 and accompanying text; however, as the Ninth Circuit correctly noted, *Data Gen.*, 734 F.2d at 1339, the test used in *Data I* was actually the same as the character of the demand test articulated in *Jefferson Parish*. But see Reback, *Further Reflection on Data General and the Law of Pricing Unbundled Products*, COMPUTER LAW., March, 1984, at 1, 3 (arguing that *Data I* test was rejected by *Jefferson Parish* but that under the *Jefferson Parish* character of demand test the same result would have occurred). In making the separate products determination, the *Data I* court noted that "the relevant inquiry is not whether the two items must be used together but whether they must come from the same seller." *Data I*, 490 F. Supp. at 1104. The *Data I* court found that Data General's maintenance of separate price lists and marketing personnel for software and hardware, and the marketing practices of the computer industry in general evidenced that software and hardware were separate products. *Id.*

In granting summary judgment against Data General on the third element, the issue of substantial amount of interstate commerce in the tied market, the court noted that any dollar volume in hardware sales more than a *de minimis* amount would satisfy this requirement. *Id.* at 1117. In this case, Data General's hardware sales were \$254,000,000 for 1977. *Id.* This large volume of sales demonstrates the rapid growth of the computer industry; Data General started out in the back room of a beauty parlor in 1968. Johnston, *Product Bundling Faces Increased Spector of Illegality Under the Antitrust Laws*, COMPUTER LAW., Sept., 1984, at 1. Data General's antitrust problem suggests that any small but quickly growing computer firm could find itself in serious antitrust problems if it chose to copyright its programs and market them in a package with its hardware.

⁹² *In re Data Gen. Corp. Antitrust Litig.*, 529 F. Supp. 801 (N.D. Cal. 1981), *rev'd sub nom.*, *Digidyne Corp. v. Data Gen. Corp.*, 734 F.2d 1336 (9th Cir. 1984).

⁹³ *Id.* at 804.

⁹⁴ *Id.* at 805.

⁹⁵ *Id.* at 816.

⁹⁶ See *supra* note 3.

⁹⁷ See *Data II*, 529 F. Supp. at 816; *Data Gen.*, 734 F.2d at 1344 n.5. The district court did not receive any evidence on the effect a copyright would have on the development of comparable programs. *Data II*, 529 F. Supp. at 816. It should be noted, however, that an invalid copyright could still be used to restrict competitors prior to its invalidation.

copyright prevented others from producing similar programs to Data General's.⁹⁸ Thus, the district court found that the plaintiffs did not establish that Data General's copyrighted programs were unique, and therefore the court held that the plaintiffs did not satisfy the second element of the per se illegality test — market power in the tying product.⁹⁹

The Ninth Circuit reversed the district court's decision granting Data General a judgment notwithstanding the verdict.¹⁰⁰ The Ninth Circuit stated, "[d]efendant's [program] has copyright protection The [program's] copyright established both the distinctiveness of [the program] and a legal bar to its reproduction by competitors. 'The requisite economic power is presumed when the tying product is patented or copyrighted.'"¹⁰¹ The Ninth Circuit held that in light of this presumption, the district court had erroneously placed the burden of proof on the plaintiff.¹⁰² Instead, the Ninth Circuit reasoned that the copyright created a presumption of sufficient market power to render the tying agreement illegal per se.¹⁰³ Furthermore, the *Data General* court placed the burden to rebut that presumption on the defendant.¹⁰⁴ Therefore, the Ninth Circuit, holding that there was sufficient evidence for the jury to conclude that Data General had the requisite market power, reinstated the jury's verdict.¹⁰⁵

Thus, the Ninth Circuit, like the Supreme Court in *Paramount* and *Loew's*, blindly extended the doctrine that a copyright presumptively creates the requisite market power for per se illegality. The court concluded that sufficient market power in the copyrighted software was present without analyzing the scope of the rights granted under a copyright, the effect those rights would have in creating sufficient market power to restrain com-

⁹⁸ *Data II*, 529 F. Supp. at 816. This is a very interesting holding because the court instructed the jury that: "[c]opyright protection is presumed to constitute . . . a legal barrier, and . . . the burden is on defendant to rebut that presumption by proving that its copyrights have not prevented others from developing the distinctive product themselves." *Id.* at 811.

⁹⁹ *Id.* at 816.

¹⁰⁰ *Data Gen.*, 734 F.2d at 1339.

¹⁰¹ *Id.* at 1341 (quoting *Loew's*, 371 U.S. at 45).

¹⁰² *Id.* at 1344.

¹⁰³ *Id.* Although the programs contained trade secrets and purchasers were locked in to purchasing Data General's equipment because of compatibility requirements, *id.* at 1343, the court clearly relied on the presumption of market power arising from the copyright to support its holding. *Id.* at 1344.

¹⁰⁴ *Id.* Practically, a defendant could never meet this burden. First, the defendant has the always difficult task of proving a negative — that the copyright did not create market power. Second, the court states that proof of competing substitutes is insufficient to rebut the presumption. *Id.* at 1345 (quoting *Loew's*, 371 U.S. at 49).

In addition, the problem with placing the burden on the defendant is that it will deprive the defendant of summary judgment. There will usually be disputed factual issues regarding whether the defendant rebutted the presumption of market power. Alternatively, if there were no presumption, and thus the plaintiff had the burden of proving market power, the situation could arise where the plaintiff could not present any evidence of market power. *See, e.g.*, 3 P.M., Inc. v. Basic Four Corp., 591 F. Supp. 1350, 1357 (E.D. Mich. 1984). (Plaintiff did not know and did not attempt to prove defendant's market position.) In this situation, with the burden on the plaintiff, summary judgment would be granted to the defendant. Moreover, it does not follow that if the burden were switched to the defendant, that the defendant would be entitled to summary judgment. This result would occur because of the inherent problems in proving a negative.

¹⁰⁵ *Id.* at 1346-47.

petition, and the differences in market power arising out of a copyright on a computer program as opposed to a movie.

Only one court has thus far grappled with these salient issues.¹⁰⁶ In 1984 in *3 P.M., Inc. v. Basic Four Corp.*,¹⁰⁷ the United States District Court for the Eastern District of Michigan considered a situation very similar to that in *Data General*. The *3 P.M.* court, however, granted summary judgment for the defendant.¹⁰⁸ Although the defendant's computer programs were copyrighted,¹⁰⁹ the court held that the plaintiff, as a matter of law, failed to establish the requisite market power to impose per se illegality.¹¹⁰ The *3 P.M.* court held that a copyright did not create a presumption of market power.¹¹¹ Moreover, the court stated that a copyright alone failed to establish that the computer programs were unique.¹¹² The court distinguished the Supreme Court decisions in *Paramount* and *Loew's* on the ground that both those cases were not based solely on the fact that the films were copyrighted; rather, those cases also relied on other factors, such as the themes, notoriety, and stars of the films.¹¹³ The *3 P.M.* court further reasoned that the plaintiff could have avoided summary judgment by showing that the copyright prevented the defendant's competitors from making a functionally equivalent program.¹¹⁴ The court, however, doubted that the plaintiff could do this because a copyright does not prohibit the making of functionally equivalent programs.¹¹⁵ The *3 P.M.* court maintained that a copyright on a computer program does not establish the uniqueness of the program and does not create a presumption of market power under the per se illegality test applied to hardware/software package arrangements.

III. ABANDONMENT OF THE PRESUMPTION OF MARKET POWER FOR COPYRIGHTED COMPUTER PROGRAMS

The reasoning and result in *3 P.M.* directly conflict with the Ninth Circuit's decision in *Data General*, holding that the copyright on the defendant's computer program, the tying product, created a presumption of the presence of the requisite market power to render a tying arrangement per se illegal. The *3 P.M.* court's rejection of the presumption of market power is correct. Courts should abandon the presumption of market power arising from a copyright for three reasons. First, courts should not have extended the presumption of market power from patents to copyrights because patents create greater market power than copyrights. Second, even if the extension of the presumption from patents to copyrights were appropriate, courts should limit the presumption to

¹⁰⁶ The two lower court decisions in *Data General* did not address these issues either. Another court, in *Innovation Data Processing, Inc. v. International Business Mach. Corp.*, 585 F. Supp. 1470 (D.N.J. 1984), had the opportunity to address these issues in the context of a copyrighted program being tied to another copyrighted program; however, it never reached them. The *Innovation* court instead found, alternatively, that there was either no coercion or only one product. *Id.* at 1475-76.

¹⁰⁷ 591 F. Supp. 1350 (E.D. Mich. 1984). The holding of the *3 P.M.* court was followed by a court in *A.I. Boot Co. v. Computer Dynamics, Inc.*, No. C84-1348 (S.D. Ohio May 31, 1985).

¹⁰⁸ *3 P.M.*, 591 F. Supp. at 1353.

¹⁰⁹ *Id.* at 1359.

¹¹⁰ *Id.* at 1361.

¹¹¹ *Id.* at 1359 (quoting *Data I*, 490 F. Supp. at 1112).

¹¹² *Id.*

¹¹³ *Id.* (quoting *Loew's*, 371 U.S. at 48).

¹¹⁴ *Id.* at 1360.

¹¹⁵ See *id.*

copyrights on movies and should not apply it to computer programs. Because a copyright on a movie creates much greater market power than a copyright on a computer program, a blanket rule of presuming market power in all copyright cases is illogical and ignores the differences among product markets. Third, a presumption of market power in computer program copyright cases is contrary to copyright law's objective of increasing the overall availability of public information. The practical result of *Data General* will be to force companies selling software to forego copyright protection and rely on other forms of protection, such as trade secrets. Moreover, forcing companies to forego copyright protection will disproportionately affect smaller companies. For these three reasons, courts should abandon the presumption that a copyright on a computer program provides the requisite market power to establish per se illegality.

A. Presumption of Market Power Was Incorrectly Extended from Patents to Copyrights

Patents provide greater rights of exclusion to patent owners and thus give rise to greater market power than copyrights.¹¹⁶ A patent grants to the patent owner the exclusive right to make, use, and sell an invention.¹¹⁷ Some authors have inaccurately stated that patents protect ideas.¹¹⁸ Yet patents do not protect ideas:¹¹⁹ rather, they protect inventions, which are the embodiment of ideas as expressed in the patent's claims.¹²⁰ Thus, the scope of a patent's exclusive rights will depend on the nature of its claims.¹²¹

¹¹⁶ See, e.g., *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 154-55 (1975) (discussing limited nature of copyright's exclusive rights); *Mazer v. Stein*, 347 U.S. 201, 217 (1954) ("Unlike a patent, a copyright gives no exclusive right to the art disclosed; protection is given only to the expression of the idea — not the idea itself."); *Sheldon v. Metro-Goldwyn Pictures Corp.*, 81 F.2d 49, 54 (2d Cir.) (L. Hand) ("though a copyright is . . . less vulnerable than a patent, the owner's protection is more limited"), cert. denied, 298 U.S. 669 (1936); Gemignani, *supra* note 70, at 276 (if a program is patented it gets a broader scope of protection than if it is copyrighted); cf. *Commissioner of Patents v. Whiteley*, 71 U.S. (4 Wall.) 522, 532 (1866) ("Patentees are a meritorious class, and all the aid and protection which the law allows, this court will cheerfully give them.")

¹¹⁷ 35 U.S.C. § 154 (1982) provides:

Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, for the term of seventeen years, subject to the payment of fees as provided for in this title, of the right to exclude others from making, using, or selling the invention throughout the United States, referring to the specification for the particulars thereof. A copy of the specification and drawings shall be annexed to the patent and be a part thereof.

¹¹⁸ E.g., Reback, *supra* note 91, at 4.

¹¹⁹ *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (quoting: *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874)). In the *Gottschalk* case, the Court stated: "That statement followed the longstanding rule that '[a]n idea of itself is not patentable.'" *Id.*; Gemignani, *supra* note 70, at 294.

¹²⁰ See 35 U.S.C. § 112 (1982) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.")

¹²¹ A patent owner enforces the patent's rights through an action for infringement. Anyone who makes, uses or sells the invention during the term of the patent is an infringer. *Id.* § 271. A patent owner has a civil right of action against an infringer, *id.* § 281. Through this civil action the patent owner can obtain an injunction, *id.* § 283, and damages, *id.* § 284, from an infringer. The damages will be at least a reasonable royalty and can include prejudgment interest. *Id.* § 284; *General Motors Corp. v. Devex Corp.*, 461 U.S. 648 (1983) (upholding an award of \$8,813,945.50 in damages based on a reasonable royalty and \$11,022,954.97 in prejudgment interest).

The claims define the patentee's invention. 35 U.S.C. § 112. Thus, to determine whether an

Unlike a copyright holder, however, who is only protected for a single work,¹²² a patentee

infringement has occurred a court must look to the claims of the patent. *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 758 (Fed. Cir. 1984); *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 395-96 (Ct. Cl. 1967), cited with approval in *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1569 (Fed. Cir. 1983). The *Autogiro* decision contains an excellent discussion of how to make an infringement determination. 384 F.2d at 395-97. The *Autogiro* court noted that although courts are confined by the language of the claims, "[t]he lucidity of a claim is determined in light of what ideas it is trying to convey. Only by knowing the idea, can one decide how much shadow encumbers reality." *Autogiro*, 384 F.2d at 396; see *Fromson*, 720 F.2d at 1569. Thus, to determine the meaning of the claims and consequently the scope of patent protection, a court can look to the drawings and the specifications. *Autogiro*, 384 F.2d at 397; see *Fromson*, 720 F.2d at 1569. Quite often this is essential because "patent law allows the inventor to be his own lexicographer" that is, in the specifications of the patent a patentee can define the meaning of the words used in the claims. *Autogiro*, 384 F.2d at 397; *Fromson*, 720 F.2d at 1569. More importantly, however, the specifications and the drawings can never be used to expand the claims. *Autogiro*, 384 F.2d at 398.

There are two types of infringements: literal infringement and infringement under the doctrine of equivalents. See *Atlas Powder Co. v. E.I. Du Pont De Nemours & Co.*, 224 U.S.P.Q. 409, 415-16 (Fed. Cir. 1984). Under both types of infringement the claims of the patent are controlling. Literal infringement occurs when the claims literally describe the accused infringing device — the patent claims A, B, and C and the infringing device has A, B, and C. See, e.g., *Minerals Separation, Ltd. v. Butte & Superior Mining Co.*, 250 U.S. 336 (1919) (patent claim placed a maximum limit on the amount of oil in a process, Court found no infringement when accused process used more oil than maximum limit stated in patent claims).

Infringement under the doctrine of equivalents occurs when the accused device performs "substantially the same function in substantially the same way to obtain the same result," as the invention claimed in the patent. *Graver Tank & Mfg. Co. v. Linde Air Prod. Co.*, 339 U.S. 605, 608 (1950) (finding manganese silicate and magnesium silicate equivalents) (quoting *Machine Co. v. Murphy*, 97 U.S. 120, 125 (1877)). Thus, if the patent claims A, B, and C and the accused infringer uses A, B', and C the court must determine whether A, B', and C meet the test defined in *Graver Tank* for equivalency and thus constitute an infringement. This doctrine of equivalents, however, is only relied upon when literal infringement cannot be proved. *Id.* at 607.

All patent infringement cases regardless of what district they were brought in are now appealed to the Court of Appeals for the Federal Circuit. 28 U.S.C. § 1295 (1982). Following are some of the decisions by the Federal Circuit regarding infringement, the doctrine of equivalents, and limitations on that doctrine (file wrapper estoppel or prosecution history estoppel) *Jamesbury Corp. v. Litton Indus. Prods., Inc.*, 225 U.S.P.Q. 253, 259-60 (Fed. Cir. 1985) (infringement); *Martin v. Barber*, 225 U.S.P.Q. 233, 235 (Fed. Cir. 1985) (doctrine of equivalents and infringement); *Lemelson v. United States*, 224 U.S.P.Q. 526, 532-35 (Fed. Cir. 1984) (infringement and doctrine of equivalents); *Atlas Powder Co. v. E.I. Du Pont de Nemours & Co.*, 224 U.S.P.Q. 409, 415-16 (Fed. Cir. 1984) (infringement and doctrine of equivalents); *Kinzenbaw v. Deere & Co.*, 741 F.2d 383, 389 (Fed. Cir. 1984) (prosecution history estoppel); *Nestier Corp. v. Menasha Corp.*, 739 F.2d 1576, 1579-80 (Fed. Cir. 1984) (infringement); *Bayer Aktiengesellschaft v. Duphar Int'l Research B.V.*, 738 F.2d 1237, 1242-43 (Fed. Cir. 1984) (prosecution history estoppel); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1582 (Fed. Cir. 1984) (infringement and doctrine of equivalents); *Radio Stell & Mfg. Co. v. MTD Prods., Inc.*, 731 F.2d 840, 847-48 (Fed. Cir. 1984) (doctrine of equivalents); *Amstar Corp. v. Envirotech Corp.*, 730 F.2d 1476, 1480-86 (Fed. Cir. 1984) (infringement); *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 828-29 (Fed. Cir. 1984) (doctrine of equivalents); *Rosemount, Inc. v. Beckman Instruments, Inc.*, 727 F.2d 1540, 1547-48 (Fed. Cir. 1984) (willful infringement); *Studiengesellschaft Kohle v. Dart Indus.*, 726 F.2d 724, 728 (Fed. Cir. 1984) (reverse doctrine of equivalents); *Thomas & Betts Corp. v. Litton Sys.*, 720 F.2d 1572, 1579-80 (Fed. Cir. 1983) (prosecution history estoppel); *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1363-66 (Fed. Cir. 1983) (prosecution history and file wrapper estoppel).

¹²² Copyright protection extends to "original works of authorship fixed in any tangible medium of expression." 17 U.S.C. § 102(a) (1982). The owner of a copyright has the exclusive right to reproduce the copyrighted work, to prepare derivative works, to distribute copies of the work, to

is free to draft the claims and thus define the scope of protection as broadly as is possible within the limits of the prior act. Thus the patentee's resulting right of exclusion under a patent can be quite broad.¹²³

A slice of history illustrates this distinction. Orville and Wilbur Wright invented the first powered airplane. They received a patent on their invention on May 22, 1906.¹²⁴ In the patent they claimed the combination of an aeroplane, a horizontal rudder, and a means for raising and lowering the rear edge of the rudder.¹²⁵ In effect, they claimed an airplane's wings and elevators. This claim is broad enough to prevent anyone from making, using, or selling an airplane. Moreover, the market power associated with this right of exclusion is substantial. For example, if the patent was valid and in effect today,¹²⁶ Orville and Wilbur could prevent the making, using, and selling of any plane from a Piper to a 747.¹²⁷

Now suppose that history was a little different; instead of being inventors, Orville and Wilbur were authors. Further, suppose they wrote a novel about flying. In this novel they describe their airplane in such detail that after reading the novel one could successfully build the machine.¹²⁸ Orville and Wilbur then copyright their novel but never patent their airplane.

publicly perform the work, and to publicly display the work. *Id.* § 106. Anyone who violates these exclusive rights is an infringer and can be sued by the owner of the copyright for the violation of those exclusive rights. *Id.* § 501. The copyright owner can get an injunction, *id.* § 502, and profits and damages, *id.* § 504. Unlike patent law, copyright law also provides for criminal liability of an infringer. *Id.* § 506.

To determine if an accused work is infringing a copyrighted work, a court must determine if the accused work is substantially similar to the copyrighted work. The accused work will only be able to violate one of the exclusive rights set down in § 106 if it is substantially similar to the copyrighted work. *See Warner Bros. Inc. v. American Broadcasting Cos.*, 720 F.2d 231, 239 (2d Cir. 1983) (comparing Greatest American Hero television series and Superman); *Eden Toys, Inc. v. Florelee Undergarment Co.*, 697 F.2d 27, 34-35 (2d Cir. 1982) (comparing Paddington Bear to Fred Bear); *Atari Inc. v. North Am. Philips Consumer Elecs. Corp.*, 672 F.2d 607, 614-15 (7th Cir.) (comparing home television K.C. Munchkin to electronic arcade game PAC-MAN), *cert. denied*, 459 U.S. 880 (1982); *Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp.*, 562 F.2d 1157, 1165-67 (9th Cir. 1977) (comparing H.R. Pufnstuf television series and McDonald's T.V. commercials). *Compare Sheldon v. Metro-Goldwyn Pictures Corp.*, 81 F.2d 49 (2d Cir.) (L. Hand) (finding works substantially similar), *cert. denied*, 298 U.S. 669 (1936) with *Nichols v. Universal Pictures Corp.*, 45 F.2d 119 (2d Cir. 1930) (L. Hand) (finding works not substantially similar). *See generally* 3 M. NIMMER, *supra* note 3, at § 13.03 (discussion of substantial similarity). Therefore, in determining if an infringement has occurred, the copyrighted work, itself, serves the same purpose as the claims in a patent; it defines the scope of protection.

¹²³ *See* 35 U.S.C. § 102 (1982) (novelty requirement of patentability); 35 U.S.C. § 103 (1982) (non-obviousness requirement of patentability).

¹²⁴ *O. & W. Wright*, Patent No. 821,393, filed March 23, 1903, issued May 22, 1906 [hereinafter *Wright Patent*].

¹²⁵ *Id.* at 7, claim 12. That claim provided:

12. In a flying-machine, the combination, with an aeroplane of a normally flat and substantially horizontal flexible rudder, and means for curving said rudder rearwardly and upwardly or rearwardly and downwardly with respect to its normal plane substantially as described.

¹²⁶ The patent would have expired on May 21, 1923. *See supra* note 117.

¹²⁷ *See supra* note 121. In reality the Wright Patent was never enforced through litigation nor held invalid. For an example of patents that effectively covered any helicopter, see *Autogiro*, 384 F.2d at 391.

¹²⁸ Assume that the description, if it had been used in a patent, would have met the requirements

The rights they would acquire under copyright are quite different from those acquired under patent. Under copyright law, only the novel, the embodiment of the author's expression, would be protected.¹²⁹ Orville and Wilbur could not prevent someone from building and flying the airplane described in the novel.¹³⁰ Moreover, they could not even prevent others from writing about flying in airplanes.¹³¹ Therefore, the market power flowing from these rights is substantially less than that which flowed from the patent.¹³²

The Supreme Court in 1879 in *Baker v. Selden*¹³³ used a similar hypothetical to illustrate how the idea/expression dichotomy creates differences between patent and copyright protection. The *Baker* Court stated,

The difference between the two things, letters-patent and copyright, may be illustrated by reference to the subjects just enumerated. Take the case of medicines. Certain mixtures are found to be of great value in the healing art. If the discoverer writes and publishes a book on the subject (as regular physicians generally do), he gains no exclusive right to the manufacture and sale of the medicine; he gives that to the public. If he desires to acquire such exclusive right, he must obtain a patent for the mixture as a new art, manufacture, or composition of matter. He may copyright his book, if he pleases; but that only secures to him the exclusive right of printing and publishing his book. So of all other inventions or discoveries.

The copyright of a book on perspective, no matter how many drawings and illustrations it may contain, gives no exclusive right to the modes of drawing described, though they may never have been known or used before.¹³⁴

of 35 U.S.C. § 112 (1982) ("The specification shall contain a written description . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the [invention]").

¹²⁹ See 17 U.S.C. § 102(b) (1982); 37 C.F.R. § 202.1(b) (1984). Section 102(b) provides:

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

This section is the statutory articulation of the idea/expression dichotomy. 1 M. NIMMER, *supra* note 3, at § 2.03[D]. Simply stated the idea/expression dichotomy provides that a copyright only protects the author's expression, not the author's ideas. This principle has long been recognized by the courts. 3 M. NIMMER, *supra* note 3, at § 13.03[A], at 13-20; see, e.g., *Holmes v. Hurst*, 174 U.S. 82, 86 (1899); *Rubin v. Boston Magazine Co.*, 645 F.2d 80, 82 (1st Cir. 1981). In this hypothetical, the idea would be manned flight and airplane would be the novel expression.

¹³⁰ See *infra* text accompanying notes 133-34; see also *DeSilva Const. Corp. v. Herrald*, 213 F. Supp. 184, 196 (M.D. Fla. 1962) (even though the plans for a bridge are copyrighted, it is not an infringement to build the bridge).

¹³¹ See *supra* note 129. Following is another often used example of the idea/expression dichotomy. Suppose that Shakespeare had a copyright on "Romeo and Juliet." That copyright would not be infringed by "West Side Story." This result occurs because the only thing similar is the idea — boy meets girl, they fall in love, their families hate each other, relationship ends in tragedy. No expression is taken; therefore, no infringement. *Accord Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930).

¹³² See *supra* notes 19-20.

¹³³ 101 U.S. 99 (1879).

¹³⁴ *Id.* at 102-03.

The Court further stated,

But the principle is the same in all. The description of the art in a book, though entitled to the benefit of copyright, lays no foundation for an exclusive claim to the art itself. The object of the one is explanation; the object of the other is use. The former may be secured by copyright. The latter can only be secured, if it can be secured at all, by letters-patent.¹³⁵

In effect an author conceives an idea and then expresses it. Usually, the author's sole concern with the form of that expression is to achieve the best means of conveying the idea. The author does not intend to define the scope of protection the work will receive under copyright law, that is, an author does not write a book in a certain manner to enhance the scope of the book's copyright protection. Nevertheless, the author's expression serves as the basis to define the scope of copyright protection.¹³⁶

In contrast, an inventor conceives an idea and then depicts the embodiment of that idea, the invention, in patent claims.¹³⁷ The claims serve the same purpose as the author's expression; they define the scope of protection.¹³⁸ Unlike the author's expression, however, an experienced patent attorney rather than the inventor, usually drafts the claims with the express intention of defining the scope of the inventor's protection. Moreover, the attorney will draft the claims as broadly as possible to create the broadest right of exclusion and thus create the greatest market power.¹³⁹

Thus, the respective rights of an author and an inventor are drastically different even though they may have the same idea. The author has the rights to the novel. The author cannot prevent others from writing about the idea or practicing it. On the other hand, the inventor can acquire rights that only the prior art and the skill of the claims drafter limit. Moreover, those rights, in effect, can prevent anyone from using or practicing the idea.

Clearly, the broad, exclusive rights that the inventor has make the invention patent more valuable than the author's novel copyright. While both a patent and a copyright may render a particular subject matter unique, a patent protects a much broader subject matter than a copyright. A patent precludes anyone from entering the field while a copyright only prevents others from copying the author's novel. Thus, the greater breadth of uniqueness associated with a patent should give rise to far greater market power than a copyright. Moreover, because of this discrepancy in market power, court's extension of the presumption of market power from patents to copyrights is unwarranted.

In the Wright Brothers as inventors example, the inventors practically preempted the practice of their idea. Yet this result could never occur with a copyright. Under copyright law, when a form of expression is the only way to express an idea, that form will not be copyrightable.¹⁴⁰ This rule is founded in the principle that a copyright does not protect ideas.¹⁴¹ The Commission on New Technological Uses for Copyrighted Works and the courts that affirmed copyright protection for computer programs thoroughly

¹³⁵ *Id.* at 105.

¹³⁶ *See supra* note 122.

¹³⁷ *See supra* note 120.

¹³⁸ *Id.*

¹³⁹ *See supra* notes 19-20 and accompanying text.

¹⁴⁰ *Baker*, 101 U.S. 99. *But see* 1 M. NIMMER *supra* note 3, at § 2.18[C][1].

¹⁴¹ *See supra* notes 129-31.

analyzed this rule in the context of computer programs.¹⁴² Basically, a copyright on a computer program does not prevent others from making a functionally equivalent program.¹⁴³ Furthermore, if the program was the only way to express its underlying idea, it could not be copyrighted.¹⁴⁴ Rather, a program must have or at least be able to have functional equivalents before it can be copyrighted. This result clearly shows the logical inconsistency of the Ninth Circuit's reasoning in *Data General*. To get a copyright, functional equivalents of the program must be creatable. Yet once the copyright is obtained, the *Data General* court in effect presumed, for the purpose of the antitrust laws, that no functional equivalents existed or could exist.¹⁴⁵ Therefore, if a copyright on a computer program is to raise any presumption about uniqueness, the presumption should be that the program is not unique.

One additional example of the scope of rights available under patents and copyrights will illustrate the difference between the scope of those rights and the different market power they create. In 1981, the Supreme Court in *Diamond v. Diehr*¹⁴⁶ held that a computer program was patentable if it did not preempt an algorithm and if the program was used in conjunction with a physical process. The Court in *Diamond* was presented only with the issue of patentability; no patent infringement claims were presented. Thus, the patent owner in *Diamond* with a patent on a computer program could prevent others from making, using, or selling a functionally equivalent program in conjunction with a functionally equivalent process. On the other hand, if the inventor in *Diamond* had obtained a copyright rather than a patent, he could not prevent others from making, using, or selling functionally equivalent programs regardless of whether they were used in conjunction with the process.¹⁴⁷

Again, this difference between the scope of patent rights and copyright rights supports the proposition that a copyright confers uniqueness which is much narrower in scope than that which a patent confers. Furthermore, this difference in the breadth of uniqueness supports the theory that the extension of the presumption of market power from patent to copyright is incorrect.

The amount of market power that a copyright confers is further limited by the various statutory exemptions to copyright infringement, and because independent creation is not an infringement. To establish infringement, a copyright plaintiff must show that the accused work was copied from the original.¹⁴⁸ If the defendant in a copyright

¹⁴² CONTU *supra* note 1, at 18-20; *see, e.g., Apple Computer, Inc. v. Formula Int'l Inc.*, 725 F.2d 521, 523-24 (9th Cir. 1984).

¹⁴³ CONTU *supra* note 1, at 20. A computer program when reduced to object code is nothing more than a series of zeros and ones, i.e., 1011010110. If it took a minimum of ten statements, each statement is either a zero or a one, to state an idea there would be 1024 (2^{10}) different ways of expressing the idea. *See Gemignani, supra* note 70, at 289 n.113. Moreover, given the vast number of higher level languages, each creating a potentially different form of expression for the same object code, it is doubtful that a programmer could not produce a functionally equivalent non-infringing program. *See Davis, supra* note 84. The Davis article discusses the legal and practical aspects of making a functionally equivalent non-infringing program to IBM's BIOS operating system. The article concludes that such a program can be made and notes that one firm, Phoenix Inc., claims to already have such a program. *Id.* at 12.

¹⁴⁴ *See supra* note 140; *Apple Computer*, 725 F.2d at 525.

¹⁴⁵ *See supra* notes 103-04 and accompanying text.

¹⁴⁶ 450 U.S. 175, 191-93 (1981).

¹⁴⁷ *See supra* notes 121, 129-31.

¹⁴⁸ *See, e.g., Kamar Int'l, Inc. v. Russ Berrie & Co.*, 657 F.2d 1059, 1062 (9th Cir. 1981); *Universal City Studios, Inc. v. Film Ventures Int'l, Inc.*, 543 F. Supp. 1134, 1140 (C.D. Cal. 1982).

infringement action can show independent creation, there is no infringement.¹⁴⁹ This is not the case, however, in the patent law context. In a patent infringement suit, it is irrelevant that the defendant never saw the patent and created the infringing device independently.¹⁵⁰ Patent infringement occurs whenever an unauthorized person makes, uses, or sells the patented article, regardless of whether that article was copied.¹⁵¹

In addition to the defense of independent creation, certain statutory exceptions to infringement limit copyright protection. The most relevant exceptions to infringement for the purposes of copyrights on computer programs are sections 107 and 117 of the Copyright Act.¹⁵² Both of these sections, however, will have a minimal effect on the market power associated with a copyright. Section 107 is the fair use section which exempts from infringement certain copying for the purposes of "criticism, comment, new reporting, teaching . . . or research."¹⁵³ These categories do not conclusively establish fair use or the exclusive types of fair use. Rather, this section provides that courts apply a four factor test to determine if a particular copy is a fair use.¹⁵⁴ The four factors to be considered are the purpose and character of the use, the nature of the copyright, the amount of the copyrighted work that was taken, and the effect of the use on the value of the copyright.¹⁵⁵ The Supreme Court in *Sony Corp. v. Universal City Studios, Inc.*,¹⁵⁶

¹⁴⁹ See, e.g., *Ferguson v. National Broadcasting Co.*, 584 F.2d 111, 113-14 (5th Cir. 1978); *Granite Music Corp. v. United Artists Corp.*, 532 F.2d 718, 720 (9th Cir. 1976).

¹⁵⁰ E.g., *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 478 (1974); *Granite Music*, 532 F.2d at 720.

¹⁵¹ See *supra* note 121.

¹⁵² 17 U.S.C. § 107 (1982) provides:

Notwithstanding the provisions of section 106, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include —

- (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.

17 U.S.C. § 117 (1982) provides:

Notwithstanding the provisions of section 106, it is not an infringement for the owner of a copy of a computer program to make or authorize the making of another copy or adaptation of that computer program provided:

- (1) that such a new copy or adaptation is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner, or
- (2) that such new copy or adaptation is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.

Other limitations on the exclusive rights of a copyright owner are contained in 17 U.S.C. §§ 108-116, 118 (1982).

¹⁵³ *Id.* § 107.

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ 464 U.S. 417, 448-49, 451.

placed particular emphasis on the first factor. The Court stated that if the use was for profit, it would be presumptively unfair.¹⁵⁷

Courts have yet to develop the scope of the fair use exception in the area of computer programs.¹⁵⁸ In light of the Supreme Court's emphasis on profit motive defeating fair use, however, it is doubtful that any use of a copyrighted program that would significantly affect the market power of a copyright, would constitute a fair use. Thus, the fair use exception would not further the argument that from a market power standpoint copyrights are weaker than patents.

Likewise, the exceptions in section 117 are so limited that they would have little effect on the market power of a copyright. That section exempts from infringement any copying or adaptation of a computer program that is an essential step in using the program.¹⁵⁹ Section 117 additionally provides for the making of archival copies.¹⁶⁰ Both of those situations, by their nature, would give rise to only a very small number of copies being made. Moreover, section 117 provides that for such copies to qualify for the exception, they cannot be independently distributed.¹⁶¹

Thus, neither the fair use exception nor section 117 decreases the market power associated with a copyright. There are, however, no similar statutory exceptions in the patent laws.¹⁶² Although the copyright exceptions do not limit the market power of a copyright they at least illustrate a Congressional attempt to limit the rights attainable under copyright law that is not present with patent law.

An alternative argument could be made that a copyright creates greater market power than a patent because the term of the copyright is substantially longer than the patent. A copyright is effective for the life of the author plus fifty years.¹⁶³ A patent is only effective for seventeen years.¹⁶⁴ This argument, however, is flawed in two respects.

First, it is not the duration of the rights that gives rise to uniqueness and thus market power. Rather, it is the scope of those rights — the ability to prevent others from making a competitive product — that is important.¹⁶⁵ Thus, a limited right, although held for a long time — a copyright — would not create the same market power as an expansive right held for a relatively short time — a patent. This point becomes clearer upon reexamination of the definition of market power: market power is the ability to raise the price above what could be charged in a competitive market.¹⁶⁶ Because a copyright

¹⁵⁷ *Id.* at 449.

¹⁵⁸ See *supra* note 2.

¹⁵⁹ 17 U.S.C. § 117(1) (1982).

¹⁶⁰ *Id.* § 117(2).

¹⁶¹ *Id.* § 117.

¹⁶² *But cf.* 35 U.S.C. §§ 251, 252 (1982) (reissue patents). A patent owner can apply for a reissue patent. The reissue patent, if applied for within two years from the date the original patent issued, can be broader than the original. Section 252 creates what are termed intervening rights. Those rights exempt from infringement anyone whose use falls within the scope of the reissue patent, but not within the scope of the original patent. For a recent Federal Circuit case discussing reissue patents see *Seattle Box Co. v. Industrial Crating & Packing*, No. 84-1559 (Fed. Cir. March 30, 1985).

¹⁶³ 17 U.S.C. § 302(a) (1982). This section only applies to works created after January 1, 1978, and by one author. The duration of copyright protection can vary depending on different circumstances. See *id.* §§ 302-304. Nevertheless, all of those statutory periods for copyright protection are longer than a patent's term.

¹⁶⁴ 35 U.S.C. § 154.

¹⁶⁵ See *supra* notes 19-20.

¹⁶⁶ *Id.*

on a program does not prevent competitors from developing functionally equivalent programs, the copyright does not reduce competition.¹⁶⁷ Moreover, as long as competition remains vigorous, the copyright owner will be unable, or at least foolish, to charge prices above competitive levels. Therefore, because a copyright on a program never enables its owner to restrict competitive programs, the length of time that the copyright exists would have no effect on the market power of the copyright.¹⁶⁸

Second, the argument that the duration of a copyright creates greater market power than a patent is further flawed when applied to copyrighted computer programs because programs are valuable for a very limited time. At the very best a computer program will retain its value for approximately five years.¹⁶⁹ Thus, the program itself will be valueless long before the copyright expires.

In summary, courts' extension of the presumption of market power from patents to copyrights is unwarranted. A patent creates substantially greater rights than a copyright. A copyright, unlike a patent, does not preclude the manufacture of functional equivalents. Moreover, a copyright owner's exclusive rights do not prevent independent creation and are subject to statutory exceptions. In contrast, a patent owner's exclusive rights are not so limited. Finally, that a copyright lasts longer than a patent does not support an argument that copyrights have equal or greater market power than patents. Therefore, courts should abandon the presumption that a copyright on the tying product establishes market power.

B. *Loew's and Paramount Do Not Apply to Copyrighted Computer Programs*

Even if courts do not totally reject the presumption that a copyright confers market power, courts should not extend it from the facts involved in *Loew's* and *Paramount* to computer programs. In both *Loew's* and *Paramount*, the Supreme Court held that copyrights on movies created a presumption of market power.¹⁷⁰ Courts should not extend that holding to computer programs because the underlying facts regarding computer programs and movies are totally different.

All works of authorship divide into two theoretical parts: the idea and the expression. Copyright only protects the expression.¹⁷¹ Looking at the two theoretical parts of a movie, the expression is the part in which all the value lies. For example, in "Gone with the Wind," the value in the movie is the expression — Clark Gable and Vivian Leigh acting on screen. People will pay to see those actors in that movie. There is, however, little value in the idea of setting a love story amidst the turmoils of the Civil War.

The *Loew's* Court implicitly recognized this proposition when it stated, "forcing a television station which wants 'Gone With The Wind' to take 'Getting Gertie's Garter' as well is taking undue advantage of the fact that to television as well as motion picture viewers there is but one 'Gone With The Wind.'" ¹⁷² Both films were copyrighted.¹⁷³

¹⁶⁷ See *supra* notes 143-44 and accompanying text.

¹⁶⁸ To use a rather extreme example, if one had the exclusive right to jump off the Empire State Building, that exclusive right would have little or no market power whether it lasted for one day or 100 years.

¹⁶⁹ The program will become obsolete and thus unable to compete for sales against newer programs. See I D. BENDER, *supra* note 3, at § 3A.07[2], at 3A-71.

¹⁷⁰ See *supra* notes 36-47, 55-66 and accompanying text.

¹⁷¹ See *supra* notes 129-31.

¹⁷² 371 U.S. at 48 n.6.

¹⁷³ *Id.* at 50.

Moreover, if market power arose solely from the copyright, rather than from the value of what the copyright protected, "Getting Gertie's Garter" would have had the same market power as "Gone With The Wind." This result is contrary to common sense and clearly not what the *Loew's* Court intended.¹⁷⁴

Thus, in the context of movies, the copyright protects the theoretical part of the work that has value. Therefore, a movie copyright would increase the value already present in the work by preventing others from copying the valuable portion of the work — the expression. This is not the situation, however, with a computer program. In a computer program, the greatest value resides in the idea portion of the work, not in the expression.¹⁷⁵ It is the idea portion of a program that has true value, and competitors are able to use the idea to create functionally equivalent programs.¹⁷⁶ Thus, in a computer program, the copyright does not protect the part with the greatest value — the idea — but rather protects the part of lesser value — the expression.

The recent development of a functionally equivalent program to IBM's BIOS illustrates this point. BIOS is the operating system program used in IBM personal computers.¹⁷⁷ If a competitive personal computer manufacturer wants its personal computers to run IBM applications programs it will have to use BIOS or another operating systems program that has the same functions as BIOS.¹⁷⁸ Although BIOS is copyrighted, the copyright does not protect BIOS's functions. Yet it is the functions that IBM's competitors are interested in. Moreover, the value of those functions is substantial; a BIOS equivalent can cost \$290,000.¹⁷⁹

Although the idea portion of a computer program is considerably more valuable than the expression, the expression in a computer program is not altogether valueless. Copyright protection of expression does prevent direct pirating of a program, which would offer the copyright holder some economic power.¹⁸⁰ Nevertheless, the presumption of market power applied to copyrighted movies in *Loew's* and *Paramount* should not apply to copyrighted computer programs because the main value of a program lies in the idea, which copyright does not protect.¹⁸¹ Therefore, the presumption of market power should not be extended from copyrighted movies to copyrighted programs.

¹⁷⁴ The *Paramount* Court's opinion also has strong language that evidences the Court's position that it was the value of the films in conjunction with the copyright and not the copyright alone that gave rise to the presumption of market power. See *supra* notes 38-40 and accompanying text.

¹⁷⁵ A purchaser of computer software is not concerned with the expression of the program; rather a purchaser is concerned with the function of the program — people buy programs to solve problems. See *Gilburne, supra* note 84, at 1.

¹⁷⁶ See *Davis, supra* note 84, at 11.

¹⁷⁷ *Id.*

¹⁷⁸ *Id.* at 11-12.

¹⁷⁹ *Id.* at 12.

¹⁸⁰ See Greguras, *Technical and Other Practical Software Protection Measures*, THE COMPUTER LAW., April 1984, at 22, 23.

¹⁸¹ The court in *Capital Temporaries, Inc. of Hartford v. Olsten Corp.*, 506 F.2d 658 (2d Cir. 1974), distinguished *Loew's* using a similar rationale. The *Capital* court stated:

The appellant misreads *Loew's* if he concludes that the mere existence of the copyrighted tying motion pictures was enough to create the tying. The *tyed* films were also copyrighted, so that if copyright were the sole factor there would have been a countervailing power. The tying was created by the attractiveness of some of the films, as contrasted to the inferior quality of the others also required to be purchased in the package. Thus the Court in its opinion cited the trial court's "apt example" of forcing a television station which wants "Gone With the Wind" to take with it "Getting Gertie's

C. *The Presumption of Market Power Will Force Companies to Forego Copyright Protection*

Extending the presumption of market power to copyrighted computer programs contravenes the copyright laws' objective of increasing public disclosure. The exclusive rights granted under copyright law are intended to encourage the production of works.¹⁸² Moreover, the primary objective of copyright law is to increase the amount of material that is available to the public.¹⁸³ This objective is accomplished through two means. First, once an author knows that a work is protected, the author will sell or license the work to the public in order to reap a reward. Moreover, the more people that have the work, the greater will be the reward. Second, after the copyright expires, the work is dedicated to the public. Thus, anyone can have access to it without charge.¹⁸⁴

Extending the presumption of market power to copyrighted computer programs would discourage the copyrighting of programs. If a company decided that it was necessary to market its hardware and software in a package, it would most likely forego copyright protection on the software. The company would forego copyright protection to avoid the presumption of market power and the resulting likelihood of a finding of per se illegality.¹⁸⁵ The risk of a treble damage award under the antitrust laws¹⁸⁶ would far outweigh the risk of losing the program to pirates. Moreover, the risk that the program would be stolen can be minimized through trade secret protection¹⁸⁷ and physical means of designing the program.¹⁸⁸ Even if trade secret protection was eventually held to be preempted by copyright law, a result that is both unlikely and improper,¹⁸⁹

Garter." *United States v. Loew's Inc.*, *supra*, 371 U.S. at 48 n.6, 83 S. Ct. 97 n.6. Once the attractiveness of the tying product is established, the economic power test is then met by the patent or the copyright, since competitors cannot offer the distinctive product (e.g., "Gone With the Wind") without violating the patent of the copyright of the tier.

Id. at 663-64. The issue before the *Capital* court, however, was the tying of trademarks not copyrights. *Id.* at 661.

¹⁸² U.S. CONST. art. I, § 8, cl. 8, provides: "To promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to these respective writings and discoveries."

¹⁸³ *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975) (citing *Fox Film Corp. v. Doyal*, 286 U.S. 123, 127 (1931)).

¹⁸⁴ See *supra* note 163 and accompanying text.

¹⁸⁵ See *supra* text accompanying notes 86-87.

¹⁸⁶ See *supra* note 13.

¹⁸⁷ See *supra* note 4.

¹⁸⁸ See generally Greguras, *supra* note 180 (discussing types of physical protection).

¹⁸⁹ 17 U.S.C. § 301(a) (1982) provides:

On and after January 1, 1978, all legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright as specified by section 106 in works of authorship that are fixed in a tangible medium of expression and come within the subject matter of copyright as specified by sections 102 and 103, whether created before or after that date and whether published or unpublished, are governed exclusively by this title. Thereafter, no person is entitled to any such right or equivalent right in any such work under the common law or statutes of any State.

There are two components to a preemption analysis. First, it must be determined if there are equivalent rights involved. Second, it must be determined if the work at issue is protectable under copyright law. Trade secret law is designed to prevent wrongful appropriation of valuable information. See UNIF. TRADE SECTS. ACT § 1 comment (1979); RESTATEMENT OF TORTS § 757 (1939) (liability for disclosure or use of another's trade secret). Therefore to state a cause of action under trade secret law, a plaintiff must show either wrongful appropriation or breach of a confidential

the program owner¹⁹⁰ could still find protection under contract law.¹⁹⁰

A trade secret, as the name implies, must be kept secret in order to receive protection.¹⁹¹ Thus programs protected by trade secrets would not be open to the public. This secrecy requirement would nevertheless not stop the large scale distribution of programs. Either sellers could enter into confidential relationships with the program's purchasers¹⁹² or they could package the program so that any attempt to discover the program's secrets would destroy the program.¹⁹³

The market power presumption therefore decreases the number of copyrighted programs. This in turn decreases the amount of information open to the public. In summary, anyone can read and learn from a copyrighted work. The same is not true of a trade secret. Thus, forcing programmers to seek protection via trade secrets rather than copyrighted computer programs contravenes the copyright law's objective of increasing available knowledge.

In addition to decreasing the amount of available knowledge, forcing companies to rely on trade secrets and contracts will have a disproportionate detrimental effect on smaller companies. First, the smaller company is more likely to need to market its hardware and software in a package to enable it to compete with larger companies like IBM. Second, only a large company would be able to exact the necessary contract terms to assure trade secret protection. IBM can rely on its reputation for quality and as an industry leader to force a purchaser into the necessary contractual provisions to protect a program. It is doubtful that a small company would have enough clout to exact the necessary contractual provisions to protect a program. Thus, extending the presumption of market power to copyrighted computer programs ultimately will reduce rather than foster competition.

This argument does not propose that it is permissible to violate the antitrust laws in order to compete more effectively. Instead, this argument merely states that placing the

relationship. UNIF. TRADE SECTS. ACT § 1 (1979); RESTATEMENT OF TORTS § 757 (1939). This is not the case for copyright infringement. See *supra* note 122. Moreover, copyright does not protect the physical object upon which the work is fixed, 17 U.S.C. § 202 (1982), while trade secret would. Thus, it is at least arguable that trade secret rights are not equivalent to copyright's exclusive rights.

Secondly, although a computer program is copyrightable subject matter, see *supra* note 3, only the program's expression is protected by copyright law, see *supra* notes 129-31 and accompanying text. On the other hand, trade secret law protects the entire program, both ideas and expression. UNIF. TRADE SECTS. ACT § 1(4) (1977); RESTATEMENT OF TORTS § 757 (1939). Thus, at least with respect to the ideas involved, trade secret extends protection to non-copyrightable subject matter.

Nevertheless, there are still those who argue for partial or total preemption of trade secret law. See, e.g., Sadler, *Federal Copyright Protection and State Trade Secret Protection: The Case for Partial Preemption*, 33 AM. U.L. REV. 667 (1984); Laurie & Everett, *supra* note 4, at 4. Moreover, the courts have not conclusively resolved this issue. Compare *Freedman v. Select Information Sys.*, 221 U.S.P.Q. 848, 851 (N.D. Cal. 1983) (no preemption); *Warrington Assocs. Inc. v. Real-Time Eng'g Sys. Inc.*, 522 F. Supp. 367, 368-69 (N.D. Ill. 1981) (no preemption); *BPI Sys. v. Leith*, 532 F. Supp. 208, 211 (W.D. Tex. 1981) (no preemption) with *Videotronics, Inc. v. Bend Elecs.*, 564 F. Supp. 1471, 1477 (D. Nev. 1983) (preemption); *Synercom Technology, Inc. v. University Computing Co.*, 474 F. Supp. 37, 42 (N.D. Tex. 1979) (preemption).

¹⁹⁰ See text articulated *supra* note 168.

¹⁹¹ See UNIF. TRADE SECTS. ACT § 1 comment (1979); RESTATEMENT OF TORTS § 1, at § 757 comment b (1939); *E.I. du Pont DeNemours & Co. v. Christopher*, 431 F.2d 1012, 1016-17 (5th Cir. 1970), *cert. denied*, 400 U.S. 1024 (1971).

¹⁹² See 1 R. MILGRIM, *supra* note 1, at § 3.01.

¹⁹³ See *supra* note 191.

presumption of market power on computer programs deprives smaller competitors of an otherwise legal means of competition. A brief example will suffice. Suppose that a small saw mill owner invents a device that will automatically cut up a log in the most efficient manner. This device uses conventional saw mill equipment, with one exception. A cam controls the entire device and is the key to the device's proper functioning. Moreover, the owner keeps the shape of the cam secret. When the device is sold, the cam is encased in a box in such a manner that any attempt to discover the cam's secret shape would destroy it.¹⁹⁴

The saw mill owner then markets the cam and the other conventional equipment only as a package. Eventually the owner comes under the scrutiny of the antitrust laws for an alleged tying violation. For the purposes of this argument, assume that the cam and the conventional equipment are separate items and the seller conditions purchase of the cam on the purchase of the conventional saw mill equipment. Furthermore, assume that there is a substantial effect on commerce in the tied market of conventional saw mill equipment. Thus, two of the three requirements of per se illegality are met.¹⁹⁵

The final requirement, market power in the tying product, will depend on the facts surrounding the cam, that is how desirable it is, how easily a similar cam can be independently created, and how much time and money using the cam saves a saw mill. Importantly, a court will not presume that the cam has market power.¹⁹⁶ Therefore, if the cam in fact has sufficient market power, a court would impose antitrust liability. On the other hand, if the cam, for whatever reason, did not have sufficient market power, there would be no per se antitrust violation.¹⁹⁷

Now assume that the latter situation is the case, that the cam does not have market power. The owner then replaces the cam with a mini computer containing a special program. That program performs exactly the same function as the cam — they are functional equivalents. Additionally, the program is copyrighted. Once the operator replaces the cam with the copyrighted program, the presumption of market power comes into play, resulting in the imposition of liability.¹⁹⁸

The copyrighted program would be no more or less desirable than the cam. The copyright would not prevent the creation of functional equivalents, of either other cams or other programs.¹⁹⁹ The anti-competitive effects would remain the same. Nevertheless, the replacement of the cam with a copyrighted program would give rise to antitrust liability. This example clearly illustrates the potential injustice that could arise if the courts extend the presumption of market power to copyrighted computer programs.

Moreover, abandoning the presumption would not contravene the policies against tying agreements.²⁰⁰ Plaintiffs could still prove that the tying product had the requisite market power, although now the copyright would only be a factor in determining uniqueness of the tying product and not dispositive of it. The result in both *Paramount* and *Loew's* would not change. In those cases the copyrighted articles were unique in and of themselves and the copyright only added to their uniqueness.²⁰¹ In the computer

¹⁹⁴ *Id.*

¹⁹⁵ See *supra* notes 16–21 and accompanying text.

¹⁹⁶ See *supra* note 33.

¹⁹⁷ See *supra* notes 26–33 and accompanying text.

¹⁹⁸ See *supra* notes 100–05 and accompanying text.

¹⁹⁹ See *supra* notes 129–31 and notes 143–44 and accompanying text.

²⁰⁰ See *supra* notes 14–15 and accompanying text.

²⁰¹ See *supra* notes 172–73 and accompanying text.

context, a plaintiff could establish market power by showing that the copyright prohibited direct copying and that creating a functional equivalent program would be impossible because of the cost involved. Thus, abandoning the presumption of market power for copyrights would not give rise to anti-competitive practices. Rather, such abandonment would create an environment in which courts could restrict truly anti-competitive practices without placing an arbitrary and undue burden on legitimate practices.

IV. CONCLUSION

Courts should abandon the presumption that a copyright on a computer program creates the requisite market power to establish *per se* illegality. Courts erroneously extended the presumption from patents to copyrights. Even if courts do not abandon the general presumption that a copyright creates market power, they should not apply the presumption to copyrighted computer programs. The difference in protection a copyright affords computer programs, in comparison with other literary works, such as movies, supports this conclusion. Finally, extending the presumption to computer programs will result in fewer copyrights. This result will defeat the copyright law's objective of increasing public knowledge. In addition, small companies will be disproportionately hurt.

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