

ARTICLE

MISUSE OR FAIR USE: THAT IS THE SOFTWARE COPYRIGHT QUESTION

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I. INTRODUCTION

The emergence of the copyright misuse doctrine is one of the most significant trends in copyright law in recent years. A basic premise of our intellectual property system is that various rights granted to creators as an incentive to produce intellectual property must be carefully balanced with the rights retained by the public. The judicial doctrine of intellectual property misuse limits efforts of intellectual property creators to inappropriately extend their rights and alter this careful balance. While the patent misuse doctrine has for decades prevented patent holders from unduly extending the rights granted to them beyond the scope of the patent, an appellate court did not extend an analogous limitation to a copyright owner until 1990. In the ensuing period, a debate has emerged whether the copyright misuse doctrine should exist, and if so, whether it should exist outside the scope of an antitrust violation.

This paper argues that the copyright misuse defense should exist, and that at least in the context of computer software it should be separate from antitrust analysis. Computer software is distinct from other forms of copyrighted works in various ways, providing more market power to the copyright owner and impacting federal patent law in ways that require restraints on the actions of software copyright owners. In addition, application of traditional antitrust analysis does not extend well to the software industry because actions that evade antitrust law are nevertheless misuse of copyright.

After examining how courts have previously applied doctrines such as "fair use" to restrict over-reaching by software copyright owners, the paper concludes that a software copyright misuse doctrine would provide a more appropriate vehicle for defining the scope of rights

accorded to software copyright owners. Finally, the paper briefly employs a misuse analysis to consider various situations that occur in the software industry.

Part II of this paper begins by examining the role that intellectual property plays in our economic system, briefly tracing its history and examining the balance of rights between creators and the general public. Part III provides a brief history of the development of the intellectual property misuse doctrine. Part IV examines the advantages and disadvantages of an antitrust approach to copyright misuse, and after exploring the unique aspects of computer software relative to other copyrighted works, concludes that a software copyright misuse doctrine should exist independent of antitrust law. Part V considers the relatively recent arrival of the software copyright misuse doctrine, and concludes that, in the absence of such a doctrine in the past, courts have used other doctrines to limit software copyrights. Parts VI and VII briefly apply a copyright misuse analysis to various practices in the software industry.

II. THE UTILITARIAN ROLE OF INTELLECTUAL PROPERTY IN OUR ECONOMIC SYSTEM

Commentaries on the copyright misuse doctrine often refer exclusively to the patent misuse doctrine and antitrust laws when reaching competing conclusions as to the correct application of copyright misuse. Many proponents of a strong copyright misuse doctrine argue that patent misuse has a long history, and that the similarity of copyright law to patent law thus legitimizes a copyright misuse doctrine in analogous situations. Alternately, proponents of restricting copyright misuse to a purely antitrust analysis focus only on how a copyright misuse defense would affect the application of antitrust principles.

When examining the proper scope of copyright protection for software, it is instructive to explore the historical application of the copyright¹ and patent² laws in a broader sense, and to review other situations which require limitations on the rights of patent and copyright owners. This exploration will illustrate that the patent and copyright laws have indeed evolved together and that they are based on a common public policy of benefiting society through the encouragement of creation, discovery and dissemination of novel ideas and creative expression. It will also illustrate that this utilitarian goal is achieved through the grant of property rights in a limited monopoly to inventors and creators.

1. See 17 U.S.C. §§ 101-1101 (1997).

2. See 35 U.S.C. §§ 1-376 (1997).

Although society wants to provide incentives to create, underlying public policy necessitates the careful balancing of the rights granted to creators with the rights retained by the general public. The rights which are granted to creators are determined uniformly through statutory grants and limitations, but subjective judicial doctrines allow courts to modify these rights in individual situations. Enforcement of an appropriate balance prevents reordering of these rights, whether the reordering occurs through state law or by private action. While the misuse doctrine can be used to prevent such reordering, it is only one of many limitations placed on the rights of intellectual property holders and it should be applied in a manner consistent with these other limitations.

A. The Utilitarian Public Policy Rationale For Intellectual Property Protection In The United States

The current federal copyright and patent laws share underlying public policy rationales, and are the result of a similar evolution over time. As with much of the law in the United States, the impetus for federal patent and copyright laws originated with English law, which strove to benefit society by encouraging the creation of new inventions and new works of authorship.³ In continuing this English tradition, the copyright and patent laws in the United States are designed to benefit society as a whole by providing incentives to creators.⁴ These federal laws stem from a constitutional grant of power to Congress: "*To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.*"⁵ The copyright/patent clause is notable in that it explicitly

3. During the sixteenth century, the English Crown was notorious for granting "letters patent" to individuals, which conveyed exclusive rights to produce, import, or sell items within the kingdom (extending even to common items such as salt and vinegar). In response to abuses, Parliament passed the Statute of Monopolies in the early seventeenth century, which permitted patents to be granted only to the creator of a new invention and only for fourteen years. In a similar manner, the Crown in the sixteenth century granted to the Stationers' Company an exclusive right to publish and print all published works. Parliament revoked that right by passing the Statute of Anne in the early 1700s, which gave authors the exclusive right to publish their works for twenty-eight years. .See 1 ERNEST B. LIPSCOMB, LIPSCOMB'S WALKER ON PATENTS §§ 1:1-1:2, 1:5-1:6 (3d ed. 1984) [hereinafter WALKER ON PATENTS]; WILLIAM F. PATRY, LATMAN'S THE COPYRIGHT LAW, 2-5 (1986).

4. The term "creators" as used in this paper is intended to include both authors and inventors, and "creative works" is intended to include both original works of authorship and novel inventions.

5. U.S. CONST. art. I, § 8, cl. 8 (emphasis added).

mentions the purpose behind the grant of power, an unusual occurrence in the Constitution.⁶ By placing the copyright and patent grant of power together in this manner, and by explicitly incorporating the purpose of the grant in the Constitution, the framers indicated the importance of these doctrines and continued the English tradition of encouraging the creation of intellectual property.⁷

American courts have affirmed the utilitarian nature of intellectual property rights⁸ by repeatedly emphasizing that the federal intellectual property rights granted to creators serve as an incentive to produce. "The

6. [The unusual inclusion of the reason for the grant of the power in the copyright/patent clause] doubtlessly was due to the fact that those who formulated the Constitution were familiar with the long struggle over monopolies so prominent in English history, where exclusive rights to engage even in ordinary business activities were granted so frequently by the Crown for the financial benefits accruing to the Crown only. It was desired that in this country any Government grant of a monopoly for even a limited time should be limited to those things which serve in the promotion of science and the useful arts.

In *Re Yuan*, 188 F.2d 377, 380 (C.C.P.A. 1951).

7. It is significant, we think, that the framers of our Constitution continued the English development of intellectual property law and considered in tandem those property rights protectable by copyrights and those protectable by patents. In giving Congress the power to create copyright and patent laws, the framers combined the two concepts in one clause, stating a unitary purpose—to promote progress [A] comment in *The Federalist* papers indicates the public policy behind the grant of copyright and patent powers is essentially the same.

Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 975 (4th Cir. 1990).

8. The intellectual property doctrine that arose in England emphasized the utilitarian nature of the intellectual property rights granted to inventors and authors. By granting a limited monopoly to these creators, they were given an incentive to produce inventions and works because the monopoly presumably allowed the creators to reap benefits from a useful creation that would compensate them for their effort and risk taken in producing the useful creation. Thus, benefits received by creators serve as an incentive to produce rather than as a reward for creations.

Conversely, the intellectual property doctrines that arose in continental Europe are often referred to as based on a moral rights theory. This theory grants rights to creators not as an incentive to produce, but as a recognition of the ownership in the creation that results from the labor and ingenuity in producing the creation, and stems in part from Locke's theory of property. See generally Jane C. Ginsburg, *A Tale Of Two Copyrights: Literary Property In Revolutionary France And America*, 64 TUL. L. REV. 991 (1990).

economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Science and useful Arts.'"⁹ Thus, both patent law and copyright law derive their underlying authority from the common public policy of benefiting society by granting incentives for the production of novel ideas and creative expression.

B. Balancing The Rights Accorded Copyright And Patent Holders With Those Retained By The Public

In order to achieve the public policy objectives underlying copyright and patent law, it is necessary to limit the rights that are granted to the owners of copyrights and patents.¹⁰ If the ultimate utilitarian goal is to increase the number of inventions and works of authorship that are available to the public, then legal monopolies granted to creators can have a negative short-term effect on this goal. To the extent that creators can restrict access or use of their creation, whether absolutely or through exorbitant monopoly rents, the public fares less well than if the same creation had been available without legal restrictions. However, the premise of utilitarian theory is that some incentive is necessary to induce the creation in the first place—that is, the public is better off with a new creation at a monopoly price than with no creation at all. Furthermore, the limited duration of the rights granted guarantees that at some point the creation will enter the public domain and become freely available to the public.

Since the legal incentives granted to creators deprive the public of a benefit in the short term, the utilitarian goal of the intellectual property system can only be fully achieved if the incentives granted to creators are the minimum necessary to spur the creation and dissemination of inventions and works of authorship. In an effort to achieve this optimal level of innovation at the lowest public costs, the rights granted to owners

9. See *Mazer v. Stein*, 347 U.S. 201, 219 (1953); see also *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349-50 (1991) ("The principal objective of copyright is not to reward the labor of authors, but 'to promote the Progress of Science and useful Arts'"); *United States v. Paramount Pictures, Inc.*, 334 U.S. 131, 158 (1948); *United States v. Loew's, Inc.*, 371 U.S. 38, 44-51 (1962); *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186 (1933); WALKER ON PATENTS, *supra* note 3, § 1.6.

10. It would be more accurate to state that rights are granted to a particular invention or work of authorship, and that these rights generally subsist in the current owner of the invention or work. For the sake of brevity, I will refer in this paper to the rights granted to creators.

of copyrights and patents are carefully balanced with the rights retained by the public. In a world with perfect information and zero transaction costs, the optimal solution could be attained by varying the rights granted to each creator on an individual basis. Thus, each creator could be compensated at the minimum level necessary to compensate for each creation produced, regardless of the underlying value of the creation.

Transaction costs render it impractical to grant rights to each creator on an individual basis. Therefore, the legal system instead imposes systemic constraints on the rights of creators. These constraints take the form of both statutory limitations and judicial doctrines. While some systemic constraints are objective limitations that apply to all creators equally, others are subjective or equitable in nature. To the extent that subjective and equitable constraints are imposed on an individual basis, these efforts can be viewed as an attempt to tune more finely the balance of rights granted to a particular creator. Conversely, courts can enforce subjective doctrines broadly and use them to alter the balance of rights granted to creators either for a broad class of transactions, or for a type of protected subject matter.

1. STATUTORY DEFINITIONS OF COPYRIGHT AND PATENT RIGHTS

The statutory grants of power under chapters 17 and 35 of the United States Code define federal intellectual property rights of creators. In the absence of such explicit statutory grants, a creator would not enjoy any federal intellectual property protection for their creations. Under the protections granted for both copyrights and patents, the federal statutes include broad provisions that grant power to the creator, and narrower provisions that restrict the granted power in a variety of specific ways.

A patent conveys the right to exclude others¹¹ from making, using, selling, offering for sale, and importing the patented invention.¹² This

11. The patent statute conveys rights to owners as a negative grant—while the owner can generally exclude others from engaging in prohibited activities, an owner is not statutorily entitled to practice his or her own invention. Thus, external limitations, such as regulations from an administrative body such as the Food and Drug Administration or legal restrictions from an inventor with a blocking patent, can prevent an inventor from practicing his or her own invention.

right can be enforced through a combination of injunctions,¹³ damages,¹⁴ and attorney's fees.¹⁵ While these rights can convey significant economic power for a useful invention, the statutes limit the rights in various ways. As a threshold matter, a patent is only granted to inventions that are "worthy" of these legal protections. That is, to be patentable, an invention must have the appropriate statutory subject matter,¹⁶ be novel,¹⁷ be useful¹⁸ and be non-obvious.¹⁹ Further, the patent rights granted are of a limited duration.²⁰ In addition, the rights of patent owners are statutorily limited in other ways.²¹ Through these statutory grants, patent law provides relatively broad rights that last for a relatively short time.

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12. (a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.
 - (b) Whoever actively induces infringement of a patent shall be liable as an infringer.
 - (c) Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

35 U.S.C. § 271 (1997).

13. *See* 35 U.S.C. § 283 (1997).

14. *See* 35 U.S.C. § 284 (1997).

15. *See* 35 U.S.C. § 285 (1997).

16. *See* 35 U.S.C. § 101 (1997).

17. *See* 35 U.S.C. § 102 (1997).

18. *See* 35 U.S.C. § 101 (1997).

19. *See* 35 U.S.C. § 103 (1997).

20. *See* 35 U.S.C. §§ 154, 173 (1997).

21. For example, a patent owner cannot prevent another from using the owner's invention if it is in a vessel that is temporarily in the country. *See* 35 U.S.C. § 272 (1997). This is also true if the use of the invention is "solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs or veterinary biological products," or if the patent owner ties the use of the invention to a separate product and the patent owner has market power in the relevant market. *See* 35 U.S.C. § 271(d) & (e)(1) (1997).

A copyright, on the other hand, conveys the affirmative exclusive right to reproduce, distribute to the public, perform publicly, display publicly, and prepare derivative works of the copyrighted work.²² Authors of works of visual art have additional rights of attribution and integrity,²³ and performers of live musical performances have additional rights to control the use of their performances.²⁴ Copyright protection is available for original works of authorship that are fixed in any tangible medium of expression²⁵ and lasts for a limited duration, but does not

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22. Subject to sections 107 through 120, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:
- (1) to reproduce the copyrighted work in copies or phonorecords;
 - (2) to prepare derivative works based upon the copyrighted work;
 - (3) to distribute copies or phonorecords of the copyrighted work ...;
 - (4) ... to perform the copyrighted work publicly;
 - (5) ... to display the copyrighted work publicly; and
 - (6) in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission.

17 U.S.C. § 106 (1997).

23. *See* 17 U.S.C. § 106A (1997).

24. *See* 17 U.S.C. § 1101 (1997).

25. (a) Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device
- (b) In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.

17 U.S.C. § 102 (1997).

prevent independent creation of the same work.²⁶ As with patent law, the copyright statute provides various statutory limitations on copyright owners,²⁷ including special provisions for certain classes of users such as libraries²⁸ and instructors,²⁹ and special provisions for certain classes of copyrighted works such as computer programs.³⁰ In addition, section 109 provides limitations on a copyright owner's ability to control an item embodying a copyright after the item has been sold (the "first-sale" doctrine),³¹ and section 107 codifies the equitable "fair use" limitation

26. (a) In General.—Copyright in a work created on or after January 1, 1978, subsists from its creation and, except as provided by the following subsections, endures for a term consisting of the life of the author and fifty years after the author's death

(c) Anonymous Works, Pseudonymous Works, and Works Made For Hire.—In the case of an anonymous work, a pseudonymous work, or a work made for hire, the copyright endures for a term of seventy-five years from the year of its first publication, or a term of one hundred years from the year of its creation, whichever expires first.

17 U.S.C. § 302 (1997).

27. See 17 U.S.C. § 108, §§ 110-120 (1997).

28. See 17 U.S.C. § 108 (1997).

29. See 17 U.S.C. § 110 (1997).

30. 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.

Any exact copies prepared in accordance with the provisions of this section may be leased, sold, or otherwise transferred, along with the copy from which such copies were prepared, only as part of the lease, sale, or other transfer of all rights in the program. Adaptations so prepared may be transferred only with the authorization of the copyright owner.

17 U.S.C. § 117 (1997).

31. The owner of a lawfully made copy can sell or dispose of the copy (i.e., distribute it) or publicly display it without authorization of the owner of the copyright. See 17 U.S.C. § 109 (1997).

which permits certain types of uses of copyrighted works.³² These statutory copyright grants provide relatively narrow rights that last for a relatively long time.

2. JUDICIAL MODIFICATIONS OF COPYRIGHT AND PATENT RIGHTS

While the copyright and patent statutes provide the primary definition of the rights granted to creators, the courts have adopted judicial doctrines which alter the scope of these rights. Over time, some of these doctrines were codified and became part of the statutory framework. For example, the "fair use" doctrine of copyright law originally arose judicially to restrict the rights of copyright owners, but is now statutorily codified.³³ Although it is possible for judicial doctrines to provide an objective expansion or limitation of a creator's rights, they generally are more subjective and equitable in nature. As such, courts can enforce these doctrines on an individual basis and can alter the rights granted to an individual creator to reflect the amount of protection that is needed or deserved. Alternatively, courts can enforce such doctrines broadly and use them in such a manner so as to alter the balance of rights

32. Notwithstanding the provisions of sections 106 and 106A, 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.

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

17 U.S.C. § 107 (1997).

33. See 17 U.S.C. § 102 (1997).

granted to creators for a class of transactions or for a type of protected subject matter.³⁴

Two notable judicial doctrines used in patent law are the requirement of non-obviousness for patentability³⁵ and the doctrine of equivalents for determining the breadth of claim scope.³⁶ While courts describe these doctrines as objective standards,³⁷ both doctrines involve subjective tests that provide results which are notoriously difficult to predict. For example, consider an invention that involves the combination of two techniques, A and B, and prior art references that describe either A or B but never their combination. An objective standard might hold that the combination of the two techniques is not obvious unless there is an explicit suggestion in the prior art to combine these techniques. Instead, the judicial determination is whether the combination of these techniques was obvious at the time of the invention to one of ordinary skill in the art. This determination is inherently subjective.

In the area of copyright law, the judicial doctrine of "fair use" is an extremely broad, subjective limitation on the rights of copyright holders. The fair use doctrine permits certain uses of copyrighted material (e.g. making copies of copyrighted material for news reporting or criticism), despite a literal violation of prohibited statutory activities. Although now codified in the copyright statute,³⁸ the determination of fair use is

34. It is not unusual for foreign copyright systems to vary the duration of the right granted based on the class of the work. See ROBERT A. GORMAN & JANE C. GINSBURG, *COPYRIGHT FOR THE NINETIES* 316 (4th ed. 1993). Even in the U.S., different terms are granted for utility and design patents, as well as for works of authorship depending on the situation under which the work was created. See *supra* notes 20 and 26.

35. The nonobviousness requirement, now codified in the patent statutes, creates a limitation on the rights of inventors by raising the standard necessary for an invention to achieve patentability. See *supra* note 19; *Graham v. John Deere Co.*, 383 U.S. 1, 3-4 (1966) ("We have concluded that the 1952 Act was intended to codify judicial precedents.").

36. The doctrine of equivalents enhances the rights of patent holders by extending the scope of patented claims to cover products that have only insubstantial differences from the claimed invention. See *Hilton Davis Chemical Co. v. Warner-Jenkinson Company, Inc.*, 62 F.3d 1512, 1516-17 (Fed. Cir. 1995), *rev'd on other grounds and remanded*, 1997 U.S. LEXIS 1476 (Mar 3, 1997).

37. See *id.* at 1519 (finding the doctrine of equivalents is an objective standard); *Texas Instruments Inc. v. United States International Trade Commission*, 988 F.2d 1165, 1178 (Fed. Cir. 1993) (holding the nonobvious requirement is an objective standard).

38. See *supra* note 32.

inherently subjective and thus dependent on judicial implementation.³⁹ While fair use has traditionally been viewed as a limitation on the rights of the copyright owner (i.e., a balancing of the rights that favors the public),⁴⁰ some scholars have conceived fair use in certain cases to merely reflect market failure; if the transaction costs to obtain permission to use a right are higher than the value of the right, it would not warrant granting that right.⁴¹ Regardless of the underlying conception, such a broad-based doctrine gives significant power to the courts to modify the rights granted by copyright law. While the doctrine is intended to be a fact-intensive determination,⁴² and thus variable in each case, sweeping pronouncements by the courts can be regarded as determinative of a broad class of similar situations.⁴³ In this manner, courts can use a powerful subjective doctrine such as fair use to alter the balance of rights granted to creators in a broad class of situations.

39. The factors enumerated in the section are not meant to be exclusive: "[S]ince the doctrine [of fair use] is an equitable rule of reason, no generally applicable definition is possible, and each case raising the question must be decided on its own facts." H.R. REP. NO. 94-1476, at 65 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5679.

40. "In essence, the traditional concept of fair use excused reasonable unauthorized appropriations from a first work, when the use to which the second author put the appropriated material in some way advanced the public benefit, without substantially impairing the present or potential economic value of the first work." GORMAN & GINSBURG, *supra* note 34, at 548. Judge Birch wrote:

Although the traditional approach is to view "fair use" as an affirmative defense, this writer, speaking only for himself, is of the opinion that it is better viewed as a right granted by the Copyright Act of 1976 As a statutory doctrine, however, fair use is not an infringement. Thus, since the passage of the 1976 Act, fair use should no longer be considered an infringement to be excused; instead, it is logical to view fair use as a right.

Bateman v. Mnemonics, Inc., 79 F.3d 1532, 1542 n.22 (11th Cir. 1996).

41. See Robert P. Merges, *Of Property Rules, Coase, And Intellectual Property*, 94 COLUM. L. REV. 2655 (1994); Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, 82 COLUM. L. REV. 1600 (1982).

42. *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 560-69 (1985).

43. For example, a court could effectively pronounce that a book review quoting 100 words or less from a full length novel is per se fair use. See Part V.B. *infra* for additional discussion.

C. Balancing The Rights Granted By Federal Intellectual Property Law With Those Accorded By State Law

The federal intellectual property laws are based upon a utilitarian public policy rationale that necessitates balancing the rights granted to creators with those retained by the public. The statutory framework of the copyright and patent laws, and their corresponding judicial doctrines, have evolved to adjust and protect this balance. However, the federal laws do not provide the only means to grant rights to creators or the public—both state laws and private contractual agreements can alter this balance of rights. Since our legal system grants significant deference to both state and private action, federal law will preempt such action only if necessary for an important federal purpose. Courts have recently faced issues of state and private actions that significantly alter the balance of rights granted under federal law, and have been forced to decide whether to preempt these actions. In resolving the preemption issue, courts have relied on the constitutional authority of federal intellectual property laws and the Supremacy Clause⁴⁴ of the Constitution, which dictate that state action, including state-enforced private action, may not encroach on that authority.

In the 1964 companion cases of *Sears, Roebuck & Co. v. Stiffel Co.*⁴⁵ and *Compco Corp. v. Day-Brite Lighting, Inc.*,⁴⁶ the Supreme Court gave a broad reading to the constitutional preemption of state laws relating to intellectual property. In both cases, state unfair competition laws prohibited the copying of products that were neither patented nor copyrighted. In *Sears*, the court stated that “[w]hen state law touches upon the area of these federal statutes, it is ‘familiar doctrine’ that the federal policy ‘may not be set at naught, or its benefits denied’ by the state law. [citation omitted.] This is true, of course, even if the state law is enacted in the exercise of otherwise undoubted state power.”⁴⁷ The court recently reaffirmed this policy in 1989 by striking down a Florida law that prevented the copying by direct molding of unpatented boat hulls in *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*⁴⁸ The “state regulation of intellectual property must yield to the extent that it clashes

44. The United States “Constitution, and the Laws of the United States which shall be made in Pursuance thereof ... shall be the supreme Law of the Land; ... any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.” U.S. CONST. art. VI, cl. 2.

45. 376 U.S. 225 (1964).

46. 376 U.S. 234 (1964).

47. *Sears*, 376 U.S. at 229.

48. 489 U.S. 141 (1989).

with the balance struck by Congress in our patent laws."⁴⁹ Thus, there are clearly constitutional limits on the laws which states may enact and enforce. At a minimum, state laws will be preempted if they provide protection to uncopyrighted or unpatented works in such a manner as to give the author or creator of those works a property right equivalent to that granted by patent or copyright law.

Although some state laws alter the balance of federal intellectual property rights sufficiently to be preempted, the Supreme Court found that state trade secret law does not. In upholding an Ohio law of trade secrets, the Court held that a state law is void under the Supremacy Clause only if it stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.⁵⁰ However, the Court noted that limits existed on how far trade secret law could be enforced. "If a State, through a system of protection, were to cause a substantial risk that holders of patentable inventions would not seek patents, but rather would rely on the state protection, we would be compelled to hold that such a system could not constitutionally continue to exist."⁵¹

Thus, it is difficult to determine whether a particular state or private action should be allowed to alter the balance of federal intellectual property rights. The Supreme Court has stated that while state regulation of intellectual property, which clashes with the balance struck by Congress, must be preempted, such regulation will clash in this manner only if it stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.⁵² It is clear, however, that consideration of the purposes and objectives of Congress will be the touchstone to maintain the careful balance of federal intellectual property rights in a preemption analysis.

III. THE ROLE OF INTELLECTUAL PROPERTY MISUSE IN ENFORCING UTILITARIAN PUBLIC POLICY

As previously noted, the utilitarian goal of intellectual property is accomplished by granting property rights in a limited monopoly to creators, and the underlying public policy necessitates the careful balancing of the rights and powers granted to the creator and the rights and powers retained by the general public. The judicial doctrine of intellectual property misuse was created to address situations in which

49. *Id.* at 152.

50. *See* *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974).

51. *Id.* at 489.

52. *Id.* at 480-81.

the owner of an intellectual property right used his or her legal monopoly to create such an asymmetry in the balance of rights that the courts refused to enforce the normal intellectual property rights.⁵³

A. The History Of The Patent Misuse Doctrine

The doctrine of intellectual property misuse first arose in the early 1900s in conjunction with the use of patents.⁵⁴ In the 1917 case of *Motion Picture Patents v. Universal Film Mfg. Co.*,⁵⁵ the patentee licensed its patented movie projector on the condition that the film used in the machine must be purchased from the patentee (a type of tying arrangement).⁵⁶ The Court found that:

[s]uch a restriction is invalid because such a film is obviously not any part of the invention of the patent in suit; because it is an attempt, without statutory warrant, to continue the patent monopoly in this particular character of film after it has expired, and because to enforce it would be to create a monopoly in the manufacture and use of moving picture films, wholly outside of the patent in suit and of the patent law as we have interpreted it.⁵⁷

In short, the Court denied relief to the patentee because the licensing restrictions attempted to extend the scope of the film projector patent into the unpatented area of film.

The Court extended the patent misuse doctrine in the seminal 1942 case *Morton Salt Co. v. G. S. Suppiger Co.*,⁵⁸ and in doing so addressed the relationship of the misuse doctrine to antitrust law. In *Morton Salt*, the plaintiff held a patent on a machine that placed salt tablets into canned goods, and required licensees of its machine to purchase the unpatented

53. [C]opyright owners are given power by virtue of a congressionally-sanctioned monopoly; users are safeguarded under the same statute by at least some congressional solicitude for their interests (e.g., the fair use doctrine, limited terms, § 117). The proprietor's use of her property power to force a user to forego the rights that Congress intended him to have is the evil against which the misuse defense is aimed.

David Nimmer, *Brains And Other Paraphernalia Of The Digital Age*, 10 HARV. J.L. & TECH. 1, 24 n.103 (1996).

54. For a detailed look at the history of the patent misuse doctrine, see generally James B. Kobak, Jr., *A Sensible Doctrine Of Misuse For Intellectual Property Cases*, 2 ALB. L.J. SCI. & TECH. 1 (1992).

55. 243 U.S. 502 (1917).

56. *Id.* at 506.

57. *Id.* at 518.

58. 314 U.S. 488 (1942).

salt tablets for the machine exclusively from the plaintiff.⁵⁹ The defendant produced its own salt tablet-depositing machine that was modeled after the plaintiff's machine, and the plaintiff sued for direct infringement of its patent.⁶⁰ Among other defenses, the defendant argued that the plaintiff misused its patent through its licensing agreements. The Court, without ruling on validity or infringement, found that the plaintiff's tying arrangement constituted patent misuse. In so doing, the Court prevented the plaintiff from enforcing its patent,⁶¹ despite the lack of any connection between the defendant's infringing machine and the plaintiff's tying actions.⁶² In addition, the court found that an antitrust violation was not necessary for a finding of misuse.⁶³

59. *Id.* at 491.

60. *Id.* at 490-91.

61. Equity may rightly withhold its assistance from such a use of the patent by declining to entertain a suit for infringement, and should do so at least until it is made to appear that the improper practice has been abandoned and that the consequences of the misuse of the patent have been dissipated.

Id. at 493.

62. It is the adverse effect upon the public interest of a successful infringement suit in conjunction with the patentee's course of conduct which disqualifies him to maintain the suit, regardless of whether the particular defendant has suffered from the misuse of the patent. Similarly equity will deny relief for infringement of a trademark where the plaintiff is misrepresenting to the public the nature of his product either by the trademark itself or by his label.

Id. at 494.

63. The Court of Appeals for the Seventh Circuit [found for the plaintiff] ... because it thought that respondent's use of the patent was not shown to violate § 3 of the Clayton Act, 15 U.S.C. § 14, 15 U.S.C.A. § 14, as it did not appear that the use of its patent substantially lessened competition or tended to create a monopoly in salt tablets [However, we reverse.] The Clayton Act authorizes those injured by violations tending to monopoly to maintain suit for treble damages and for an injunction in appropriate cases. 15 U.S.C. §§ 1, 2, 14, 15, 26, 15 U.S.C.A. §§ 1, 2, 14, 15, 26. But the present suit is for infringement of a patent. The question we must decide is not necessarily whether respondent has violated the Clayton Act, but whether a court of equity will lend its aid to protect the patent monopoly when respondent is using it as the effective means of restraining competition with its sale of an unpatented article *It is unnecessary to decide whether respondent has violated the Clayton Act, for*

The courts and Congress continued to develop and refine the doctrine of patent misuse after *Morton Salt*. While patent misuse has been analyzed in a number of factual settings,⁶⁴ two paradigmatic cases emerged where misuse was typically found—tying arrangements where the patentee requires the purchase of unpatented goods or services along with a patented product or process, and non-compete clauses that prevent a patent licensee from producing or selling competing goods.⁶⁵ The analysis was changed for tying arrangements in 1988 when Congress passed the Patent Misuse Reform Act⁶⁶ which modified § 271(d) of the Patent Act, and held that patent tying arrangements are no longer per se misuse.⁶⁷

Thus, the patent misuse defense continues to be an important judicial doctrine, with some recent statutory modifications for certain types of misuse cases. However, the misuse doctrine has not been limited solely to the patent arena. It has also been applied in trademark law and has recently emerged in the area of copyright.

B. The Recent Emergence Of The Copyright Misuse Doctrine

Although the copyright misuse doctrine was articulated by the courts only recently, the doctrine has been implicitly recognized since the time of *Morton Salt*. In the 1948 case of *United States v. Paramount Pictures, Inc.*,⁶⁸ the Supreme Court affirmed the lower court's finding that

we conclude that in any event the maintenance of the present suit to restrain petitioner's manufacture or sale of the alleged infringing machines is contrary to public policy and that the district court rightly dismissed the complaint for want of equity.

Id. at 490-94 (emphasis added).

64. See 5 DONALD S. CHISUM, ON PATENTS § 19.04[3] (1996) [hereinafter CHISUM] (noting twelve types of situations in which patent misuse has been considered, and speculates that the acts which will be viewed as constituting misuse will shift over time. The twelve situations are tying arrangements, covenants not to compete, package licensing, post-expiration royalties and restraints, royalties based on total sales (unrelated to amount of sales including patented item), refusals to license including excessive or discriminatory royalties, price fixing, territorial limitations including resale restraints, field-of-use and customer limitations, grant-back clauses, restraints on the patentee including covenants not to license, and suppression including compulsory licensing.).

65. See *id.*

66. Pub. L. No. 100-73, 102 Stat. 4674 (1988).

67. See 35 U.S.C. § 271(d) (1997); *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970, 976 n.15 (4th Cir. 1990) ("The primary effect of the Patent Misuse Reform Act is to eliminate the presumption that use of a patent license to create a tie-in is per se misuse.").

68. 334 U.S. 131 (1948).

Paramount's block-booking of movies was an antitrust violation by relying on the reasoning of the patent misuse cases.⁶⁹ The Court was more explicit in a later block-booking case, *United States v. Loew's Inc.*,⁷⁰ in analogizing the patent misuse cases to the area of copyright.⁷¹ Furthermore, statements by other courts indicated that copyright misuse might have been recognized under different sets of facts.⁷²

Despite this long history, the copyright misuse doctrine was not applied by an appellate court until 1990.⁷³ In that year, the Fourth

69. "[E]nlargement of the monopoly of the copyright was condemned below in reliance on the principle which forbids the owner of a patent to condition its use on the purchase or use of patented or unpatented materials. [Citations omitted]." *Id.* at 157.

70. 371 U.S. 38 (1962).

71. The requisite economic power is presumed when the tying product is patented or copyrighted. [Citations omitted]. This principle grew out of a long line of patent cases which had eventuated in the doctrine that a patentee who utilized tying arrangements would be denied all relief against infringements of his patent. *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502; [citations omitted], *Morton Salt Co. v. G. S. Suppiger Co.*, 314 U.S. 488; [citation omitted]. As the District Court [in *Paramount Pictures*] said, the result is to add to the monopoly of the copyright in violation of the principle of the patent cases involving tying clauses Accommodation between the statutorily dispensed monopoly in the combination of contents in the patented or copyrighted product and the statutory principles of free competition demands that extension of the patent or copyright monopoly by the use of tying agreements be strictly confined.

Id. at 45-50.

72. See *Mitchell Bros. Film Group v. Cinema Adult Theater*, 604 F.2d 852, 865 n.27 (5th Cir. 1979), *cert. denied*, 445 U.S. 917 (1980) ("It is ... likely that the public monopoly extension rationale of *Morton Salt* ... is applicable to copyright."); *F.E.L. Publications, Ltd. v. Catholic Bishop of Chicago*, 214 U.S.P.Q. 409, 413 n.9 (7th Cir. 1982) ("[I]t is copyright misuse to exact a fee for the use of a musical work which is already in the public domain"); *United Telephone Company v. Johnson Publishing Co.*, 855 F.2d 604 (8th Cir. 1988); *Broadcast Music, Inc. v. Moor-Law, Inc.*, 691 F.2d 490 (3rd Cir. 1982); *Supermarket of Homes, Inc. v. San Fernando Valley Board of Realtors*, 786 F.2d 1400 (9th Cir. 1986); *BellSouth Advertising & Publishing Corp. v. Donnelley Information Publishing Co., Inc.*, 719 F. Supp. 1551 (S.D. Fla. 1988), *rev'd on other grounds*, 999 F.2d 1436 (11th Cir. 1993).

73. One district court case in 1949, *M. Witmark & Sons v. Jensen*, 80 F. Supp. 843 (D. Minn. 1948), *appeal dismissed*, 177 F.2d 515 (8th Cir. 1949), had previously upheld a copyright misuse defense and also found an antitrust violation in a situation involving the

Circuit decided *Lasercomb America, Inc. v. Reynolds*,⁷⁴ in which the plaintiff, Lasercomb, had developed and licensed software for the computer-aided design and manufacture of steel rule dies used to score paper for folding into cartons.⁷⁵ The defendant, Reynolds, had purchased four licenses for the software. However, rather than purchasing additional licenses, Reynolds chose to circumvent the copy protection devices included with the software and made three additional unauthorized copies which Reynolds used on its own systems.⁷⁶ Reynolds then created an almost exact copy of Lasercomb's software, and marketed this program in competition with Lasercomb's product.⁷⁷ Because the defendant purposefully copied the software and made misrepresentations to Lasercomb, there was no question of copyright infringement.⁷⁸ However, in addition to limiting copying of licensed software, Lasercomb also included a provision in its standard form contract that prevented a licensee from independently developing a competing software program for 100 years.⁷⁹ Although the defendants were not themselves subject to this licensing provision, other licensees of Lasercomb had agreed to this provision,⁸⁰ and the defendants argued that Lasercomb had misused its copyright through the use of this non-competition provision.

After a detailed analysis, the Fourth Circuit accepted the argument of the defendants, and found that the plaintiff's license agreements amounted to copyright misuse because the license provision inhibited independent creation for a lengthy period of time (the 100 year term was

blanket-license practices for musical compositions of the American Society of Composers, Authors and Publishers (ASCAP).

74. 911 F.2d 970 (4th Cir. 1990).

75. *Id.* at 971.

76. *Id.*

77. *Id.*

78. *Id.*

79. Licensee agrees during the term of this Agreement and for one (1) year after the termination of this Agreement, that it will not write, develop, produce or sell or assist others in the writing, developing, producing or selling computer assisted die making software, directly or indirectly without Lasercomb's prior written consent. Any such activity undertaken without Lasercomb's written consent shall nullify any warranties or agreements of Lasercomb set forth herein. The "term of this Agreement" referred to in these clauses is ninety-nine years.

Id. at 973.

80. *Id.*

potentially longer than the life of the copyright itself).⁸¹ In so ruling, the court held that Lasercomb's copyright was unenforceable until the plaintiff had purged the effects of its misuse.⁸² In its analysis, the court acknowledged that the existence of the copyright misuse defense was unclear, and proceeded to conduct an extensive analysis of the history of the misuse doctrine and the public policy underlying the patent and copyright laws. The court finally concluded that the patent misuse doctrine first enunciated in *Morton Salt* should be incorporated into copyright law,⁸³ and found copyright misuse despite the fact that the actions of the plaintiff had no direct effect on the defendants⁸⁴ and despite the fact that no antitrust violation had been found.⁸⁵ Since the

81. 911 F.2d at 978.

82. *Id.*

83. Although the patent misuse defense has been generally recognized since *Morton Salt*, it has been much less certain whether an analogous copyright misuse defense exists We are of the view, however, that since copyright and patent law serve parallel public interests, a "misuse" defense should apply to infringement actions brought to vindicate either right. As discussed above, the similarity of the policies underlying patent and copyright is great and historically has been consistently recognized. Both patent law and copyright law seek to increase the store of human knowledge and arts by rewarding inventors and authors with the exclusive rights to their works for a limited time. At the same time, the granted monopoly power does not extend to property not covered by the patent or copyright Thus, we are persuaded that the rationale of *Morton Salt* in establishing the misuse defense applies to copyrights.

Id. at 976-77.

84. [A]gain analogizing to patent misuse, the defense of copyright misuse is available even if the defendants themselves have not been injured by the misuse. In *Morton Salt*, the defendant was not a party to the license requirement that only Morton-produced salt tablets be used with Morton's salt-depositing machine. Nevertheless, suit against defendant for infringement of Morton's patent was barred on public policy grounds.

Id. at 979.

85. So while it is true that the attempted use of a copyright to violate antitrust law probably would give rise to a misuse of copyright defense, the converse is not necessarily true—a misuse need not be a violation of antitrust law in order to comprise an equitable defense to an infringement action. The question is not whether the copyright is being used in a manner violative of antitrust law (such as whether the licensing agreement is "reasonable"), but whether the copyright is being used in a

Lasercomb decision, four other circuit courts have recognized the doctrine of copyright misuse.⁸⁶

IV. THE PROPER TEST TO ENHANCE UTILITARIAN PUBLIC POLICY: ANTITRUST "RULE OF REASON" OR MISUSE "SCOPE OF THE GRANT"?

Although most courts have accepted that some version of the copyright misuse doctrine should exist, questions remain over its application. One view holds that misuse should be found only when an antitrust violation occurs. In general, the antitrust laws are intended to prohibit situations that unreasonably harm competition, and can apply to various uses of intellectual property rights. Another view argues that the misuse doctrine should be applied when the scope of the intellectual property grant has been exceeded. This view asserts that the intellectual property laws have balanced the rights granted to creators with those granted to the public, and seeks to prevent the extension of creators' rights beyond the scope granted by the intellectual property laws. As such, this "scope of the grant" view of misuse is independent of antitrust criteria such as market power.

The extension of copyright to computer software significantly alters this analysis. Software possesses features that provide it greater market power than other copyrighted works. Moreover, the grant of copyright protection to computer software can create additional disruptions in the normal balancing of rights granted to creators. Due to these factors, the software arena needs a copyright misuse doctrine unencumbered by antitrust analysis in order to preserve the public policy rationales of copyright law.

manner violative of the public policy embodied in the grant of a copyright.

Id. at 978.

86. The 4th, 5th, and 9th Circuits have explicitly recognized the doctrine of copyright misuse, while the 1st and Federal Circuits have cited *Lasercomb* with approval but have not applied the doctrine. *DSC Communications Corp. v. DGI Technologies, Inc.*, 81 F.3d 597 (5th Cir. 1996); *Triad Systems Corp. v. Southeastern Exp. Co.*, 64 F.3d 1330 (9th Cir. 1995); *Data General Corp. v. Grumman Systems Support Corp.*, 36 F.3d 1147 (1st Cir. 1994); *Atari Games Corp. v. Nintendo of America Inc.*, 975 F.2d 832 (Fed. Cir. 1992).

In the 2nd, 3rd, 6th, 7th, 8th, 10th, 11th, and DC Circuits the existence of the doctrine is an open question (either the issue has not been raised since *Lasercomb* or the courts have not had to rule on the issue). The 3rd, 7th, 8th, and 11th Circuits, however, have previously indicated approval of the doctrine. *See supra* note 72.

A. The Misuse Analysis Provides Advantages Over An Antitrust Analysis In Balancing The Rights Granted

The decisions in both *Morton Salt* and *Lasercomb* endorse a strong version of intellectual property misuse which measures the actions of the intellectual property owner against the scope of the grant of intellectual property rights accorded to the owner. This scope of the grant view of misuse asserts that the intellectual property laws have established a ceiling on the level of rights granted to creators, and seeks to prevent any extension of creators' rights beyond this ceiling. Since this analysis is not related to restraints on competition, this version of misuse is independent from antitrust. In addition, those opposed to an antitrust-based approach to misuse have argued that the goals of the intellectual property laws and the antitrust laws are different, and that a misuse offense can occur even if antitrust laws are not violated.⁸⁷

1. AN ANTITRUST ANALYSIS FOR INTELLECTUAL PROPERTY

While the explicit use of the copyright misuse doctrine is relatively recent,⁸⁸ questions about the application of antitrust principles to patent and copyright situations have a long history. As was the case in *Morton Salt*,⁸⁹ it is not unusual for an antitrust law claim to accompany a misuse claim. In general, the antitrust laws are embodied in the Clayton Act⁹⁰ and the Sherman Act,⁹¹ and are intended to prohibit situations that may harm competition.⁹² It is generally necessary to show that the accused

87. See *supra* notes 63 and 85; see also Timothy H. Fine, *Misuse and Antitrust Defenses to Copyright Infringement Actions*, 17 HASTINGS L.J. 315 (1965); Richard Stitt, *Copyright Self-help Protection as Copyright Misuse: Finally, the Other Shoe Drops*, 57 UMKC L. REV. 899 (1989); Julie E. Cohen, *Reverse Engineering And The Rise Of Electronic Vigilantism: Intellectual Property Implications Of "Lock-Out" Programs*; 68 S. CAL. L. REV. 1091 (1995); David Scher, Note, *The Viability of the Copyright Misuse Defense*, 20 FORDHAM URB. L.J. 89 (1992).

88. *Lasercomb*, 911 F.2d at 970.

89. See *supra* note 63.

90. See 15 U.S.C. §§ 12-27 (1997).

91. See 15 U.S.C. §§ 1-7 (1997).

92. "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 hereby declared to be illegal." 15 U.S.C. § 1 (1997); "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony" 15 U.S.C. § 2 (1997);

has market power in the relevant market, and courts subsequently use a "rule of reason" to analyze whether the contested practice has "unreasonably" restrained competition in light of the circumstances.⁹³

Since the enforcement of intellectual property rights restrain the abilities of others to act, these rights can be considered to be limited, legally-imposed monopolies. However, despite these monopoly-like results, these aspects of intellectual property rights are part of the careful balance of rights, and should not implicate antitrust laws. Thus, while the enforcement of a patent or copyright will always involve some restraint of competition, it will not be an unreasonable restraint if applied within the normal scope of the intellectual property right.

2. A COMPARISON BETWEEN AN ANTITRUST ANALYSIS AND A MISUSE ANALYSIS

While court decisions like *Morton Salt* and *Lasercomb* endorse the view that misuse can occur even without a violation of the antitrust laws, this view is not universal. The circuit courts are split on this point.⁹⁴ Congress also examined this issue when it enacted the Patent Misuse Reform Act in 1988.⁹⁵ In that year, Congress considered limiting patent misuse to those actions which violated the antitrust laws in 1988, but declined to take such action.⁹⁶ Adherents to the Chicago School of Law

It shall be unlawful for any person engaged in commerce ... to lease or make a sale or contract for sale of goods, ... or fix a price charged therefor, ... on the condition, agreement, or understanding that the lessee or purchaser thereof shall not use or deal in the goods, ... or other commodities of a competitor or competitors of the lessor or seller, where the effect ... may be to substantially lessen competition or tend to create a monopoly in any line of commerce.

15 U.S.C. § 14 (1997).

93. For a more detailed discussion of antitrust law doctrine, see William M. Landes & Richard A. Posner, *Market Power In Antitrust Cases*, 94 HARV. L. REV. 937 (1981).

94. While five circuits have indicated approval of the copyright misuse doctrine and it is an open issue in the other circuits, the question remains whether or not the copyright misuse defense is considered to be independent of an antitrust analysis. The 1st, 4th, 5th, 9th, and Federal Circuits appear to agree with the *Lasercomb* and *Morton Salt* proposition that misuse is independent of antitrust law, while the 7th Circuit appears to favor requiring an antitrust approach to misuse. See *supra* note 86 and *Reed-Union Corp. v. Turtle Wax, Inc.*, 77 F.3d 909 (7th Cir. 1996).

95. See *supra* note 66.

96. The Act is a compromise between the Senate and the House over the necessity for and content of reform of the misuse doctrine. A Senate-passed bill would have provided that no patent owner would be deemed

and Economics,⁹⁷ including Judges Posner and Easterbrook of the Seventh Circuit, also argue strongly for an antitrust-based approach to misuse analysis⁹⁸ and they have been joined by other commentators.⁹⁹

Proponents of the scope of the grant approach have countered several of the antitrust proponents' arguments. Two typical arguments raised in support of an antitrust-based approach to misuse stem from a

guilty of misuse 'by reason of his or her licensing practices or actions or inactions relating to his or her patent, unless such practices or actions or inactions, in view of the circumstances in which such practices or actions or inactions are employed, violate the antitrust laws.'

5 CHISUM § 19.04(1)(f) at 19-294 (citing S. Rep. 100-492, 100th Cong., 2d Sess. (Aug. 25, 1988)).

97. For additional discussion on the Chicago School of Economics, see Toshiko Takenaka, *Extending The New Patent Misuse Limitation To Copyright: Lasercomb America, Inc. v. Reynolds*, 5 SOFTWARE L.J. 739, 746-48 (1992); Kobak, *supra* note 54, at 27-28.

98. See *USM Corp. v. SPS Technologies, Inc.*, 694 F.2d 505, 511-12 (7th Cir. 1982), where Judge Posner argued:

The [patent misuse] doctrine arose before there was any significant body of federal antitrust law, and reached maturity long before that law ... attained its present broad scope [T]here is increasing convergence of patent-misuse analysis with standard antitrust analysis One still finds plenty of statements in judicial opinions that less evidence of anticompetitive effect is required in a misuse case than in an antitrust case But apart from the conventional applications of the doctrine we have found no cases where standards different from those of antitrust law were actually applied to yield different results If misuse claims are not tested by conventional antitrust principles, by what principles shall they be tested? Our law is not rich in alternative concepts of monopolistic abuse; and it is rather late in the day to try to develop one without in the process subjecting the rights of patent holders to debilitating uncertainty.

See also *infra* note 168.

99. See Takenaka, *supra* note 97; Tony Paredes, *Copyright Misuse And Tying: Will Courts Stop Misusing Misuse?*, 9 HIGH TECH. L.J. 271 (1994); Roger Arar, Note, *Redefining Copyright Misuse*, 81 COLUM. L. REV. 1291, 1311 (1981); Byron A. Bilicki, *Standard Antitrust Analysis and the Doctrine of Patent Misuse: A Unification Under the Rule of Reason*, 46 U. PITT. L. REV. 209 (1984); J. Dianne Brinson, *Patent Misuse: Time for a Change*, 16 RUTGERS COMPUTER & TECH. L.J. 357 (1990); Scott A. Miskimon, *Divorcing Public Policy From Economic Reality*, 69 N.C. L. REV. 1672 (1991); Philip Abromats, Comment, *Copyright Misuse and Anticompetitive Software Licensing Restrictions: Lasercomb America, Inc. v. Reynolds*, 52 U. PITT. L. REV. 629 (1991).

belief that antitrust law and intellectual property public policy are both based on similar goals (that of promoting consumer welfare through a combination of free competition and innovation),¹⁰⁰ and that antitrust principles provide more certainty than those of misuse.¹⁰¹ Several commentators, however, have pointed out that the intellectual property goal of stimulating the creation and distribution of creative works is different from the antitrust goal of encouraging marketplace competition,¹⁰² and that there are instances in which an antitrust inquiry alone fails to prevent all abuses of the intellectual property grant that may harm the public.¹⁰³

An antitrust analysis can also be particularly difficult to apply to the area of software. While an antitrust analysis is often considered to be more objective and predictable than a "scope of the grant" determination, commentators have argued that the antitrust analysis is no more certain than a misuse analysis in the area of software.¹⁰⁴ In particular, it can be extremely problematic or impossible to define the relevant market for software goods. Since antitrust law depends on the concept of market power, it can thus be difficult to apply to the software industry. For

100. See Paredes, *supra* note 99, at 275; Donald F. Turner, *Basic Principles in Formulating Antitrust and Misuse Constraints on the Exploitation of Intellectual Property Rights*, 53 ANTITRUST L.J. 485, 485 (1984).

101. See Paredes, *supra* note 99, at 291.

102. See Ramsey Hanna, Note, *Misusing Antitrust: The Search For Functional Copyright Misuse Standards*, 46 STAN. L. REV. 401, 419-21 (1994) (while antitrust and intellectual property laws both have the ultimate objective of enhancing public welfare, they reach this objective through different intermediate goals which lead to different conclusions as to what practices to allow); Scher, *supra* note 87, at 98.

103. See Hanna, *supra* note 102, at 435-44 ("[T]he Supreme Court's current interpretation of antitrust law would hold harmless copyright holders engaging in a broad range of practices aimed at stifling product-based competition," particularly certain types of predatory pricing and non-pricing techniques in the software industry); Note, *Clarifying The Copyright Misuse Defense: The Role Of Antitrust Standards And First Amendment Values*, 104 HARV. L. REV. 1289 (1991); see also discussion in Part IV.A.3. *infra*.

104. See Hanna, *supra* note 102, at 431-32 ("[A]ntitrust analysis is particularly inadequate at measuring economic power in innovative dynamic industries, due to the difficulty of defining markets in industries with differentiated but highly substitutable goods."); Stephen J. Davidson & Nicole A. Engisch, *A Survey Of The Law Of Copyright Misuse And Fraud On The Copyright Office: Legitimate Restraints On Copyright Owners Or Escape Routes For Copyright Infringers?*, 448 PLI/PAT 489 (1996) (defining the relevant market for an antitrust analysis of most copyrighted works may be impossible, and the law of antitrust doesn't produce certain results because it varies by circuit and over time).

instance, software goods are frequently bundled with other products (including other software, hardware, or with services),¹⁰⁵ making measurement of market share difficult. Producers of software often leverage products in other seemingly unrelated markets, and use the desire for compatibility to achieve market power in seemingly unrelated areas.¹⁰⁶ Because these interconnections between unrelated markets in the software arena are difficult to define, the traditional antitrust analysis can lead to unpredictable results.

Thus, it has been argued that an antitrust-based approach to analyzing misuse is appropriate because of the common goals of antitrust law and intellectual property law, and the certainty provided by an antitrust analysis. However, many commentators have refuted these arguments, particularly as they apply to the software industry. Therefore, the justification for an antitrust-based approach to misuse is at best uncertain.

3. ANTITRUST LAW DOES NOT APPLY WELL TO NETWORK ECONOMIC SITUATIONS

While certainty and common goal arguments have been mentioned by commentators as reasons for an antitrust-based analysis for misuse, the primary thrust for an antitrust approach arises from the belief that antitrust's economic analysis allows for a more efficient utilization of the intellectual property rights granted.¹⁰⁷ For example, this argument (based on the Chicago School of Economics) asserts that an intellectual property right conveys only a limited amount of power, and that normally tying arrangements cannot extract more than that amount.¹⁰⁸ Moreover, ties

105. See Paredes, *supra* note 99, at 298, 309-15 ("[Software creators] are notorious for tying hardware, maintenance, and servicing to their software"). But see Thomas M. Jorde and David J. Teece, *Rule Of Reason Analysis Of Horizontal Arrangements: Agreements Designed To Advance Innovation And Commercialize Technology*, 61 ANTITRUST L.J. 579 (1993) (arguing that horizontal arrangements can be pro-competitive and a legitimate business strategy).

106. See discussion in Part IV.A.3. *infra*.

107. See Paredes, *supra* note 99, at 309-15; Kobak, *supra* note 54, at 25-32.

108. [T]he fixed sum [argument] is ... that a firm with market power may be able to gain its profit all from its own market, all from another, or from any combination thereof, but the total amount of restriction that the monopolist will profitably be able to impose is fixed regardless of the practice that is used.

Louis Kaplow, *Extension Of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515, 517-18 (1985).

can serve as a form of metering by allowing the seller to profit based on the amount of use (by extracting most or all of the profit from the tied item if it is consumed during use), and this metering can allow price discrimination which simultaneously maximizes access to the public and profits to the intellectual property owner.¹⁰⁹

However, a relatively recent "network theory" of economics attacks these traditional antitrust economic assumptions. Adherents to network economic theory argue that traditional antitrust assumptions do not apply to certain industries (such as the software and Internet areas) and that traditional antitrust analysis is therefore inapplicable to these areas.¹¹⁰ These adherents assert that in certain industries, systematic tendencies exist for inefficient technologies to become established and to resist replacement by superior alternatives.¹¹¹ These tendencies are particularly powerful if there is a strong need for compatibility between different purchasers or users of the products supplied. While it has long been clear that this phenomenon existed in situations where users were physically connected (e.g., a telephone system has little use if different people have different types of phones which cannot inter-communicate), commentators have recently realized that the same phenomenon can apply in the software industry where users need compatibility (e.g., users need to share files with other users and software programs need to interact with other software programs).¹¹² As users increasingly become interconnected through the Internet and intranets,¹¹³ the problem in the

109. See Kobak, *supra* note 54, at 28-30.

110. See generally Mark A. Lemley, *Antitrust and the Internet Standardization Problem*, 28 CONN. L. REV. 1041 (1996); S.J. Liebowitz & Stephen E. Margolis, *Should Technology Choice Be A Concern Of Antitrust Policy?*, 9 HARV. J.L. & TECH. 283 (1996); Thomas A. Piraino, Jr., *The Antitrust Analysis Of Network Joint Ventures*, 47 HASTINGS L.J. 5 (1995); Kenneth W. Dam, *Some Economic Considerations In The Intellectual Property Protection Of Software*, 24 J. LEGAL STUD. 321 (1995).

111. *Id.*

112. Commentators at the Berkeley School of Law and Economics have pioneered much of this work. See Michael A. Cusumano, *Strategic Maneuvering And Mass Market Dynamics: The Triumph Of VHS Over Beta* (Consortium On Competitiveness And Cooperation, Haas School of Business, U.C. Berkeley Working Paper No. 90-95, 1990); Joseph Farrell, *Standardization and Intellectual Property*, 30 JURIMETRICS J. 35, 37 (1989); Peter S. Menell, *Tailoring Legal Protection for Computer Software*, 39 Stan. L. Rev. 1329 (1987); PAMELA SAMUELSON ET AL., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308 (1994).

113. See discussion in Part V.A. *infra*.

software industry is exacerbated. These types of network situations do not fit well within the framework of antitrust law.

4. *THE ANTITRUST ANALYSIS DOES NOT ADDRESS THE PROPER SCOPE OF RIGHTS FOR CREATORS*

If this network theory of economics is correct, an antitrust analysis based on traditional economic theory will not identify many misuse situations in the software industry. But even if the analysis of the Chicago School is correct, allowing the full utilization of a granted right is only beneficial and efficient for society if that granted right conveys the appropriate degree of power. If the intellectual property owner is trying to enforce rights that go beyond those which they should rightfully possess based on public policy considerations, then allowing the full utilization of the owner's desired scope of rights will be counterproductive to the societal goals and public policy underlying the original granting of the right. Therefore, if enforcing a judicial doctrine such as intellectual property misuse is perceived to maintain the appropriate balance of rights between those granted to the creator and those retained by the public, then arguing for full utilization of granted rights is premature because the scope of the rights granted to a creator must be defined before the rights can be enforced.

However, using a judicial doctrine to define the appropriate scope of rights for a "scope of the grant" analysis has its own problems. In particular, such a scheme would create debilitating uncertainty if intellectual property owners do not know the extent of the rights granted to them until after judicial intervention in an enforcement action. In this situation, any benefits achieved by a careful balancing of rights would likely be overshadowed by the transaction costs associated with the system. Such a system would thus be unworkable if each individual creator needed to rely on a judicial pronouncement for a definition of his rights.

One solution, however, is to balance the rights for a class of works rather than for each individual work.¹¹⁴ A small number of judicial decisions could then define the scope of the rights granted to creators of works in each class, and the resulting uncertainty would be no more than exists in any common law system of jurisprudence, including that of antitrust law. Of course, such a system would be practical only if the determination of class membership was simple, and would be reasonable only if the works in the class had shared features which altered the

114. Different grants for different classes of works are not unusual. See *supra* text accompanying note 34.

normal balance of rights and thus justified a judicial restriction on the standard statutory grant.

B. The Unique Status Of Software As A Copyrighted Work

As discussed above, some commentators argue that a judicial doctrine of intellectual property misuse is appropriate only if an antitrust-based analysis is used, primarily because an intellectual property owner should be able to engage in a full utilization of the intellectual property rights granted. Even if the underlying theory of economics behind this argument is valid as applied to the software industry, the argument is preempted if the misuse doctrine is needed to redefine the appropriate extent of rights that are granted in the first place. But if a judicial determination of rights engenders excessive uncertainty on the part of intellectual property owners and others, then the system will be unworkable. This can only be avoided if the scope of the rights granted can be generalized to a class of works, which then provides the necessary predictability for other works in that class. For the reasons outlined below, computer software is such a class of copyrighted works.

1. THE UNEASY BALANCE OF SOFTWARE AND COPYRIGHT LAW

An examination of the history of copyright protection for computer software demonstrates a tumultuous road. Because software does not fit well within the traditional confines of copyright law, many difficult issues have arisen, and many still remain to be resolved.

While some would argue that computer programming first began in the nineteenth century with Charles Babbage and his Analytical Engine, modern computer software traces its origins to the creation in the 1940s of the first electronic computer. In response to copyright issues raised by the increasing prevalence of computer software in the 1960s and 1970s, Congress established in 1974 a National Commission on New Technological Uses of Copyrighted Works (CONTU). Based on the 1978 CONTU final report, Congress amended the Copyright Act in 1980¹¹⁵ to make explicit that copyright protection extended to computer software.

In the seventeen years since the 1980 amendments to the Copyright Act, the following major issues are among those that have arisen related to software copyrightability: whether software object code (as distinct

115. 17 U.S.C. § 101 (1997) (added definition of "computer program"); 17 U.S.C. § 117 (1997) (added section entitled "Limitations on exclusive rights: computer programs"); see also *supra* note 30.

from software source code) is copyrightable;¹¹⁶ whether software copyright protection violates the *Baker v. Selden*¹¹⁷ prohibition on protection for a system described in a copyrighted work;¹¹⁸ whether software copyright protection violates 17 U.S.C. §102(b)'s prohibition on protection for ideas, procedures, systems or processes;¹¹⁹ whether the structure, sequence and organization of a program are copyrightable (as opposed to the textual computer code);¹²⁰ whether computer menu command hierarchies are copyrightable;¹²¹ whether the "look and feel" of computer screen displays are copyrightable;¹²² whether temporary copies of software in Random Access Memory (RAM) are infringing;¹²³ whether reverse engineering of software is infringing;¹²⁴ and whether attempts to deny software purchasers the statutory rights granted to "owners" (such as the right to resale or to make backup copies) can be enforced through mass-market shrink-wrap licenses.¹²⁵

For many of these issues the law is not yet clear, and new issues continue to arise in abundance, particularly with relation to software on the Internet. Although these examples do not suggest that copyright protection for software is inherently wrong, they do illustrate that fitting software into previously existing copyright doctrines has been akin to fitting a square peg in a round hole.¹²⁶ At a minimum, these problems illustrate that copyrighted software works share features that distinguish them from other classes of copyrighted works.

116. *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (3rd Cir. 1983).

117. 101 U.S. 99 (1879).

118. *Apple*, 714 F.2d at 1250-51.

119. *Id.*

120. *See Whelan Associates v. Jaslow Dental Laboratory, Inc.*, 797 F.2d 1222 (3rd Cir. 1986), *cert denied*, 479 U.S. 1031 (1987); *Computer Associates International, Inc. v. Altai, Inc.*, 982 F.2d 693 (2nd Cir. 1992).

121. *Lotus Development Corp. v. Borland International, Inc.*, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided Court*, 116 S. Ct. 804 (1996).

122. *Apple Computer, Inc. v. Microsoft Corp.*, 35 F.3d 1435 (9th Cir. 1994), *cert denied*, 115 S. Ct. 1176 (1995).

123. *MAI Systems Corp. v. Peak Computer, Inc.*, 991 F.2d 511 (9th Cir. 1993).

124. *See Sega Enterprises v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992); *Atari Games Corp. v. Nintendo of America, Inc.*, 975 F.2d 832 (Fed. Cir. 1992); *see also infra* Part V.B.

125. *ProCD v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).

126. *Computer Assoc.*, 982 F.2d at 712 (2nd Cir. 1992).

2. SOFTWARE IS A FUNCTIONAL WORK AND COPYRIGHT PROVIDES IT MARKET POWER & PATENT-LIKE PROTECTION

Computer software embodies a group of works that is distinct from other copyrighted works.¹²⁷ One such distinction arises because software is a functional work. For other forms of copyrighted works such as books or paintings, perceiving the expression is the goal of the work. This is true even for a work such as a movie or a sound recording in which the item embodying the work (a film, a phonorecord, a compact disk, etc.) requires a machine to allow the user to perceive the work.

On the other hand, software's inherent value lies in its ability to perform a function or task when its instructions are executed on a machine.¹²⁸ The user almost always lacks interest in the particular expression that the software engineer used to accomplish the result (e.g., while another software engineer might comment on the aesthetic beauty of how Sally used a tail-recursive subroutine rather than a looping construct or how Bob structures his object classes to promote reusability of code, most users merely care whether the program accomplishes its task in a minimum amount of time without crashing the computer). While a computer screen is often needed to perceive the code for a computer program, only the very rare user acquires software out of a desire to see the expression that is present in the lines of software code. Thus, while users of other copyrighted works are interested in perceiving the expression, a software user is interested in the results that are accomplished when this expression is executed and performs a function.

127. Marshall Leaffer, *Engineering Competitive Policy and Copyright Misuse*, 19 U. DAYTON L. REV. 1087, 1090 (1994) (arguing that computer software differs significantly from other types of literary works); Paredes, *supra* note 99, at 309-15 (1994) (noting that research and development costs are higher for software than for other types of copyrighted works).

128. See Samuelson, *supra* note 112, at 2315-19; Hanna, *supra* note 102, at 409-10 ("[U]nlike other types of copyrightable subject matter, software serves a functional purpose" and superior functionality gives its producer a competitive edge); Leaffer, *supra* note 127; Note, *Clarifying The Copyright Misuse Defense: The Role Of Antitrust Standards And First Amendment Values*, 104 HARV. L. REV. 1289, 1299 (1991) ("Computer software, however, differs from other works of authorship in ways that make it more like a patented invention. What users value most in a computer program is rarely the expression contained in its coded instructions; rather, it is the utility of the program in accomplishing some purpose."); see also *qad. inc. v. ALN Associates, Inc.*, 770 F. Supp. 1261, 1265 (N.D. Ill. 1991).

The extension of copyright protection to a functional work is a factor that grants greater power to a software copyright owner than to other copyright owners, and necessitates an adjustment of the scope of the rights granted to these copyright owners so that an appropriate balance between the owner and the public is maintained. Copyright protection for software can be used to withhold access to the ideas underlying the expression,¹²⁹ and can also prevent others from building compatible products thereby leveraging existing technology.¹³⁰

In a network industry such as software, market conditions often dictate the need for a single standard, thus effectively destroying competition.¹³¹ Even a small difference in initial market power can tip the balance of power between competing products in a new market segment. And once a product has larger market share than competitors, the network externalities that stem from the desire for compatibility with the installed user base act to perpetuate and increase the market share (i.e., software developers will increasingly support the standard to the exclusion of others, independent service organizations will arise to train and repair problems with that software, hardware vendors will preload the software on the computers that they sell, etc.). If an existing dominant software vendor can tie a new entry in the market to its existing dominant products or standards, new entrants in the marketplace have little opportunity to compete.¹³² To the extent that software copyright is

129. See *infra* Part IV.B.3.

130. Computer software may be characterized as a "cumulative technology," an attribute it shares with other rapidly developing areas of technology. In "cumulative technology" industries, future advances build incrementally on previous recent developments If protection is given too broad a scope, it may retard the advancement of innovation in an industry (like the software industry) in which innovation proceeds through sequential development. Many economists would agree that getting technology to the market sooner will raise consumer welfare and encourage further development of new generations of products, particularly in industries with cumulative technological characteristics.

Leaffer, *supra* note 127, at 1095.

131. See Samuelson, *supra* note 112.

132. Many observers point to Microsoft as an example of this network economic phenomenon in the software industry. Microsoft received a dominant position in the personal computer operating system market with its MS-DOS® product (this initial dominant position arose from the endorsement by the then-dominant hardware manufacturer IBM, who did not at the time recognize the increasing importance of the software industry). Microsoft then used that near-monopoly in MS-DOS to leverage a

used to enhance and maintain this type of "monopoly", it can confer significant market power¹³³ and make software copyright protection more akin to that provided by patent law (which protects functional ideas).¹³⁴

This software copyright market power creates a difficulty for those who argue that the protection afforded by copyright will not generally afford sufficient market power to justify a copyright misuse doctrine.¹³⁵

near-monopoly in the Windows™ operating system market, which in turn provided a near-monopoly in the productivity applications market (such as Office, Word, Excel). Now, Microsoft is attempting to leverage its near-monopoly into dominance in the network and Internet arenas. A commentator sums up the industry's mix of admiration, jealousy, and disdain of Microsoft well:

Microsoft is inevitable. It will dip into endlessly deep pockets to buy anything, or anyone, to feed its infinite appetites. It will out-work, under-price, and out-last any competition. It will own any market it chooses, and punish customers who buy from the competition. Whether you are a competitor or a customer, you will be assimilated. Resistance is futile.

Dan Gillmor, *Microsoft Empire Lacks Jedi Adept At Striking Back*, SAN JOSE MERCURY NEWS, Mar 24, 1997 at E1.

133. See Hanna, *supra* note 102, at 409-10, 427-32 ("Rivals may not be able to effectively compete by introducing functionally equivalent products if they lack access to necessary productive resources or expertise, or if they fear offending a dominant software producer's copyrights." In particular, if copyright law prevents a rival from reverse engineering software, significant market power can result.)

134. *Id.* at 415-16 ("Computer applications and operating systems, while considered 'literary works' for purposes of copyright, resemble patented inventions in that consumers value such computer programs for their functional utility, not their artistic expression."); P. Samuelson, *CONTU Revisited: The Case Against Copyright Protection for Computer Programs in Machine-Readable Form*, 1984 DUKE L.J. 663 (1984); Paul Goldstein, *Infringement of Copyright in Computer Programs*, 47 U. PITT. L. REV. 1119, 1128 (1986) (arguing that misuse should apply in the software context where the protection is for many practical purposes the same as patent law); Peter S. Menell, *An Analysis of the Scope of Copyright Protection for Application Programs*, 41 STAN. L. REV. 1045, 1102 (1989) (noting that courts should not allow owners of copyrights in user interfaces from misusing them).

135. The Court has historically treated tie-ins involving intellectual property more harshly than ties involving other goods or services.... [T]he Court presumed that patents and copyrights provided the seller with sufficient economic power over the tying product to foreclose competition in the tied market... With regard to copyrights, this presumption of anticompetitive effects was not justified.

Paredes, *supra* note 99, at 302-03; "Since the requirements for a patent are more demanding than for copyrights, patents confer more market power than copyrights." *Id.* at 305;

To the extent that copyrighted software holds such market power, this argument falls short.

3. *COPYRIGHT LAW CAN BE USED TO EXTEND PATENT-LIKE PROTECTION TO SOFTWARE IDEAS AND TRADE SECRETS*

In addition to the functionality aspects of software which distinguish it from other copyrighted works, the distribution of software in object code format allows the copyright owner to prevent access to important parts of the work. These excluded parts include not only the original creative expression of the software engineer (which is embodied in the source code), but also the ideas that underlie the expression and to any trade secrets that are contained in the software.¹³⁶ In fact, computer software may be the only product that simultaneously receives patent, copyright, trademark and trade secret protection for the same aspects of the product. Even if a user is allowed and is able to reverse engineer the object code, the resulting reverse engineered end-product will contain less information than the original creative work for which the copyright owner obtained protection.¹³⁷ Courts and commentators alike have criticized

"[B]ased on the reduced scope of exclusionary power, at least in theory, of many copyrights, an inquiry into market power would seem even more germane for copyrights than for patents." *Kobak, supra* note 54, at 34 .

136. As many commentators have previously described, computer software is normally developed in a high-level computer language such as C++, Lisp, or Java. These languages are readable to a trained developer, and the resulting source code allows significant expression in such things as choices of names for variables and functions, or the specific manner in which a result is achieved. Generally, this source code is then compiled into object code, which is composed of 1s and 0s, and which can be executed by a computer but which does not convey useful information to a human. If only the object code is distributed by the software copyright owner, which is the normal practice, then a user will never be able to see the original source code that produced the object code. For more detail, see cases cited *supra* note 124.

137. It is sometimes possible to engage in a form of reverse engineering called decompilation whereby the goal is to produce the object code from the original source code. This is typically time-consuming and very difficult, and it is not possible to retrieve all of the original expression. Since reverse engineering of software will typically involve creating at least interim copies of the object code or code that is derived from the object code, this reverse engineering is arguably an act of copyright infringement. See Leaffer, *supra* note 127, at 1090-91 ("To develop either competitive or compatible products, interim copying into an intelligible medium may therefore be necessary to study a program's sequence and logic Prohibition of reverse engineering through decompilation would erect a serious obstacle to developers who legitimately desire to create compatible

the use of copyright law to prevent reverse engineering and thereby prevent access to expression and protect both underlying ideas¹³⁸ and trade secrets.¹³⁹

software, which many would argue is essential to innovation in the computer industry."); see also *infra* Part V.B.

138. "[T]he unique attributes of computer software [allows] ... an author [to acquire] ... patent-like protection by putting an idea, process, or method of operation in an unintelligible format and asserting copyright infringement against those who try to understand that idea." *Leaffer, supra* note 127, at 1094.

Courts have also recently made broad statements, albeit at least partially in dicta.

As discussed above, the fact that computer programs are distributed for public use in object code form often precludes public access to the ideas and functional concepts contained in those programs, and thus confers on the copyright owner a de facto monopoly over those ideas and functional concepts. That result defeats the fundamental purpose of the Copyright Act—to encourage the production of original works by protecting the expressive elements of those works while leaving the ideas, facts, and functional concepts in the public domain for others to build on.

Sega, 977 F.2d at 1527;

An author cannot acquire patent-like protection by putting an idea, process, or method of operation in an unintelligible format and asserting copyright infringement against those who try to understand that idea, process, or method of operation. [Citations omitted.] The Copyright Act permits an individual in rightful possession of a copy of a work to undertake necessary efforts to understand the work's ideas, processes, and methods of operation.

Atari, 975 F.2d 842; see also David A. Rice, *Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543, 611 (1992) (noting that reverse engineering clauses in software licenses should be constitutionally preempted by copyright law).

139. In *Vault Corporation v. Quaid Software Ltd.*, 655 F. Supp. 750 (E.D. La. 1987), *aff'd* *Vault Corporation v. Quaid Software Ltd.*, 847 F.2d 255 (5th Cir. 1988), a case criticized by some commentators, the court preempted a software license, which disallowed reverse engineering of the software, in part because the contractual provision would prevent access to unprotectable trade secrets and thus was violative of patent law.

Vault's cause of action based on the Louisiana trade secrets act is not preempted by the federal Copyright act, on its face. See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 94 S. Ct. 1879, 40 L. Ed. 2d 315 (1974). State trade secret protection is much less effective than copyright and patent protection, and so is not preempted by federal law. One of the major weaknesses is the inability of trade secret laws to protect the

C. A "Scope Of The Grant" Copyright Misuse Doctrine Should Be Applied To Computer Software

As discussed above, the scope of the rights granted for intellectual property works is determined by a combination of statutory and judicial doctrines, and is designed to provide a balance between the rights granted to creators and those retained by the public. If a class of copyrighted works shares features that provide an excess of power to the copyright owner, a judicial determination is needed to realign the extent of rights that are granted. As discussed earlier, computer software is such a class of copyrighted works and owners of computer software copyrights thus possess an excess of rights relative to what is appropriate based on public policy. The misuse doctrine is the appropriate vehicle to realign the rights granted because it focuses on the scope of the rights granted and upholds the public policies underlying the intellectual property laws.

Adherents of an antitrust-based approach to copyright misuse rely on arguments that do not fit well within the domain of software copyright misuse. The copyright goal of promoting creative works is different from the antitrust goal of promoting competition, and copyright and antitrust laws achieve their goals through different mechanisms. In addition, defining the relevant markets for an antitrust-based approach to copyrighted software is extremely difficult, thus making the application of antitrust law uncertain. More importantly, the argument that copyrights do not convey sufficient market power to necessitate a misuse doctrine does not apply to software. Moreover, the argument to allow full utilization of the rights granted is preempted if the misuse doctrine is needed to define the appropriate level of rights that should be granted.

Because software is a class of copyrighted works that can provide greater power to the owner than is true of other classes of copyrighted works, the copyright misuse doctrine is a necessary vehicle to correct the imbalance of power between owners of copyrighted software works and the general public. As the *Lasercomb* court determined, the copyright

owner against discovery of the trade secret by independent invention, accidental disclosure, or reverse engineering.

Id. at 475-76, 94 S. Ct. at 1883. "The Louisiana Software License Enforcement Act ... has gone beyond trade secrets law by outlawing reverse engineering." *Vault*, 655 F. Supp. at 763; *see also* *Foresight Resources Corp. v. Pfortmiller*, 719 F. Supp. 1006 (D. Kan. 1989) (finding that trade secret protection achieved through license restriction on decompiling program code was preempted, because it granted greater rights than Copyright Act in precluding exercise of section 117 rights); *Rice*, *supra* note 138, at 611-13 (arguing that reverse engineering clauses in software licenses should be preempted by patent law because they unduly protect trade secrets).

misuse doctrine should be applied without the need for an antitrust-based approach, and courts should instead rely on the scope of the copyright grant as determined by public policy.

V. THE PAST USE OF OTHER JUDICIAL DOCTRINES TO LIMIT SOFTWARE COPYRIGHT IN MISUSE CONTEXTS

This paper has argued that software is a unique form of copyrighted work that confers significant market power to the copyright owner. But if the copyright misuse doctrine is truly needed to mitigate the power of software copyright, the question arises as to why the first appellate decision enforcing misuse did not occur until 1990,¹⁴⁰ with only a gradual acceptance of the misuse doctrine in the time since. The answer to the question lies both in the recent emergence of the software industry itself and in the past use of other judicial doctrines by courts to address misuse-like situations.

A. Recent Growth Of The Software Industry Creates A Need For Copyright Limitations

The software copyright misuse doctrine's recent emergence can partially be attributed to the relatively recent ascent of the computer software industry itself. While high school students can probably not conceive of a world without computers (including their Sega SaturnTM and Nintendo-64TM game machines), it is important to realize that the first personal computer was not introduced until the late 1970s,¹⁴¹ less than 20 years ago. Despite a current \$150 billion a year packaged software global market that continues to grow at a rate near 15% a year,¹⁴² this market was only \$30-35 billion a year in 1990¹⁴³ and merely \$18 billion a year in 1985.¹⁴⁴ More strikingly, the World Wide Web on the Internet did not even come into existence until the early 1990s. Yet Internet market revenue has grown to over \$5 billion a year in 1995, and is projected to

140. See *supra* note 74.

141. While the introduction of the IBM PC in the early 1980s is sometimes considered to be the beginning of the personal computer industry, the Apple II computer, as well as other computers with more limited uses such as the Altair and the Radio Shack TRS-80, were available in the late 1970s.

142. *Server Market Is The Sweet Spot*, ASIA COMPUTER WEEKLY, July 29, 1996.

143. Mark S. Basham, *Computer Software Stocks: Core Segment Holdings In A Growth Stock Portfolio*, EMERGING & SPECIAL SITUATIONS 4, March 15, 1991.

144. Jim Mitchell, *Software Battle Entering Round 2: Copyright Trouble Looms Again*, THE DALLAS MORNING NEWS, May 25, 1985 at G1.

reach over \$40 billion a year before the turn of the century¹⁴⁵ and \$200 billion a year by 2006.¹⁴⁶ Thus, it is not surprising that a 1990 case, based on actions that occurred beginning in 1983,¹⁴⁷ was the first case in which the software copyright misuse doctrine was applied.

B. Employing Fair Use To Prevent Misuse

While relatively young, the software industry is highly competitive. This competitiveness dictates that at least some producers of software will use every tool at their disposal (including intellectual property rights), even if their use is questionable use or a misuse of an intellectual property right. Due to the paucity of precedent for applying the software copyright misuse doctrine, and perhaps limited by the pleadings of the parties, courts have in the past used other judicial doctrines to address instances of copyright misuse. In particular, the subjective and equitable doctrine of copyright fair use¹⁴⁸ has proven to be a powerful tool.

The most visible examples of the courts' use of fair use in the area of software arise with respect to reverse engineering¹⁴⁹ of software¹⁵⁰ in the

145. Margaret Ryan, *Midyear Forecast/ Annual Report*, ELECTRONIC ENGINEERING TIMES, July 1, 1996 at 25.

146. Louis Connor, *Can You Trust Web Transactions?; Digital Signatures And Other Security Measures Can't Prevent Crime-But They Can Deter It*, COMMUNICATIONS WEEK, Jan 15, 1996 at 41.

147. *Lasercomb*, 911 F.2d 970 (4th Cir. 1990).

148. See discussion in Part II.B.2. *supra*.

149. See *supra* note 137.

150. While reverse engineering cases are the most visible software fair use cases, other courts have applied fair use principles in other contexts. See *Mitel, Inc. v. Iqtel, Inc.*, 896 F. Supp. 1050 (D. Colo. 1995) (finding that even if telephone call controllers' software program command codes were copyrightable, competitor's use of same command codes was "fair use" despite its commercial nature because manufacturer controlled between 75% and 90% of call controller market and competitor needed to copy the codes in order to be competitive); *Triad Systems Corp. v. Southeastern Express Co.*, 31 U.S.P.Q.2d 1239 (N.D. Cal. 1994) (finding that if service organization can show that it needs to make backup copies of plaintiff's copyrighted software while reformatting customers' computer hard drives, it is likely to prevail on copyright infringement claim as a fair use, but summary judgment is not appropriate when a factual dispute over the necessity exists. While the court later found at 36 U.S.P.Q.2d 1028 that it was not fair use to load the plaintiff's diagnostic software into RAM while servicing the computer, the court did not appear to find a copyright violation with regard to the backup copies). See also *Nimmer*, *supra* note 53, at 23 (arguing that it should be fair use for an independent service organization to make

*Sega*¹⁵¹ and *Atari*¹⁵² cases. Since the legal analysis of the Federal Circuit in *Atari* is similar to that of the Ninth Circuit in *Sega*, only *Sega* will be discussed here. In *Sega*, the plaintiff, Sega, was a video game manufacturer which produced both game consoles and game cartridges that ran in the consoles, and the defendant, Accolade, was a game manufacturer who independently produced game cartridges that were designed to be compatible with the Sega consoles.¹⁵³ While Sega licensed some vendors to produce compatible games, Accolade was not a licensee. Instead, Accolade reverse engineered Sega game cartridges to discover the necessary software interfaces to make their games compatible with the Sega consoles. After discovering the interfaces, Accolade included the required 4-letter initialization code in their own game cartridges so that they could interact with the Sega console.¹⁵⁴ Sega attempted to use copyright law to prevent competition from Accolade in two ways—it claimed that Accolade's copying of software that occurred incidental to the reverse engineering process was infringement, and that the use of the 4-letter initialization code in Accolade's game cartridges was infringement.¹⁵⁵ The court rejected the proposition that these actions were copyright infringements, and instead found that Accolade's actions were protected by fair use.¹⁵⁶

While the case was thus decided under the doctrine of fair use, there is a strong argument that the application of fair use was inappropriate, and that the misuse doctrine would have been more appropriate.¹⁵⁷ The

temporary copies of diagnostic software in RAM while performing repair or maintenance of customers' computers).

151. See *supra* note 124.

152. *Id.*

153. *Sega*, 977 F.2d at 1514.

154. *Id.* at 1514-16.

155. *Id.* at 1517.

156. "We conclude that where disassembly is the only way to gain access to the ideas and functional elements embodied in a copyrighted computer program and where there is a legitimate reason for seeking such access, disassembly is a fair use of the copyrighted work, as a matter of law." *Id.* at 1527-28. In addition, the court stated that the 4-letter code was undeserving of protection due to its functionality and its shortness. *Id.* at 1524-25.

157. It would appear that the court was limited by the pleadings of the parties—while copyright misuse was argued at the district court level, it did not appear to be an issue on appeal. 785 F. Supp. 1392 (N.D. Cal. 1992). In the *Atari* case, the Federal Circuit did consider the copyright misuse defense, but the willfully deceptive practices of the defendant in that case provided the plaintiff with a stronger equitable case. In the recent *Bateman v. Mnemonics* case involving reverse engineering of software, the 11th Circuit raised the possibility of misuse *sua sponte*, but concluded that infringement had not occurred due to

first indication that the fair use doctrine was the incorrect vehicle to use is that the traditional fair use analysis did not fit well with the defendant's commercial actions,¹⁵⁸ and so the court needed instead to rely heavily on public policy to justify its conclusion.¹⁵⁹ The second indication that the fair use analysis was inappropriate was the fact that the court found it necessary to make a broad pronouncement as a matter of law that would

the necessity to allow software compatibility without making an express finding on the legal doctrine used. 79 F.3d 1532, 1547 (11th Cir. 1996) and *infra* note 164.

158. Section 107 of the Copyright Act lists factors to be considered in determining whether a particular use is a fair one. Those factors 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. See 17 U.S.C. § 107 (1997). The statutory factors are not exclusive.

The *Sega* court stretched the limits of reason in concluding that the first, third, and fourth factors all supported Accolade. The court argued that while Accolade copied the *Sega* code for the commercial purpose of creating a competing product, it was "a legitimate, essentially non-exploitative purpose, and that the commercial aspect of its use can best be described as of minimal significance." *Sega*, 977 F.2d at 1522-23. In addition, despite the statement by the court that if "the copying resulted in the latter effect [diminishing potential sales, interfering with marketability, or usurping the market], all other considerations might be irrelevant," the court concluded that there was no evidence of harm to *Sega* since consumers might buy *Sega's* games as well as Accolade's (even if they are of the same genre, like a football game). *Id.* at 1523.

As the court itself admitted, "[w]e are not unaware of the fact that to those used to considering copyright issues in more traditional contexts, our result may seem incongruous at first blush. To oversimplify, the record establishes that Accolade, a commercial competitor of *Sega*, engaged in wholesale copying of *Sega's* copyrighted code as a preliminary step in the development of a competing product." *Id.* at 1527.

159. [W]e are free to consider the public benefit resulting from a particular use notwithstanding the fact that the alleged infringer may gain commercially Public benefit need not be direct or tangible, but may arise because the challenged use serves a public interest. In the case before us, Accolade's identification of the functional requirements for Genesis compatibility has led to an increase in the number of independently designed video game programs offered for use with the Genesis console. It is precisely this growth in creative expression, based on the dissemination of other creative works and the unprotected ideas contained in those works, that the Copyright Act was intended to promote.

Id. at 1523.

affect software copyright owners as a class,¹⁶⁰ a result that was seemingly inconsistent with the fact-intensive nature of the traditional fair use analysis.¹⁶¹ But the most telling indication that the fair use doctrine should not have been used was that the court went out of its way to denounce the actions of the plaintiff,¹⁶² an unnecessary departure from the focus on the defendant in the normal fair use analysis. Since the court found it necessary to restrict the rights available to software copyright owners as a class and thus adjust the balance of rights, the fair use doctrine was inappropriate. With its focus on public policy and limiting

160. In light of the public policies underlying the Act, we conclude that, when the person seeking the understanding has a legitimate reason for doing so and when no other means of access to the unprotected elements exists, such disassembly is as a matter of law a fair use of the copyrighted work.

Id. at 1514. After *Sega* and *Atari*, it is now a commonly-held belief that reverse engineering of software is not copyright infringement if the reverse engineering is necessary to discover underlying software interfaces in the code that are required to build competing or compatible products. Thus, a right to prevent what would otherwise be copyright infringement has been withdrawn from software copyright owners as a class. See Leaffer, *supra* note 127, at 1087 (“*Sega Enterprises, Ltd. v. Accolade, Inc.* ... held that reverse engineering for purposes of developing non-infringing competing or compatible software is a fair use of copyrighted software”).

161. Early in its opinion, the *Sega* court stated that “consideration of the unique nature of computer object code thus is more appropriate as part of the case-by-case, equitable ‘fair use’ analysis authorized by section 107 of the Act.” *Sega*, 977 F.2d at 1520.

162. “[A]n attempt to monopolize the market by making it impossible for others to compete runs counter to the statutory purpose of promoting creative expression and cannot constitute a strong equitable basis for resisting the invocation of the fair use doctrine.” *Id.* at 1523-24.

Here, both parties agree that there is a misuse of a trademark, both agree that there is unlawful mislabeling, and both agree that confusion may result. The issue, here, is—which party is primarily responsible? Which is the wrongdoer—the violator? ... The facts are relatively straightforward and we have little difficulty answering the question. ... [W]e hold that *Sega* is primarily responsible for any resultant confusion. ... *Sega* seeks once again to take advantage of its trademark to exclude its competitors from the market. The use of a mark for such purpose is inconsistent with the Lanham Act.

Id. at 1528-30. “*Sega* argues that ... section 117 of the Act ... constitutes a legislative determination that any copying of a computer program other than that authorized by section 117 cannot be considered a fair use of that program under section 107. That argument verges on the frivolous.” *Id.* at 1520-21.

over-reaching by copyright owners, the misuse doctrine instead should have been applied.

Thus, the *Sega* decision illustrates that when the court focuses on the actions of the plaintiff rather than those of the defendant, appeals to underlying public policy, treats software as a special class of copyrighted works,¹⁶³ and makes broad pronouncements of law, the court is misapplying the fair use doctrine. Since the court is effectively performing a misuse analysis that limits the rights of an entire class of copyrighted works, direct application of the misuse doctrine would provide more consistent and predicable results.

C. Employing Other Copyright Doctrines To Prevent Misuse

While the judicial doctrine of copyright fair use provides a powerful tool for courts to use in preventing misuse of software copyrights, the courts have other tools at their disposal. In *Bateman v. Mnemonics, Inc.*, a recent case related to reverse engineering of software, the Eleventh Circuit articulated this well:

Whether the [copyright] protection is unavailable because these factors render the expression unoriginal, nonexpressive per 17 U.S.C. § 102(b), or whether these factors compel a finding of fair use, copyright estoppel, or misuse, the result is to deny copyright protection to portions of the computer program. Thus, we today join these other circuits in finding that external considerations such as compatibility may negate a finding of infringement.¹⁶⁴

An example of another judicial doctrine that has been used to limit the rights of software owners who attempt to leverage their copyrights beyond allowable limits is the copyright preemption doctrine.¹⁶⁵

163. [N]ot all copyrighted works are entitled to the same level of protection. ... Computer programs pose unique problems for the application of the "idea/expression distinction" that determines the extent of copyright protection Because of the hybrid nature of computer programs, there is no settled standard for identifying what is protected expression and what is unprotected idea in a case involving the alleged infringement of a copyright in computer software ... computer programs are also unique among copyrighted works in the form in which they are distributed for public use... . Because *Sega's* video game programs contain unprotected aspects that cannot be examined without copying, we afford them a lower degree of protection than more traditional literary works.

Id. at 1524-26.

164. 79 F.3d 1532, 1547 (11th Cir. 1996).

165. [A]ll 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

However, copyright misuse principles often provide a superior framework to restrain plaintiffs who abuse their copyright privileges. In *ProCD, Inc. v. Zeidenberg*,¹⁶⁶ a software manufacturer attempted to contractually restrict the uses of uncopyrightable telephone directory information¹⁶⁷ which could be downloaded from its product. While the Seventh Circuit court found that the shrink-wrap contract contained inside the product box was not preempted (in a ruling that was led by Judge Easterbrook and which relied heavily on a Chicago School economic analysis),¹⁶⁸ the district court judge had conversely found preemption due to the invalid extension of copyright power.¹⁶⁹ If the plaintiff truly was trying to extend

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, ... are governed exclusively by this title. ... [N]o person is entitled to any such right or equivalent right in any such work under the common law or statutes of any State.

17 U.S.C. § 301(a) (1997).

166. 86 F.3d 1447 (7th Cir. 1996).

167. While the telephone listings were not copyrightable, they were within the "subject matter" of copyright, and thus subject to § 301 preemption.

168. The court spent several pages reviewing economic theory, explaining why the restrictions in the shrink-wrap contract allowed price discrimination ("[t]o make price discrimination work, however, the seller must be able to control arbitrage") which was beneficial to consumers. *ProCD*, 86 F.3d at 1449-52. The court's statements indicating that "[c]ompetition among vendors, not judicial revision of a package's contents, is how consumers are protected in a market economy" and that "[t]erms and conditions offered by contract reflect private ordering, essential to the efficient functioning of markets" demonstrate the 7th Circuit's laissez-faire approach to intellectual property. *Id.* at 1453, 1455. One assumes that even the Seventh Circuit would still uphold traditional restrictions on contractual extensions of intellectual property rights, despite being "consensual" private orderings, such as the disallowance of required royalty payments that extend beyond the term of the intellectual property right. See *Brulotte v. Thys Co.*, 379 U.S. 29 (1964) (holding that a patent owner cannot require royalty payments beyond the end of the patent term); *F.E.L. Publications, Ltd. v. Catholic Bishop of Chicago*, 214 U.S.P.Q. 409, 419 n.9 (7th Cir. 1982) ("[I]t is copyright misuse to exact a fee for the use of a musical work which is already in the public domain." (citing *Mercoid Corp. v. Mid-Continent Investment Co.*, 320 U.S. 661, 60 U.S.P.Q. 21 (1994))).

169. Contracts that are consistent with the copyright law's goals of self-protection should be upheld. Rightful owners should be able to define the limits of permissible copying or modification of their works. ... It is only when a contract erects a barrier on access to information that under copyright law should be accessible that § 301 operates to protect copyright law from individually crafted evasions of that law. ...

the power of its copyright beyond the bounds allowed by public policy, the misuse doctrine provides a better framework with which to analyze these activities.

While the Seventh Circuit did not believe that the actions of the plaintiff in the *ProCD* case were an impermissible extension of copyright law, other courts have found differently under analogous situations. In the *Vault* case,¹⁷⁰ the Fifth Circuit found several provisions of the Louisiana Software License Enforcement Act (SLEA)¹⁷¹ to be subject to preemption by the Copyright Act because the SLEA authorized contractual duplication or extension of rights granted under copyright law.¹⁷² The SLEA allowed producers of software to impose various

Plaintiff's license agreement is an attempt to avoid the confines of copyright law and of Feist, 499 U.S. 340, 111 S. Ct. 1282, 113 L. Ed. 2d 358. Its prohibition on the distribution of public information cannot be squared with the purposes of copyright law or with plaintiff's own compilation of data Plaintiff cannot use a standard form contract to make an end run around copyright law. Its contract claim is preempted by § 301.

908 F. Supp. 640, 658-59 (W.D. Wis. 1996); *see also* Rice, *supra* note 138, at 658-59 (explaining that the far-reaching public policy Section 301 implements clearly requires preemption of contract-based protection of expression where the effect is to secure rights in that expression which are greater than, equal to, or supplemental of those which section 106 secures); Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570, 1611 (1995) (stating that reverse engineering clauses in standard form software contracts, such as shrink-wrap licenses, should be preempted by patent law because they unduly protect trade secrets and act as a form of private legislation); Christopher Celentino et al., *Vault Corp. v. Quaid Software Ltd.: Invalidating Shrink-Wrap Licenses?*, 2 J.L. & TECH. 151, 162 (1987) (noting that *Vault* opinion has merit if it means that contracts providing rights greater than or equivalent to those under copyright law are preempted).

170. *See supra* note 139.

171. LA. REV. STAT. ANN. § 51:1961 (West 1987).

172. § 1964(2) of the SLEA prohibits copying "for any purpose." This section is in direct violation of the Copyright Act which permits the making of archival copies from copies of computer software and permits copying which is "an essential step in the utilization of the computer program." 17 U.S.C. § 117. *The SLEA has granted greater protection than the Copyright Act.*

In addition, § 1964(3) prohibits "translating, reverse engineering, decompiling, disassembling, and/or creating derivative works based on the computer software." The Copyright Act grants the owner of the copyright the right to prepare derivative works based upon the copyrighted work.

contractual terms upon software purchasers, provided that the terms were included with the software in a license agreement that comported with SLEA. The district court identified four areas in which the SLEA could be preempted by the copyright law, both constitutionally and under section 301.¹⁷³ It found that SLEA provided rights which exceeded those of the copyright law by allowing for prohibition of copying for any purpose, creating a bar against copying that was unlimited in duration, and allowing protection for any computer program, regardless of its originality.¹⁷⁴ In addition, the district court found that SLEA provided equivalent rights to those of the copyright law by allowing the prohibition of the creation of derivative works.¹⁷⁵ The Fifth Circuit, while affirming the reasons set forth by the district court, added yet another reason for constitutional preemption of SLEA—that the prohibition against reverse engineering does not allow the owner of a computer program to exercise the § 117 right to adapt the program as an essential step in its utilization,

17 U.S.C. § 106(2). The right to prepare derivative works is an exclusive right under the federal Copyright Act and *the SLEA cannot provide "an equivalent right."* 17 U.S.C. § 301(a). ...

....

... Congress has taken action to afford copyright protection to computer software. In this situation *the Sears-Compco preemption doctrine, as well as § 301 of the Copyright Act, are both applicable.*

The Louisiana Software License Enforcement Act creates a perpetual bar against copying any computer program licensed pursuant to its provisions. The federal Copyright Act, on the other hand, grants protection against unauthorized copying for the life of the author plus fifty years. 17 U.S.C. § 302(a). The Louisiana act also places no restrictions on the programs which may be protected under its provisions. However, under Section 102 of the federal Copyright Act, only "original works of authorship" can be protected. The Louisiana Software Act allows any computer program, original or not, to be protected from copying.

Since the Louisiana Software Act has "touch[ed] upon the area" of the federal patent and copyright law, the provisions of the PROLOK licensing agreement are unenforceable to the extent they are contrary to the policies of the federal Copyright Act. *Fantastic Fakes, Inc. v. Pickwick International, Inc.*, 661 F.2d at 481-83.

Vault, 655 F. Supp. at 762-63 (emphasis added), *aff'd*, *Vault Corp. v. Quaid Software Ltd.*, 847 F.2d 255 (5th Cir. 1988).

173. *Vault*, 655 F. Supp. at 762-63.

174. *Id.*

175. *Id.*

and thus gives rights to the owner of the copyright that exceeds those granted under the copyright law.¹⁷⁶ Thus, the circuit courts are split on what constitutes an impermissible extension of copyright under a preemption analysis. Since the misuse analysis focuses more directly on public policy, it is more appropriate than preemption to address such extensions of copyright law.

In addition to the use of the preemption doctrine, some courts have followed the *Bateman* suggestion to find works "nonexpressive per 17 U.S.C. § 102(b)" when allowing copyright protection would unduly extend the reach of copyright law.¹⁷⁷ For example, the West Publishing Company has long attempted to prevent competitors from launching similar software products by claiming copyright protection on the "star pagination" used in its compilations of uncopyrightable judicial opinions. In two recent cases, the courts have found the West star pagination to be undeserving of copyright protection,¹⁷⁸ again focusing on the inappropriate actions of the alleged copyright owner.

Thus, in only a short period of time, owners of software copyrights have used various techniques to extend their rights. Courts have addressed these actions using a variety of copyright doctrine analyses, including fair use, copyright preemption and section 102(b) "non-expressiveness." The erection of such disparate barriers to prevent abuses of software copyrights demonstrates the existence of a significant problem, and furthermore, the use of a single uniform approach would provide greater consistency and predictability. Since copyright misuse focuses on the actions of copyright owners and relies on underlying public policy considerations, a uniform approach to future examples of misuse under the penumbra of the software copyright misuse doctrine is a solution to the problem.

176. *Vault*, 847 F.2d at 270.

177. Section 102(b) states that copyright protection does not extend to any idea, procedure, process, system, or method of operation. *See supra* note 25.

178. *Matthew Bender & Co. v. West Pub. Co.*, No. 94 Civ. 0589, 1997 WL 266972 (S.D.N.Y. May 19, 1997) (holding that West may not attempt to use copyright in its pagination to prevent its Hyperlaw competitor from entering the market); *United States v. Thomson Corp.*, 949 F. Supp. 907, 928 (D.D.C. 1996) (upholding the requirement that West license its electronic pagination service because it is unlikely that the pagination is copyrightable after *Feist*, and even if it is copyrightable, the enforcement of the right "might significantly impede access to the text of court decisions, discourage the publication of secondary law products and hamper competition in the print, CD-ROM, and online research services markets").

VI. APPLYING SOFTWARE COPYRIGHT MISUSE TO TRADITIONAL MISUSE CONTEXTS

Having argued that software copyright misuse is a necessary and useful doctrine, the question next arises as to the proper application of the doctrine. Although the proper scope of the doctrine will ultimately be decided through a series of cases that develop underlying principles, it is appropriate to consider possible areas of application. One starting point arises from the established case law in the patent misuse area. As described previously, the two paradigmatic patent misuse cases involve tying arrangements (where the patentee requires the purchase of unpatented goods or services along with a patented product or process), and non-compete clauses (that prevent a patent licensee from producing or selling competing goods).¹⁷⁹

A. Software Copyright Misuse And Tying Arrangements

Due to the complicated nature of software tying arrangements, a general resolution of the issues involved is beyond the scope of this paper. Although it was fairly easy to find an illegal tying arrangement between unpatented salt tablets and the patented salt-depositing machinery in *Morton Salt* (because it is easy to treat the salt tablets and the salt-depositing machinery as distinct products), it is more difficult to determine whether a computer system sold with the hardware and operating system bundled together is such a tying arrangement. In many past business situations, one company produced both the computer hardware and the only operating system that functioned on the hardware, thus requiring both parts to achieve a minimally useful machine. In the software industry today, it is common practice to bundle productivity applications together into "office" suites. However, this is bundling only because we conceptually conceive of the different parts of the suite as independent applications—as we increasingly move toward a computing world where data is king, the notion of distinct applications may disappear.¹⁸⁰

179. See *supra* Part III.A.

180. In a data-centric model of computing, being increasingly embraced as one aspect of object-oriented programming, the data is the focal point and various operations are performed on the data to manipulate it as needed. For example, if office suites had originally been created around this notion, it is likely that a single document type would have been created by the suite. If a user desired to add words to the document, then word-processing functions would be used, and if a user desired to perform calculations or add graphics, then other corresponding functions would be used. Even if these different types of

These "tying" situations may be acceptable (or not tying at all), because it is easy to treat these tied products as a single product. At a minimum, a strong functional relationship between the tied products provides a necessity-based justification for the tying. However, in other types of software tying situations, the software copyright owner attempts to forbid incidental copying of software to prevent competition in goods or services that are unrelated to the software. These situations will be addressed below in relation to restrictions on competition.

B. Software Copyright Misuse And Restrictions On Competition

1. USE OF NON-COMPETITION AGREEMENTS IN SOFTWARE LICENSES

Not surprisingly, the first software copyright misuse case arose due to an attempted restraint on competition. As described above, the plaintiff in the *Lasercomb* case had included a provision in its standard form contract that not only limited copying of the licensed software, but also prevented licensees from independently developing a competing software program for 100 years.¹⁸¹ The Fourth Circuit held that this restriction constituted copyright misuse. Other courts have found similarly,¹⁸² and little argument has been advanced that an alternative policy would be desirable.

2. ENJOINING INCIDENTAL RAM COPIES TO PREVENT DEVELOPMENT OF PRODUCTS

Since the 1993 decision in *MAI* (which held that temporary copies of software made in RAM while the computer is turned on and running are sufficiently fixed to be infringing),¹⁸³ companies have tried to use copyright law to control various third party activities involving temporary copies, including the development of competing products and competing services. Since copyright law is designed to protect only the creative expression embodied in the source code, the functional effects of the object code should not be included within that protection unless they

functions were in fact embodied in different application programs (which wouldn't be required), this would be transparent to the user.

181. See *supra* Part III.B.

182. See *Tamburo v. Calvin*, No. 94 C 5206, 1995 WL 121539 (N.D. Ill. Mar. 17, 1995) (finding that a software license agreement which required licensees to forgo developing "any product, whether or not it is computer-based, that competes with [the TBS software]" constituted copyright misuse).

183. See *supra* note 123 and *infra* Part VI.B.3.

are integrally tied to the creative expression. Arguably, enjoying the functional results of an executing RAM copy of software is sufficiently related to the copy itself that the creation of the RAM copy is copyright infringement. However, when the creation of the RAM copy is incidental to the activity being controlled, a strong argument exists that it would be misuse to use the RAM copy to restrict the activity. For most computers, merely pressing the power switch to turn it on causes the operating system software to be loaded into RAM, thus creating an infringing copy.¹⁸⁴ Furthermore, in order to use a computer program it must be loaded into RAM,¹⁸⁵ whether the stored copy of the program normally resides on the computer's hard drive, on a floppy disk, on a CD-ROM, or on another machine on a computer network. Even if these RAM copies are infringing under a *MAI*-type rationale, the question remains whether the activities of the copyright owner constitute copyright misuse.

In the 1996 case of *DSC Communications Corp. v. DGI Technologies, Inc.*,¹⁸⁶ the Fifth Circuit found one such example likely to constitute

184. Arguably, even authorized users of most software products are actually infringers, because their shrink-wrap licenses rarely allow RAM copies to be made. However, companies have little incentive to charge legitimate customers with copyright infringement, and commentators have pointed out that a strong argument can be made for an implied license in these situations. See *Nimmer, supra* note 53, at 20-21 (noting that "any sane observer of the copyright scene would say that [loading a legitimate copy of software into computer RAM] has been implicitly licensed and is therefore noninfringing" despite the literal act of reproduction); *ProCD, supra* note 125, at 648-50 (finding that 17 U.S.C. § 117 allows copies of software created as an essential step in the utilization of the computer program in conjunction with a machine, and this includes both copies made in RAM and copies on the computer hard disk when made by a legitimate user).

185. There is a form of client-server computing in which the program is loaded into the RAM of a host computer and executed there, while the results of the execution display on the user's computer as if the user's computer were executing the program (this idea is used by some versions of the network computer or NetPC concept that has recently been popularized in the press, although other versions download an application from a host computer but run it locally). Even in this situation, a RAM copy is created somewhere, and the mere act of displaying results on the user's computer may create an infringing copy in a frame buffer or video RAM on the user's computer.

While outside the scope of this paper, other issues arise with respect to Web browsers. Any time that a web page is accessed, a copy of the page is made in the RAM on the local computer. Increasingly, copies of images, sound recordings, and even executable applets are included in this process. It is only a matter of time before someone attempts to treat a browser-based copy as an infringing copy under copyright law to restrict some type of activity.

186. 81 F.3d 597 (5th Cir. 1996).

copyright misuse. The plaintiff, DSC, manufactured telephone switching systems which were a specialized form of computer, including an operating system, at least one central computer processor and removable microprocessor cards.¹⁸⁷ When the cards are inserted into the system, they must "boot up", and in doing so they download a copy of the operating system into their RAM.¹⁸⁸ The defendant, DGI, was developing compatible microprocessor cards to run in DSC systems. In order to test its product, DGI needed to download the operating system into the card in the same manner that would occur during normal operation of the system.¹⁸⁹ In the context of a preliminary injunction requested by DSC to prevent DGI from making these copies, the Fifth Circuit found that DSC was unlikely to succeed on the merits because it was likely that their activities constituted copyright misuse.¹⁹⁰

The principles advocated in this paper support the Fifth Circuit analysis. DSC attempted to extend the rights granted to one work to prevent the creation of other independent works. Moreover, the removable add-in cards were unrelated to the creative aspects of the operating system software. A contrary holding would thwart copyright law's underlying goal of fostering creation and innovation. The development of the add-in card by DGI required substantial creativity and innovation, and its use of the operating system for compatibility purposes was incidental. Granting a monopoly over products such as the add-in cards was not the type of incentive envisioned by the framers of

187. *Id.* at 598-99.

188. *Id.* at 599.

189. *Id.*

190. DSC seems to be attempting to use its copyright to obtain a patent-like monopoly over unpatented microprocessor cards. ... In order to ensure that its card is compatible, a competitor such as DGI must test the card on a DSC phone switch. ... If DSC is allowed to prevent such copying, then it can prevent anyone from developing a competing microprocessor card, even though it has not patented the card. The defense of copyright misuse "forbids the use of the copyright to secure an exclusive right or limited monopoly not granted by the Copyright Office," including a limited monopoly over microprocessor cards. ... Of course, we do not hold that DGI will successfully avail itself of the copyright misuse defense. After a trial on the merits, the district court may well decide that DSC did not commit copyright misuse, or that DGI cannot avail itself of the defense because it has "unclean hands."

Id. at 601.

the copyright laws for rewarding the creativity expressed in creating a software literary work.

3. USE OF INCIDENTAL RAM COPIES TO PREVENT DEVELOPMENT OF SERVICES

Although the Fifth Circuit held that extending copyright in functional RAM copies to prevent the creation of *products* unrelated to the copyright was misuse, several courts have found otherwise when *services* unrelated to the copyright were obstructed. However, this distinction between products and services is not warranted,¹⁹¹ particularly as our economy becomes increasingly information-based and service-based rather than product-based.

The *MAI* case illustrates a blatant example of extending copyright in temporary RAM copies to unrelated services. In *MAI*, the Ninth Circuit found that the defendant had committed copyright infringement by merely turning on a MAI-produced computer at the direction of a MAI customer who had purchased the computer.¹⁹² The plaintiff, MAI, manufactured and sold computers that included operating system software and other diagnostic software developed by MAI.¹⁹³ The defendant, Peak, provided servicing of computers, including routine maintenance and emergency repairs, that included turning on the computer and viewing the system error log (which is part of the operating system).¹⁹⁴ Turning on the computer was found to be sufficient to constitute copyright infringement, since a copy of the MAI operating

191. See Nimmer, *supra* note 53, at n.108 (arguing that the plaintiff's attempt in *MAI* to prevent defendant from committing acts of software reproduction that were essential for the proper competitive purpose of performing hardware diagnostics is analogous to the plaintiff's attempt in *DSC* to prevent the defendant from committing acts of software reproduction that were essential for the proper competitive purpose of developing a competing microprocessor card); *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451 (1992) (finding that a genuine issue of material fact existed on whether micrographic equipment manufacturer unlawfully monopolized and attempted to monopolize sale of service and parts for machines, when manufacturer's policies limited availability to independent service organizations (ISOs) of replacement parts for its equipment, and made it more difficult for ISOs to compete with the manufacturer in servicing such equipment).

192. 991 F.2d 511 (9th Cir. 1993).

193. *Id.* at 513.

194. *Id.* at 518.

system was made in RAM as part of the boot process of the computer, even if the diagnostic software was not used by Peak.¹⁹⁵

A consideration of slight variations in the fact pattern illustrates the absurdity of this holding. Under the scenario posited by the court, if the Peak repairman had arrived at the customer's site and the computer was fortuitously on, no copyright infringement would have occurred.¹⁹⁶ Alternately, infringement would have been avoided if the repairman had stood over the shoulder of an authorized user while the user pressed the on button. A legal analysis that determines whether a computer service can be provided or whether copyright infringement has occurred based on who presses the computer "on" button seems ridiculous. In a paraphrase of the *DSC* court, *MAI* is attempting to use its copyright to obtain a patent-like monopoly over unpatented maintenance services, and the defense of copyright misuse forbids the use of the copyright to secure an exclusive right or limited monopoly not granted by the Copyright Office.

The absurdity of the *MAI* result exists even if the copyrighted software was more closely related to the service of performing maintenance on a computer. If the defendant had made a RAM copy of diagnostic software rather than operating system software, then at least there would be some logical relationship between the copy being made and the service being performed. However, while this modification to the *MAI* scenario would at least provide a tenuous relationship between the activities of producing the software and providing the service, the result is no less absurd. The on-site repairman will now have to stand over the

195. Peak concedes that in maintaining its customer's computers, it uses *MAI* operating software "to the extent that the repair and maintenance process necessarily involves turning on the computer to make sure it is functional and thereby running the operating system." It is also uncontroverted that when the computer is turned on the operating system is loaded into the computer's RAM. As part of diagnosing a computer problem at the customer site, the Peak technician runs the computer's operating system software, allowing the technician to view the systems error log, which is part of the operating system, thereby enabling the technician to diagnose the problem. [FN4]

FN4. *MAI* also alleges that Peak runs its diagnostic software in servicing *MAI* computers. Since Peak's running of the operating software constitutes copyright violation, it is not necessary for us to directly reach the issue of whether Peak also runs *MAI*'s diagnostic software.

Id.

196. Once the temporary RAM copy was created, the use of the copy would not seem to implicate any of the exclusive rights accorded the copyright owner.

shoulder of an authorized user until the user starts up the diagnostic software (rather than the operating system software), thus creating an authorized RAM copy which the repairman can use.

The problem with the *MAI* ruling is that it discriminates against different classes of users. A customer should be authorized to use its software in a normal fashion and a service provider should be entitled to act as an agent for the customer and take the same actions.¹⁹⁷ Instead in *MAI*, an inane distinction occurs based on the status of the repairman as an employee (if the company is big enough to afford a full-time system administrator) or an independent contractor. If a software producer has provided diagnostic software to a customer for the customer's use, later attempts to enjoin incidental copying in order to create a monopoly in servicing the hardware is an undeserved extension of the copyright.

Despite the obvious attempt on the part of *MAI* to extend its exclusive rights to an unrelated service, an important distinction can be made between computer servicing cases¹⁹⁸ and the *DSC* case. The competition being restrained in the computer servicing cases involves the provision of a service rather than the production of a good. Arguably, however, the distinction between goods and services should be irrelevant

197. One commentator argues that not only should such a software copy be considered a necessary copy under section 117 (one created when employing someone to run diagnostic software that is too complicated to be run by oneself), but that "a party who offers both hardware and software should be construed to have conveyed an implicit license to engage in diagnostics ... in order to make it function appropriately" and "[r]equiring customers to forego by contract the right that Congress accorded them by statute ... constitutes misuse." *Id.* at 23-25.

198. Several other courts have considered similar situations, and those who have considered a copyright misuse defense have rejected it. See *Triad Sys. Corp. v. Southeastern Express Co.*, 64 F.3d 1330 (9th Cir. 1995); *Service & Training, Inc. v. Data Gen. Corp.*, 963 F.2d 680 (4th Cir. 1992); *Advanced Computer Services of Mich., Inc. v. MAI Sys. Corp.*, 845 F. Supp. 356 (E.D. Va. 1994). But see *Data General Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1169-70 (1st Cir. 1994) ("Although DG correctly notes that the misuse in *Lasercomb* (conditioning a copyright license on a non-competition agreement) is not identical to the misuse alleged in this case (tying access to ADEX to the purchase of DG service and refusing to license ADEX to [third-party maintenance companies]), the reasoning of *Lasercomb* does not turn on the particular type of anti-competitive behavior alleged"). However, since Grumman had not argued a non-antitrust copyright misuse claim, the court declined to find one). In addition, at least one commentator has criticized these rulings. See Nimmer, *supra* note 53, at n.98 ("Yet none [of the courts that have considered copyright misuse in connection with a diagnostic computer service case] articulates a satisfactory formulation of what constitutes misuse in order to find the conduct outside its scope").

in today's society. As our society becomes increasingly specialized and the portion of our economy devoted to providing services grows, it is difficult to argue that an innovative service is less valuable from a public policy perspective than an innovative good. For example, the innovative service from Federal Express to provide overnight delivery of packages at economical prices has revolutionized how business is done. In addition, there is no principled reason why the creation of services cannot be covered under the constitutional authorization to promote "writings."¹⁹⁹

Thus, attempts to use copyright protection to stifle competition should be met with judicial disapproval, regardless of whether the competition comes in the form of goods or services. If the underlying copy of the software from which the RAM copy was created is itself a legitimate copy, then the incidental copy created in RAM should not be treated as infringement for the purposes of restricting competition. Attempts to alter this result through license agreements with customers should be treated as an undue restraint that constitutes misuse of the rights granted by copyright law.

VII. APPLYING SOFTWARE COPYRIGHT MISUSE TO CURRENT SOFTWARE PRACTICES

While considering the paradigmatic patent misuse cases is an appropriate starting point in defining the necessary scope of software copyright misuse, it is also necessary to consider those aspects of software which make it unique as a copyrighted work and to impose some limits where the unique nature of software grants excessive power to software copyright owners. The intent of this section is not to provide an exhaustive list or an in-depth analysis, but rather to suggest areas that deserve special judicial attention.

A. The Licensing Rather Than Sale Of Software

The widespread practice of "licensing" software to users rather than selling it is troubling in the context of mass-market software products.²⁰⁰ By definition, such "licensing" occurs because software

199. If "writings" can include three-dimensional sculptures, sound recordings, mask works, object code that is unreadable to humans, and buildings, it is difficult to see why it cannot include innovative computer maintenance services. Computer maintenance services are a particularly apropos example because of the creativity needed to diagnose and repair a complex system such as a computer.

200. While there is nothing inherently unique about software that allows it to be licensed to the exclusion of other off-the-shelf consumer products, this licensing phenomenon has not yet widely occurred with other products. Thus, while it is possible

copyright owners believe that it grants them greater rights than they receive under copyright law. If this were not true, companies would not invest the time and energy to develop and propagate the licenses. However, copyright misuse restrictions on this practice would collide head-on with one of the basic premises of our capitalistic economy—that contract law provides the ability to achieve the most efficient ordering of assets and rights through private agreements in the free marketplace.²⁰¹

Although it is unclear whether mass-market²⁰² form licenses are generally enforceable,²⁰³ software companies are undoubtedly attempting

that you could agree when you “license” a book in a bookstore that you could read it only once, not allow anyone else to read it and not transfer it to anyone else, there is a strong argument that such a “license” would not be allowed under copyright’s “first-sale” doctrine (particularly if the terms of the “license” were not available to you when you made your purchase).

201. Of course, a distinction can be drawn between mass-market form licenses and those negotiated software contracts between two informed parties with relatively equal bargaining power, but these types of negotiated contracts are becoming increasingly rare in the software arena. Moreover, it is possible that some rights are too important to allow a contractual waiver. For example, a standard clause in a form contract that acknowledged and accepted the unconscionability of the contract is unlikely to be enforced.

202. Mass-market form licenses have been referred to in the past as “shrink-wrap” licenses, but this name is quickly losing its meaning in an on-line world where software is distributed electronically (some commentators have used the term “click-on” licenses more recently). The electronic means of contracting does provide some advantages, however. Not only can assent to contract terms be demonstrated more readily (even if they are unconscionable), the lower transaction costs in both locating customers and in providing a variety of products should presumably allow software manufacturers to price-discriminate on the basis of the rights received. While this author is not aware of any such products, it would be possible to pay one price for software that includes the right to resell the software to another after the purchaser is done with it, another price for software that includes the right to reverse engineer it, and still another price for software that allows use only by you on a single computer. To the extent that a licensee has some modicum of choice in the rights received, the inherent unconscionability of mass-market licenses in a world where as a practical matter there are often not substitutes available for the product is lessened.

203. Until the recent decision in the *ProCD* case by the Seventh Circuit, *supra* notes 125 and 168, most legal commentators believed that shrink-wrap licenses were unenforceable, particularly if the license could not be read before the sale was completed. *See supra* notes 169 and 172. Now, at least in the Seventh Circuit, “[c]ompetition among vendors” is the only protection for “consumers ... in a market economy.” One of the underlying principles of the proposed Article 2B to the Uniform Commercial Code is that mass-market licenses should be broadly enforceable. U.C.C. § 2B-308 (Proposed Draft 1996) (“(a) Except as otherwise provided ..., a party adopts the terms of a mass market license if, before or

to alter the careful balance of rights granted between copyright owners and the public. In particular, by characterizing purchasers of off-the-shelf (or off-the-net) software as licensees rather than owners, the copyright owners are explicitly attempting to alter the rights granted to "owners" of software products under the "first-sale" provisions of section 109²⁰⁴ and under the computer-program specific rights granted to users in section 117.²⁰⁵ Allowing this practice would thwart the careful balance of rights struck by Congress.

B. License Restrictions On Reverse Engineering

While the licensing of software can generally lead to abuses of power and the alteration of the basic rights granted under the copyright law, mass-market contractual attempts to prevent reverse engineering are even more bothersome. As discussed earlier, courts have generally allowed reverse engineering in the absence of contractual restrictions.²⁰⁶ Therefore, the question becomes whether this balance of rights can be altered contractually.

Although the courts have not yet decided this issue, they have discussed the related question of the patent-like protection that copyright law can provide to ideas and trade secrets when software is distributed in object code format.²⁰⁷ This question involves competing principles. On one hand, a software copyright owner should not be able to receive the benefits of copyright law without having to disclose the underlying ideas and expressions in the source code. On the other hand, trade secrets have commercial value and businesses have a legitimate desire to protect them.

In *Kewanee*, the Supreme Court held that trade secret law was not preempted by patent law²⁰⁸ and emphasized the important role that reverse engineering played for trade secrets embodied in products.²⁰⁹ The court in *Bonito Boats* recently returned to this theme:

within a reasonable time after beginning to use the information pursuant to an agreement, the party signs or otherwise by its behavior manifests assent to a mass market license.").

204. See *supra* note 31.

205. See *supra* note 30.

206. See *supra* Part V.B.

207. See *supra* Part IV.B.3.

208. See *supra* Part II.C.

209. While trade secret law does not forbid the discovery of the trade secret by fair and honest means, e.g., independent creation or reverse engineering, patent law operates 'against the world,' forbidding any use of the invention for whatever purpose for a significant length of time Where patent law acts as a barrier, trade secret law functions relatively

[I]n essence, the Florida law prohibits the entire public from engaging in a form of reverse engineering of a product in the public domain. This is clearly one of the rights vested in the federal patent holder, but has never been a part of state protection under the law of unfair competition or trade secrets The protections of state trade secret law are most effective at the developmental stage, before a product has been marketed and the threat of reverse engineering becomes real. During this period, patentability will often be an uncertain prospect, and to a certain extent, the protection offered by trade secret law may 'dovetail' with the incentives created by the federal patent monopoly.²¹⁰

Despite the doubts of the Court in *Kewanee* that owners of patentable inventions will rely on trade secret law instead of patent law, that is exactly what happened in the early days of software patents when it was unclear if a patentee had to disclose actual source code in a patent application in order to enable the invention and describe its best mode. In this uncertain situation, many software owners recognized that a combination of trade secret law and copyright law provided stronger protection than patent law. The combination of trade secret law and copyright law allowed the software owners to use their software without fear of reverse engineering. Presumably, the widespread use of copyright law to enhance the power of trade secret law could serve to eviscerate the use of software patents, and if so, should be preempted by the patent laws.

Like the protection provided by copyright law, contracts may be used to protect ideas and trade secrets embodied in software. Restrictions in mass-market licenses can routinely prevent reverse engineering by the general public, and thus can greatly enhance the power of trade secret law. If so, the balance between trade secrets and patents will have shifted sufficiently that these clauses will be an "obstacle to the accomplishment and execution of the full purposes and objectives of Congress"²¹¹ and should be struck down as misuse.²¹²

as a sieve. The possibility that an inventor who believes his invention meets the standards of patentability will sit back, rely on trade secret law, and after one year of use forfeit any right to patent protection, § 35 U.S.C. § 102(b), is remote indeed. ... We conclude that the extension of trade secret protection to clearly patentable inventions does not conflict with the patent policy of disclosure.

Kewanee, 416 U.S. at 490-92.

210. *Bonito Boats*, 489 U.S. at 160-61.

211. *Kewanee*, *supra* note 50, at 479.

212. See also Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570 (1995).

As a final consideration, in an era of increasing international harmonization of intellectual property law, it is important to note that the European Union has rejected the use of contract law to abrogate various legitimate rights of software users.²¹³ Software copyright owners cannot contractually restrict the right to make back-up copies,²¹⁴ the right to attempt to determine the ideas underlying the program,²¹⁵ or the right to reverse engineer software in order to create competing or compatible software.²¹⁶ It is instructive that the Europeans, who normally grant greater rights to authors than does the United States, do not allow contractual restrictions on reverse engineering when it is necessary for interoperability.

VIII. CONCLUSION

The United States' federal patent and copyright laws are based on a common utilitarian public policy of benefiting society through the encouragement of the creation, discovery and dissemination of novel ideas and creative expression. The grant of property rights in a limited monopoly to creators achieves these goals, and the underlying public policy necessitates the careful balancing of the rights granted to the creator with those retained by the general public. Enforcement of the intellectual property misuse doctrine prevents reordering of these rights, whether through state law or by individual owners of intellectual property.

While the misuse doctrine can be used in a general manner as described above, it can also be used to redefine the rights granted to creators when a class of protected works provides excessive power to the owners of such works. The misuse doctrine is the appropriate vehicle to

213. Council Directive 91/250/EEC, 1991 O.J. (L122) 1-2.

214. "The making of a back-up copy by a person having a right to use the computer program may not be prevented by contract insofar as it is necessary for that use." *Id.* at art. 5, cl. 2.

215. *Id.* at art. 5, cl. 3.

216. Reverse engineering is allowed if it is indispensable to achieve interoperability with some program (even if not the program reverse engineered), provided that a) the acts are performed by someone having a legitimate copy of the software, b) the information necessary to achieve interoperability has not previously been readily available, and c) the reverse engineering is confined to the parts of the program which are necessary to achieve interoperability.

Id. at art. 6, cl. 1 and art. 9, cl. 1.

be used in such a situation because it focuses on upholding the public policies underlying the intellectual property laws. However, a judicial redefinition of rights is justified only if it can avoid creating undue uncertainty on the part of intellectual property right owners as to the rights that they possess.

Computer software is a class of works that is unique among copyrighted works. Because copyright law provides excessive power to software copyright owners, the copyright misuse doctrine is needed to retain the balance of rights necessary to accomplishing the public policy underlying the intellectual property laws. The excessive power received by software copyright owners arises as a combination of the functional aspects of computer software, the ability to protect underlying ideas and expression when distributing software in object code format, the ability to protect trade secrets in a matter akin to patent law when distributing software in object code format, and unique aspects of the software industry which provide network externalities to some producers of software. For related reasons, a software copyright misuse doctrine separate from antitrust law is needed.

Due to the recent emergence of the copyright misuse doctrine, courts have applied other doctrines to address situations in which software copyright owners have attempted to unduly extend their deserved monopolies. Whether through fair use, intellectual property preemption, non-copyrightability or findings of misuse, the abuses by software copyright owners should be equitably limited. While the courts can generally arrive at the fair result through other doctrines, application of these doctrines creates suspect legal reasoning that does not always extend well to novel problems that the courts must face. Thus, a uniform software copyright misuse doctrine will provide a more appropriate vehicle for defining the scope of rights accorded to software copyright owners.

In developing a law of software copyright misuse, courts should be especially wary of explicit attempts to alter the statutorily-defined balance of rights granted, and should disallow attempts to restrain competition. In particular, the use of non-competition agreements and copyright restrictions on incidental RAM copies to prevent the development of unrelated goods or services should be unenforceable due to their inherent misuse. Similarly, the use of contracts to significantly limit the rights retained by purchasers of mass-market software warrants judicial limitations. While software is an incredibly useful product that deserves some protection, the rights granted must be limited so that the public retains its fair allocation.