I. INTRODUCTION

The Copyright Act grants copyright owners the exclusive right to copy, sell, import, distribute, and prepare derivative works of their copyrighted material. Owners of copyrighted software, however, often want more: not just the right to keep competitors from selling infringing software, but to prohibit others from developing non-infringing, interoperable software that works in conjunction with their own copyrighted works. Fortunately for the health of the competitive marketplace, courts have frowned upon attempts by copyright owners to extend their exclusive rights beyond those granted by the Copyright Act. As software manufacturers have, in the past two decades, increasingly sought to gain protection under the copyright laws, courts have invoked the doctrine of fair use, or refused to afford copyright protection to the functional aspects of software, as means of confining the rights under copyright to those afforded by the statute and mandated by the policies motivating intellectual property law.

In the past decade, courts (and defendants) have added an increasingly deadly arrow to their quiver in the battle against copyright owners who attempt to exceed the rights under the statutory monopoly grant: copyright misuse. Derived from the more established doctrine of patent misuse, this affirmative defense to copyright infringement renders unenforceable a

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2. See id. § 107; Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510, 1521-22 (9th Cir. 1993); Atari Games Corp. v. Nintendo of Am., Inc., 975 F.2d 832, 842-43 (Fed. Cir. 1992).
3. See 17 U.S.C. § 102(b) (“In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.”); Lotus Dev. Corp. v. Borland Int’l, Inc., 49 F.3d 807, 815 (1st Cir. 1995), aff’d by an equally divided Court, 516 U.S. 233 (1996); Apple Computer, Inc. v. Microsoft Corp., 35 F.3d 1435, 1444 (9th Cir. 1994).
copyright held by an author who improperly seeks to leverage a lawful monopoly granted by the Copyright Act into an unlawful monopoly in a separate market for non-infringing material.\textsuperscript{5} Adding to the growing body of caselaw validating copyright misuse as a viable defense, the Fifth Circuit in \textit{Alcatel USA, Inc. v. DGI Technologies, Inc.}\textsuperscript{6} refused to allow a manufacturer of telephone switching equipment employing copyrighted software to exclude others, through restrictive license provisions, from the market for compatible, though non-infringing, expansion cards for its switches. In doing so, the \textit{Alcatel} court performed a valuable function, keeping copyright within its proper bounds and preventing a copyright in one product market from granting owners unwarranted monopolies in others. Copyright misuse—along with fair use, limits on copyrightability, and enforcement of the traditional antitrust laws—has become a key tool in keeping copyright owners from excluding others from the market for interoperable products.

\section*{II. THE CASE}

\textit{Alcatel USA, Inc.}, formerly DSC Communications Corporation ("DSC"),\textsuperscript{7} designs, manufactures, and sells telephone switching equipment.\textsuperscript{8} DSC's switches, used by major long distance providers such as MCI and Sprint, route long distance calls to their proper destinations. DSC also develops software necessary to control its switches.\textsuperscript{9} It does not sell the software, but instead licenses it to its customers pursuant to a license agreement that provides: (1) the software remains the property of DSC; (2) the customer may use the software only to operate its switches (and not for other purposes); (3) the customer may not copy the software or make it available to third parties; and (4) the customer may use the software only in conjunction with DSC switches (and not in conjunction with other manufacturers' switches).\textsuperscript{10}

When customers require additional call-handling capacity for their switches, they purchase expansion cards containing "firmware," which is

\textsuperscript{5} See, e.g., Lasercomb America, Inc. v. Reynolds, 911 F.2d 970, 979 (4th Cir. 1990) ("The misuse arises from Lasercomb's attempt to use its copyright . . . to control competition in an area outside the copyright.").

\textsuperscript{6} 166 F.3d 772 (5th Cir. 1999).

\textsuperscript{7} Following the practice of the courts that have adjudicated this case, I will refer to "DSC" rather than "Alcatel" throughout.

\textsuperscript{8} See \textit{Alcatel USA, Inc. v. DGI Techs, Inc.}, 166 F.3d 772, 777 (5th Cir. 1999).

\textsuperscript{9} \textit{See id.}

\textsuperscript{10} \textit{See id.}
software embedded in memory chips. Until 1989, DSC itself was the sole provider of such expansion cards. In that year, however, the defendant in this case, DGI Technologies, Inc. ("DGI"), sought to break DSC's monopoly in the expansion card market by designing, manufacturing, and selling its own expansion cards. DGI contended that, in order to develop its DSC-switch-compatible cards, it engaged in permissible reverse engineering of DSC's unpatented technologies. DGI further contended that DSC engaged in a series of practices intended to bar the potential new competitor's entry into the expansion card market. Such practices allegedly included the insertion by DSC of software "patches" designed to render the DGI cards inoperable and DSC's sending of a letter to its switch customers threatening to void its warranties if they used DGI cards instead of DSC cards. DSC disputed these claims, countering that DGI did not engage in legitimate reverse engineering, but instead improperly obtained copyrighted schematics and operating manuals provided to customers only on the condition that their contents not be disclosed to third parties.

In 1994, DSC filed suit against DGI in the United States District Court for the Northern District of Texas, stating claims for copyright infringement and state-law misappropriation of trade secrets and unfair competition by misappropriation. DGI counterclaimed, charging DSC with: (1) violating section 2 of the Sherman Act by monopolizing or attempting to monopolize the market for DSC-switch-compatible expansion cards; (2) tortiously interfering with DGI's contractual relations; and (3) engaging in unfair competition. The district court issued a preliminary injunction barring DGI from removing DSC's operating system software from customer facilities, on an initial appeal, the Fifth Circuit subsequently affirmed, while finding a likelihood that DGI would prevail on its copyright misuse defense.

11. See id. at 777-78.
12. See id. at 778.
13. See id.
14. See id.
15. See id.
16. See id.
17. See id. at 779.
18. See id.
19. See id.
A. The District Court Proceedings

After issuing its preliminary injunction, the district court held a three-week jury trial that produced a mixed verdict. The jury did find that DGI infringed DSC’s copyrights;\(^\text{21}\) engaged in unfair competition by misappropriating DSC’s time, labor, skill, and money;\(^\text{22}\) and misappropriated DSC’s trade secrets.\(^\text{23}\) But it also found that DSC violated the Sherman Act, interfered with DGI’s contractual relations, and itself engaged in unfair competition. Finally, it determined that both parties had “unclean hands.”\(^\text{24}\) Nine months after the conclusion of the trial, in November 1997, the court entered a final judgment and permanent injunction. The court awarded DSC $4.3 million in actual damages and $7 million in punitive damages, and also awarded DGI $2 million in actual damages and $9 million in punitive damages—resulting in a net offset judgment of $300,000 for DSC. The court dismissed DGI’s antitrust claim, holding that it had failed to prove the relevant market pursuant to the standards set forth by the Supreme Court in *Eastman Kodak Co. v. Image Technical Services, Inc.*\(^\text{25}\) and that its damages model was “hopelessly flawed.”\(^\text{26}\) And, finally, the court permanently enjoined DGI from developing any new cards with the assistance of DSC’s software and from selling any card designed to use DSC software;\(^\text{27}\) it also ordered DGI to turn over all of its “DMP-2800” expansion cards to DSC for destruction.\(^\text{28}\) Both parties appealed, and hence this decision of the Fifth Circuit, issued January 29, 1999.

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21. The actual act of infringement occurred when DGI, as part of the testing process for its cards, necessarily downloaded DSC’s operating system software into its expansion cards. It did so with the help of NTS Communication, a valid licensee of DSC. *See Alcatel*, 166 F.3d at 779. The act of downloading a copy of software into RAM has been held to constitute copyright infringement. See MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993), *cert. dismissed*, 510 U.S. 1033 (1994); Central Point Software, Inc. v. Nugent, 903 F. Supp. 1057, 1059-60 (E.D. Tex. 1995) (“Plaintiffs may establish copying if they can demonstrate that the software has been reproduced in a computer’s memory without permission.”).

22. *See Alcatel*, 166 F.3d at 779.

23. *See id.* at 779-80.

24. DGI’s hands were apparently sullied by its actions in obtaining, through NTS, DSC’s proprietary materials, including owners manuals. *See Alcatel*, 166 F.3d at 794. DSC had allegedly earned its own unclean hands by installing software patches designed to disable the DGI expansion cards, and by threatening to void switch-owners’ warranties and maintenance agreements if they used non-DSC expansion cards. *See id.* at 796.


26. *Alcatel*, 166 F.3d at 780.

27. *See id.*

28. *See id.*
B. The Fifth Circuit's Decision

The Fifth Circuit began its analysis of this "complex intellectual property action" by turning to the antitrust claim and agreeing with the district court that DGI had failed as a matter of law to define the relevant market. The court next considered DSC's trade secret cause of action and concluded that "there was ample evidence to support the jury's determination that DGI obtained DSC's trade secrets through improper means." Citing its own caselaw and the Restatement of Torts, the court held that DGI's conduct in gaining access to "purloined software" fell below the generally accepted standards of commercial morality and reason conduct.

The court next considered whether DSC's state-law misappropriation claim against DGI was preempted by federal copyright law, which mandates preemption when: (1) the work sought to be protected by state law falls within the subject matter of copyright as defined in section 102 of the Copyright Act; and (2) the right sought to be protected by the state law is equivalent to any of the exclusive rights specified by section 106 of the Act. DSC had argued against preemption based on the first prong of the preemption test, characterizing its misappropriation claim as concerned with DGI's taking of facts contained within its copyrighted works—but not of the copyrighted material itself. The court, however, quickly rejected this reasoning, explaining that the district court had instructed the jury on this claim, without objection from DSC, as to the copyrighted materials as a whole, not to the specific facts contained within. The work at issue, the court thus determined, falls under the subject matter of copyright. After undertaking a lengthy analysis of the purposes of both copyright and Texas misappropriation law, the court also held that the rights protected by both are equivalent, and thus that the second prong of the

29. Id. at 777.
30. See id. at 780-84.
31. Id. at 785. The "improper means" were employed by DGI to obtain access to the DSC operating system through NTS, which, according to the terms of its license from DSC, was not permitted to furnish the DSC software to DGI or any other third party. Explained the court, "DGI duped NTS into breaching its own contract with DSC." Id.
32. Id.; E.I. DuPont deNemours & Co. v. Christopher, 431 F.2d 1012, 1016 (5th Cir. 1970); RESTATEMENT OF TORTS § 757, cmt. f (1939).
35. See Alcatel, 166 F.3d at 786.
preemption test is satisfied. The court therefore held that the district court should have dismissed DSC's state-law misappropriation claim under section 301 and ordered its damages reduced by the amount awarded under that theory.

After holding that the district court had sufficient evidence of DGI's acts of copyright infringement on which to base its injunction, it turned to DGI's argument that, even assuming that it had infringed DSC's copyrights, the "copyright misuse" defense precluded injunctive relief under such facts. The copyright misuse defense does not invalidate an otherwise valid copyright, but "'bars a culpable plaintiff from prevailing on an action for the infringement of the misused copyright'" where the copyright is used "'to secure an exclusive right or limited monopoly not granted by the [Copyright] Office and which it is contrary to public policy to grant.'" Pressing its case for a misuse defense, DGI argued that "as DSC's software is licensed to customers to be used only in conjunction with DSC-manufactured hardware, DSC indirectly seeks to obtain patent-like protection of its hardware—its microprocessor card—through the enforcement of its software copyright." The court agreed, explaining that there was no way for DGI to develop its cards without using DSC's copyrighted software, thereby giving DSC a "limited monopoly over its uncopyrighted microprocessor cards." It therefore held that DSC had misused its copyright and thus could not recover for any alleged infringement by DGI.

Finally, in the last major holding of the case, the Fifth Circuit rejected DSC's claim that the copyright misuse defense should be unavailable to DGI given the jury's finding that DGI had unclean hands. The relevant issue, the court explained, is not whether DGI had unclean hands, but whether DSC—which was the party seeking equitable relief in the form of an injunction—had sullied its own. DSC had indeed, the court stated, by misusing its copyright. Despite acknowledging that a "smattering" of other courts had held the copyright misuse defense unavailable to defendants

36. See id. at 789.
37. See id.
38. Id. at 792 (quoting Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 972 (4th Cir. 1990)).
39. Id. at 792 (quoting Lasercomb, 911 F.2d at 976).
40. Alcatel, 166 F.3d at 793.
41. Id. at 794.
42. See id. at 793-95.
with unclean hands, the Fifth Circuit announced, "[W]e find these decisions unpersuasive." 43

III. DISCUSSION

A. Copyright Misuse

Copyright misuse is a defense to copyright infringement. When a plaintiff brings a cause of action against a defendant for copyright infringement, the defendant may assert that, despite the alleged infringement, equity should prevent the plaintiff from recovering. The notion stems from the venerable equitable doctrine that a party seeking relief in equity will be denied relief if he comes to court with "unclean hands"—i.e., that he himself is guilty of having committed wrongful acts. 44 Such defenses generally arise from one of two types of situations. First, the plaintiff may be accused of some sort of unfair conduct, such as fraud in its dealings with the Copyright Office. 45 Second, and more commonly, the party asserting the misuse defense will accuse its opponent of using the rights afforded it under the copyright law to expand its monopoly beyond

43. Id. at 795. Among the decisions holding that the copyright misuse defense is unavailable to a party with unclean hands are Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147, 1170 n.43 (1st Cir. 1994); Atari Games Corp. v. Nintendo of Am., Inc., 975 F.2d 832, 846 (Fed. Cir. 1992); Leo Feist, Inc. v. Young, 138 F.2d 972, 975 (7th Cir. 1943); Tempo Music, Inc. v. International Good Music, Inc., 143 U.S.P.Q. (BNA) 67 (W.D. Wash. 1964). Nimmer on Copyright also suggests that the copyright misuse defense is inappropriate in such circumstances. See 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.09[B], at 13-295 (1997).

44. As the district court explained in instructing the jury,
The doctrine of unclean hands is an equitable defense which provides that a party must have acted fairly and justly in its dealings with another in order to assert a cause of action against that party. A party is said to possess ‘unclean hands’ if it is guilty of conduct involving fraud or bad faith. If you find that either party acted in a fraudulent, underhanded, unfair or unjust manner then you may conclude that party had “unclean hands.”

Alcatel, 166 F.3d at 796.

45. See, e.g., Atari, 975 F.2d at 836. The case provides a vivid example of fraud on the Copyright Office. After Atari was unable, through its own reverse engineering attempts, to gain access to Nintendo's object code, Atari's attorney applied to the Copyright Office for a copy of the code, claiming that it was a defendant in a copyright infringement action and needed the code in order to defend itself. In fact, contrary to its assertions, Atari was not then a defendant. See id. The court later used this fact to preclude Atari from invoking the copyright misuse defense, even where it may otherwise have been a viable defense to charges of infringement. See id. at 846.
that of the Copyright Act's statutory grant, in violation of the spirit, if not the letter, of the antitrust laws.46

1. Origins in patent law

Most commentators agree that copyright misuse is a direct outgrowth of the more established and refined doctrine of patent misuse.47 The notion of patent misuse—though it was not called by that name until later—first began to receive favorable hearing in the Supreme Court as early as 1917.48 Put simply, the patent misuse doctrine states that a patentee may not enforce his statutory rights when he improperly attempts to extend his monopoly power beyond the power granted by the Patent Act.49 In the Motion Picture Patents case, for example, the Supreme Court expressed concern that the patentee was attempting, through license provisions, to restrict the manner of use of the invention.50 In another early case, the Court frowned upon a provision in a license for a patented dry ice machine that required licensees to purchase other, unpatented, materials from the licensor.51

The seminal Supreme Court case on patent misuse, and the first one to actually use the term, was Morton Salt Co. v. G.S. Suppiger Co.52 Morton Salt manufactured and held a patent to a machine that inserted salt tablets into canned food products.53 Morton licensed its machine; one of the provisions of the license mandated that licensees had to purchase the (unpatented) salt tablets from a Morton subsidiary.54 When Morton brought suit against a manufacturer of a rival salt-tablet depositing machine that alleg-
edly infringed its patent, the defendant successfully raised the misuse defense in the district court;\textsuperscript{55} the Supreme Court agreed.\textsuperscript{56} Though the Court found no actual violation of the antitrust laws on the part of Morton, it denied relief by relying on "the equitable maxim that a party seeking the aid of a court of equity must come into court with clean hands."\textsuperscript{57} The Court was less than precise about what sort of conduct, short of an actual Sherman Act transgression, would preclude a patentee from being able to enforce its patent; it merely stated that practices that would trigger application of the doctrine were those that are "contrary to public policy" or that have an "adverse effect on the public interest."\textsuperscript{58}

In the half century since \textit{Morton Salt}, courts have created a considerable body of law refining the patent misuse defense, and the doctrine is an established feature of the current terrain of patent law.\textsuperscript{59} A detailed examination of the modern application of the patent misuse doctrine is beyond the scope of this Note; instead it is simply worth noting a recent statement of the Federal Circuit on the subject: "Patent misuse is an affirmative defense to an accusation of patent infringement, the successful assertion of which requires that the alleged infringer show that the patentee has impermissibly broadened the physical or temporal scope of the patent grant with anticompetitive effect."\textsuperscript{60}

2. \textit{The birth of copyright misuse}

A federal district court first validated a defense of copyright misuse in 1948 in \textit{M. Witmark & Sons v. Jensen}.\textsuperscript{61} The case involved the conduct of ASCAP, the performing rights society, which negotiated with film producers over the rights to record copyrighted songs on motion picture soundtracks and also negotiated with theater owners over the rights to per-

\textsuperscript{55} See id. at 489-90.
\textsuperscript{56} See id. at 494.
\textsuperscript{57} Id. at 492.
\textsuperscript{58} Id.
\textsuperscript{59} See 6 CHISUM, supra note 49, § 19.04. The doctrine, however, is not without its critics. See Mark A. Lemley, Comment, \textit{The Economic Irrationality of the Patent Misuse Doctrine}, 78 CALIF. L. REV. 1599, 1599 (1990) (arguing for the abolition of the doctrine on the grounds that: (1) "the level of sanction [unenforceability of the patent] is unrelated to the injury caused" by the misuse; (2) "the sanction duplicates antitrust remedies, leading to excessive recoveries;" and (3) the doctrine awards a "windfall" to infringers, even if they themselves are not harmed by the misuse).
\textsuperscript{60} Virginia Panel Corp. v. MAC Panel Co., 133 F.3d 860, 868 (Fed. Cir. 1997) (internal quotation marks omitted).
form films that contained the copyrighted songs. ASCAP brought a copyright infringement action against the defendants, but the court denied relief, analogizing from the patent misuse cases. The court reasoned that, since ASCAP controlled eighty percent of the songs used on soundtracks, it gained an unfair advantage in the market for theater performance licenses, in violation of the antitrust laws. Concluded the court,

One who unlawfully exceeds his copyright monopoly and violates the anti-trust laws is not outside the pale of the law, but where the Court's aid is requested, as noted herein, and the granting thereof would tend to serve the plaintiffs in their plan and scheme with other members of ASCAP to extend their copyrights in a monopolist control beyond their proper scope, it should be denied.

3. Lasercomb and the reawakening of copyright misuse

After the copyright misuse defense reared its head in Witmark, the doctrine quickly retreated into near dormancy for over forty years. Though a number of courts considered the defense, every single one found it inapplicable on the facts presented. It was not until 1990 in Lasercomb America, Inc. v. Reynolds that a court actually accepted the argument that it should not enforce a copyright on behalf of a plaintiff who had "misused" its statutory monopoly grant. Lasercomb manufactured sophisticated steel rule dies used to cut paper and cardboard into shapes appropriate for boxes and cartons. It also developed copyrighted software that enabled users to direct the cutting of the actual steel die by first creating a cardboard model on a computer screen. Lasercomb licensed the software to users; its standard license agreement contained provisions forbidding licensees from developing or aiding others in developing any competing

62. See id. at 844-45.
63. See id. at 844, 848-49.
64. See id.
65. Id. at 850.
66. See, e.g., United Tel. Co. of Mo. v. Johnson Publishing Co., 855 F.2d 604, 610-12 (8th Cir. 1988); Supermarket of Homes, Inc. v. San Fernando Valley Bd. of Realtors, 786 F.2d 1400, 1408 (9th Cir. 1986); F.E.L. Publications, Ltd. v. Catholic Bishop of Chicago, 214 U.S.P.Q. (BNA) 409, 413-14 (7th Cir. 1982); Mitchell Bros. Film Group v. Cinema Adult Theater, 604 F.2d 852, 865 (5th Cir. 1979); CBS, Inc. v. ASCAP, 607 F.2d 543, 544-45 (2d Cir. 1979); Edward B. Marks Music Corp. v. Colorado Magnetics, Inc., 497 F.2d 285, 290 (10th Cir. 1974).
67. 911 F.2d 970 (4th Cir. 1990).
68. See id. at 971.
69. See id.
software for a period of 99 years. Lasercomb brought a copyright infringement suit against defendant Holiday Steel after Holiday apparently made three unauthorized copies of the Lasercomb software and also developed and marketed software of its own that copied from Lasercomb's. Holiday Steel asserted copyright misuse as an affirmative defense, claiming that the license provision described above (to which Holiday was not even a party) constituted an improper attempt to expand its copyright protection beyond that granted by the Copyright Act by foreclosing competition even from software which did not infringe its own.

The Fourth Circuit undertook a fairly detailed examination of the related historical origins of patent and copyright and ultimately determined that "since copyright and patent law serve parallel public interests, a 'misuse' defense should apply to infringement actions brought to vindicate either right." The court explicitly cited Morton Salt, noting that "the phraseology [announcing the Supreme Court's embrace of the patent misuse defense] adapts easily to a copyright context." Significantly, the court also adopted Morton Salt's holding that a party may succeed with a misuse defense without actually proving an antitrust violation. Also, the Fourth Circuit held, as in Morton Salt, that a party (like Holiday Steel) need not actually be bound by the offending license provisions or indeed even harmed directly by them in order to avail itself of the copyright misuse defense. Finally, the court noted that Lasercomb would be free to bring another suit for copyright infringement against Holiday Steel (or anyone else) "once it has purged itself of the misuse."

4. After Lasercomb: increasing acceptance of the copyright misuse defense

Commentators did not let the Lasercomb decision go unnoticed; the decision sparked a flurry of scholarly comment, not to mention assertion

70. See id. at 973.
71. See id. at 971.
72. See id. at 979.
73. See id. at 972.
74. Id. at 976.
75. Id. at 977.
76. See id. at 978.
77. See id. at 979.
78. Id. at 979 n.22.
79. See, e.g., Ramsey Hanna, Misusing Antitrust: The Search for Functional Copyright Misuse Standards, 46 STAN. L. REV. 401 (1994); James A.D. White, Misuse or Fair Use: That is the Software Copyright Question, 12 BERKELEY TECH. L.J. 251 (1997); William E. Thomson, Jr. & Margaret Y. Chu, Overstepping the Bounds: Copyright Misuse, COMPUTER LAW., Nov. 1998, at 1; Aaron Xavier Fellmeth, Copyright Misuse and
of the defense by litigants. A large percentage of the post-Lasercomb cases and commentary have concerned alleged copyright misuse in cases involving computer software. Explanations for why this is so center around the factors that distinguish software from more traditional forms of copyrighted material, such as literary works, music, and film. While commercially successful works in those media may provide authors a revenue stream for many years, in fact many decades, that is not the case with computer software, where manufacturers release new versions with dizzying speed; state-of-the-art Version 3.0 becomes obsolete as soon as Ver-


80. For cases in which the defense was successfully raised, see, e.g., Practice Management Info. Corp. v. AMA, 121 F.3d 516 (9th Cir. 1997); Atari Games Corp. v. Nintendo of America, Inc., 975 F.2d 832 (Fed. Cir. 1992); PRC Realty Sys., Inc. v. Nat'l Assoc. of Realtors, 972 F.2d 341 (4th Cir. 1992); Electronic Data Sys. Corp. v. Computer Assocs. Int'l, Inc., 802 F. Supp. 1463 (N.D. Tex. 1992); qad, Inc. v. ALN Assocs., Inc., 770 F. Supp. 1261 (N.D. Ill. 1991).


81. See, e.g., Hanna, supra note 79, at 409 ("[T]he misuse defense has been raised most frequently in software infringement cases.").

82. 17 U.S.C. § 302 provides that copyright lasts for the life of the author plus 70 years, or 95 years for a corporate or anonymous author. These terms reflect the recently passed Sonny Bono Copyright Extension Act, which extended terms for both categories of works by 20 years. See Pub. L. No. 105-298, 112 Stat. 2827 (codified at 17 U.S.C. § 302 (Supp IV 1999)).
sion 4.0 hits the shelves. Thus software manufacturers must act quickly to recoup the costs of development and reap a profit; they cannot count on a steady current of royalties to pour in over the life of the copyright grant. For this reason, licensors of software seek, in those licenses, to gain every advantage possible, including, at times, attempts to extend their monopoly beyond that explicitly granted by the Copyright Act. As Nimmer and Santhanam explain, software is a “burgeoning field” in which

the commercial life of the copyrighted work is fleeting in proportion to the term of the copyright. Moreover, the market for the work is also not so pervasive as in the case of other copyrighted works. The cost of development of such works is also comparatively high. These factors combine to impel the holder to adopt measures that would ensure recouping of the investment, stabilizing market presence and reaping rewards. These measures may present the aura of misuse to a court applying vague concepts of equity in light of its own views of what scope of leverage a property rights owner should have.

In explaining the high percentage of software cases in the misuse arena, others have focused on the functional nature of computer software and the fact that it must be used with compatible hardware and software; the compatibility factor works to endow the owners of intellectual property the power to formulate license provisions that seek to extend their monopolies further than that explicitly permitted by the copyright (or patent) statutes. Endowed by the power of their technology with the means to exclude competitors from the market for interoperable software, it should be little surprise that profit-seeking software manufacturers indeed seek to do so.

B. Alternatives to Copyright Misuse in Maintaining Interoperability

As commentators have recognized, copyright misuse is but one means courts and litigants have of furthering the goal of interoperability, that is, maintaining a competitive market for software products compatible with

83. See Peter H. Lewis, State of the Art; Many Updates Cause Profitable Confusion, N.Y. TIMES, Jan. 21, 1999, at G1 (“The frantic pace of innovation in the computer industry is a mixed blessing. On one hand, we benefit from a torrent of newer, faster, better and cheaper products, creating value for the consumer at a speed unmatched in any other industry in history. On the other hand, rapid advances in technology condemn us to a treadmill of rapid obsolescence. It is frustrating to buy version 1.0 of something, knowing that version 1.1 is already in development and that version 2.0 is just around the corner.”).

84. Nimmer & Santhanam, supra note 47, at 423.

85. See Hanna, supra note 79, at 409-10; White, supra note 79, at 282-85.
other products protected by copyright. Scholars examining network economic effects have recognized the importance of maintaining interoperability in order to prevent the acquisition of monopoly power in markets simply by virtue of having obtained intellectual property protection for one important component in the interoperable system. As Professor Merges explains, "small" property rights should not be employed to "leverage very large markets." It is by no means certain that there is but one best means of furthering the goal of interoperability, and different factual scenarios may in fact invite different responses. But in evaluating the potential responses to copyright owners who attempt to prevent competitors from developing compatible products, one must start by examining the advantages and disadvantages of copyright misuse as compared with potential alternatives, including fair use, limits on copyrightability, and antitrust. As it shall become clear, in embracing the copyright misuse defense, the Alcatel court, whether or not it did so consciously, embraced the most appropriate means, given the particular facts of the case, to safeguard the market for interoperable goods.

1. Fair use

Courts in several instances have invoked fair use to maintain the interoperability principle. The game cartridge cases are prime examples. Manufacturers of game consoles such as Nintendo and Sega sought to

86. See Merges, supra note 4, at 4-9; David R. Owen, Note, Interfaces and Interoperability in Lotus v. Borland: A Market-Oriented Approach to the Fair Use Doctrine, 64 FORDHAM L. REV. 2381 (1996) (arguing that "the use of protected elements of computer programs that are necessary for interoperability should be allowed under copyright law subject to a requirement that unfair harm to the market for the copyrighted work is minimized or eliminated" (internal quotation marks and footnote omitted)).

87. Network economic effects occur with products whose utility depends on the use of the same (or compatible) products by others. For example, the utility of a non-network good, such as one's shoe, is the same whether the wearer is the only one wearing the shoe or if it graces all the feet in the neighborhood. A classic network product—a telephone, for example—is useful only to the extent that others use compatible, or interoperable, telephones. See generally Mark A. Lemley & David McGowan, Legal Implications of Network Economic Effects, 86 CALIF. L. REV 479 (1998).

88. For general discussions of the importance of maintaining interoperability, see Michael L. Katz & Carl Shapiro, Network Externalities, Competition, and Compatibility, 75 AM. ECON. REV. 424 (1985); Peter S. Menell, Tailoring Legal Protection for Computer Software, 39 STAN. L. REV. 1329 (1987).

89. Merges, supra note 4, at 4.

maintain control over not just their proprietary consoles, but over the games designed to be played on the consoles, which come in the form of removable cartridges. The manufacturers attempted to maintain this control by technological means, specifically by including a short piece of code called a software "key" that cartridge makers would be forced to copy (thus infringing an exclusive right under copyright) in order to have their games work with the console. When Sega sued Accolade, a game cartridge maker that had allegedly copied this "key," the Ninth Circuit held that such copying was fair use.

Such an approach is sound in that it does indeed prevent the manufacturer of the main product (the console) from parlaying a legitimate monopoly in that market into an improper one in another. But it is somewhat limited, in that it appears only to apply where the attempt to exclude a competitor is done through technological means. In the Alcatel case, for example, DSC, the copyright holder, did not attempt to extend its statutory rights through technological ingenuity, but instead by restricting others' competitive activity through contractual provisions contained in software licenses. And where the activities of a defendant are arguably protected by fair use but are bargained away through contract, it is the contract that governs; at least in this instance, copyright does not preempt contract law. Fair use is indeed an important tool for furthering competition in general and interoperability in particular, but it does not have much bite in cases like Alcatel, where contract plays so dominant a role.

2. Limits on copyrightability

Another means by which copyright owners' ability to restrict competition may be properly limited is ensuring that copyright extends only to expression, and not to uncopyrightable ideas. If a copyright owner were allowed to gain proprietary rights over the ideas contained in its work, it could conceivably exclude others from the market for interoperable goods by staking out a monopoly over the "idea" of "all software that works in

91. See MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993), cert. dismissed, 510 U.S. 1033 (1994); Cent. Point Software, Inc. v. Nugent, 903 F. Supp. 1057, 1059-60 (E.D. Tex. 1995) ("Plaintiffs may establish copying if they can demonstrate that the software has been reproduced in a computer's memory without permission.").

92. See Sega, 977 F.2d at 1523-24.

93. See infra part III.B.3.

conjunction with mine." In Lotus v. Borland, for example, the First Circuit held that Lotus' copyright in its 1-2-3 spreadsheet application did not extend to the program's menu command structure—just as Mr. Selden a century before famously could not claim copyright in the accounting system embodied in his considerably more primitive spreadsheets nearly a century earlier. While the First Circuit was correct in its instinct that copyright should not cover functional aspects of computer software, this principle only goes so far in preserving the ability of competitors to develop competing but non-infringing products. The software-based idea/expression dichotomy articulated in Lotus v. Borland helps to answer the question of infringement vel non. But this is usually not the hard question in interoperability cases. Rather, the question in these cases is usually either: (1) is a certain amount of copyright infringement permissible if necessary to maintain competition in the market for interoperable products; or (2) should a license provision prohibiting the development of interoperable products (like DGI's expansion cards) that unquestionably do not infringe the copyright of the main component be enforceable? Limiting copyright to non-functional aspects of computer software is an important tool in keeping copyright owners from gaining monopoly power in markets where they are not entitled to it, but this principle does not go far enough in maintaining the ability of non-infringing products to compete in the market for interoperable goods.

For this reason, the issue of the proper scope of copyright was not particularly relevant to the litigants or court in the Alcatel dispute. No one could plausibly argue that DSC did not hold a valid copyright in its operating system software. Nor was there any serious question but that DSC had made out a prima facie case of copyright infringement against DGI by proving that DGI, acting in conjunction with NTS, the testing company, downloaded the operating system software into its expansion cards while lacking a license to do so. The issue was not, therefore, whether DSC properly claimed copyright in its software, or even whether DGI had technically committed an act of infringement. The issue, rather, was whether there was something about DSC's conduct that made it legally permissible for DGI to infringe. And that question could not be answered by inquiring

95. See generally Peter S. Menell, An Epitaph for Traditional Copyright Protection of Network Features of Computer Software, 43 ANTITRUST BULL. 651 (1998) for an overview of copyright protection for computer software.
96. See Lotus, 49 F.3d at 815.
97. See Baker, 101 U.S. at 100 (describing Selden's "peculiar system of bookkeeping.").
98. See Sega, 977 F.2d at 1520-28.
into the proper scope of copyright protection for DSC's operating system software.

3. Preemption

Section 301 of the Copyright Act provides that "all legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright ... are ... governed exclusively by" federal copyright law.99 The preemption mandate of the Copyright Act might be read to mean that, given the copyright law's promotion of interoperability, any contractual licensing provision that conflicts with this goal is preempted by federal law and thus invalid.100 For a variety of reasons, most relating to the complex and somewhat obscure nature of the copyright preemption doctrine, preemption has not proven to be a serious check on contractual provisions that appear to expand one or more of the rights granted by the Copyright Act.

Professor Lemley identifies four basic reasons why preemption "although necessary, is not sufficient to protect the interests of intellectual property law in the indifferent world of contract."101 First, preemption "lacks nuance" because "courts don't want to preempt the entire field of licensing contracts, and preemption doctrine does not always give them tools fine enough for the delicate legal surgery they must perform."102 Second, courts will have a hard time conducting preemption analysis when they are construing not simply the federal Copyright Act, but a more vague "policy" underlying the statute.103 Third, intellectual property laws such as trade secret law and right-of-publicity statutes are state law, and thus section 301 does not come into play.104 Fourth, and most generally, some argue that "contracts are different" from statutes and thus should not be subject to preemption, because, unlike statutes, which create rights against all the world, contracts govern relations only between the parties to the contract.105 Preemption, then, although a crucial tool for limiting states' ability to subvert the purposes of federal copyright law, is of only limited use in battling private contractual license provisions that may result in similar subversion.

101. Id. at 145.
102. Id.
103. See id. at 145-46.
104. See id. at 146.
105. See id. at 147. Professor Lemley generally disagrees with this point, explaining that even private contracts often affect the rights of third parties. See id. at 149.
The Alcatel case turned largely on the content of the license provisions that governed customer use of its telephone switch hardware and accompanying software, license provisions that arguably conflicted with the pro-competitive policies of the Copyright Act. It might be tempting, then, to suggest that the Act simply preempted the offending DSC license provisions to the extent that they subverted pro-competitive copyright policy. For the reasons described by Professor Lemley, however, such an argument was unlikely to find much support in the courts, which have consistently held that section 301 governs conflicts between the Copyright Act and state law, not conflicts between the Act and private contract provisions.106

4. Antitrust

One obvious response to the problem of improper acquisition of monopoly power in the market for interoperable products is to recognize that we have long had in place an anti-monopoly law, namely section 2 of the Sherman Act, which prohibits both monopolization and attempts at monopolization.107 Courts have held that, although intellectual property laws do confer legitimate (though limited) monopolies upon authors and inventors, IP owners are nonetheless still subject to the antitrust laws when they engage in anticompetitive acts.108 The antitrust laws can indeed be an effective remedy to anticompetitive conduct on the part of copyright owners; the availability of treble damages,109 actions brought by the government, with its vast litigation resources, and even, in certain circumstances, the possibility of criminal penalties, certainly acts to chill a great deal of improper conduct.

But antitrust also has significant drawbacks as a means for combating anticompetitive acts, especially in the intellectual property arena. Chief among these disadvantages is the necessity of defining the relevant mar-

106. See, e.g., ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996) ("courts usually read preemption clauses to leave private contracts unaffected.").
107. 15 U.S.C. § 2 (1994) ("Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding $10,000,000 if a corporation, or, if any other person, $350,000, or by imprisonment not exceeding three years, or by both said punishments, in the discretion of the court.").
108. See, e.g., Image Technical Servs. v. Eastman Kodak Co., 125 F.3d 1195, 1216 (9th Cir. 1997) ("[I]ntellectual property rights do not confer an absolute immunity from antitrust claims.").
ket, a hurdle that can trip up the antitrust plaintiff (who may be a defendant in a copyright infringement suit) even where it seems relatively clear that an IP owner is improperly attempting to leverage his legitimate copyright monopoly into a monopoly in a market where he has no proprietary rights. In the Alcatel case, for example, though there was considerable evidence that DSC had a 100 percent share of the market for expansion cards for its switches, the Fifth Circuit held that DGI had not made an adequate showing that this market was indeed the relevant one for antitrust purposes. Ramsey Hanna summarizes the inherent problems in relying on antitrust to solve the problem of anticompetitive uses of intellectual property:

[A]ntitrust law is uniquely ill-suited to assess the impact of competitive practices in markets driven by innovation. Antitrust doctrine does not provide the analytical tools necessary to measure the economic power generated by copyrights and patents, and prohibits many competitive arrangements that encourage investment in innovation. Therefore, indiscriminate application of classical antitrust analysis in copyright infringement cases may impede the very creativity copyright law seeks to promote.

C. Evaluating Misuse

Fair use, limitations on copyrightability, preemption, and the traditional antitrust laws are quite useful (indeed necessary) tools in the fight to maintaining competition in markets for products where copyright law properly does not grant a statutory monopoly. But there are still gaps: conduct that should not be tolerated, but which is not covered by any of these established doctrines. In such situations, copyright misuse, properly defined, can, and should, play a role. Perhaps the doctrine’s greatest strength—as well as its greatest weakness—is its flexibility. A party asserting misuse is not held to the strict antitrust standards concerning market power or standing. The doctrine is available in situations involving overly restrictive license provisions, as was the case in Alcatel, as well as potentially in situations where the copyright owner has attempted to ex-

110. See Hanna, supra note 79, at 410-19.
111. See Alcatel, 166 F.3d at 781-84.
pand its monopoly through technical means.\footnote{See, e.g., Atari Games Corp v. Nintendo of Am., Inc. 975 F.2d 832 (Fed. Cir. 1992).} The court is thus forced to ask not whether the copyright owner has transgressed some antitrust standard that may have been derived from a case involving products with few of the same qualities as copyrighted software, but rather to inquire whether the conduct at issue is consistent with the policy rationale for copyright, namely, to “promote the Progress of Science and the useful Arts.”\footnote{U.S. CONST. art. I, § 8, cl. 8.} As with all questions involving copyright, the court must engage in balancing, weighing the amount of incentive that must be provided to authors in order to encourage the optimal level of creativity against the public’s right to gain access to the work at a reasonable cost.

This balancing may be objected to on the grounds that it invites vague standards, creating uncertainty on the part of copyright owners as to what sort of conduct, and specifically what kind of licensing provisions, will be considered permissible.\footnote{The copyright misuse defense is also vulnerable to the same criticisms directed against the patent misuse doctrine, namely that its harsh penalty (unenforceability of a copyright) provides an unwarranted windfall to literal infringers). See Lemley, supra note 59, at 1615-16. These arguments are blunted somewhat by the fact that, once the misuse has been purged, the copyright owner is once again free to sue for damages. See Lasercomb, 911 F.2d 979 n.22.} Thomson and Chu note that “the parameters and the standard of application of the misuse defense are unclear.”\footnote{Thomson & Chu, supra note 79, at 6.} Hanna laments that “its scope remains unclear.” The Supreme Court has provided almost no guidance,\footnote{The Supreme Court has never explicitly opined on the copyright misuse defense. See Note, Clarifying the Copyright Misuse Defense, supra note 79, at 1292. Two Supreme Court antitrust cases involving “block-booking” practices of film companies, however, are often cited as precursors of the modern doctrine. See id. at 1292-93; United States v. Loew’s, Inc., 371 U.S. 38 (1962); United States v. Paramount Pictures, Inc., 334 U.S. 131 (1948).} and the lower courts have not reached consensus as to the circumstances under which the defense should be available.”\footnote{Hanna, supra note 79, at 403.} An article in the Journal of Intellectual Property Law refers to the “Misted Limbo of the Misuse Doctrine,”\footnote{Fellmeth, supra note 79, at 9.} and states, “The questions now are: what are the tenets of the doctrine and when will the defense most likely succeed?”\footnote{Id. at 4.} While concerns about vagueness are understandable, they do not seem any stronger in this context than are similar concerns about the application of the fair use doctrine in copyright or the
notoriously slippery "rule of reason" mode of analysis in antitrust. Indeed, although the copyright misuse doctrine has existed in its modern form for only a decade, commentators have had little trouble articulating general guidelines explaining what sort of license provisions will trigger a successful invocation of the misuse defense in an infringement action. For example, Thomson and Chu, writing in *Computer Lawyer*, identify four general categories of activity that can lead to a finding of copyright misuse: (1) license restrictions that do not facially appear to extend the limited copyright monopoly, if the effect of enforcing the provision is to secure more extensive rights than those granted by the Copyright Act; (2) requirements that licensees and their employees agree not to create works that compete with the copyrighted work; (3) requirements that licensees use the copyrighted work to the exclusion of a competitor's works; and (4) licenses that bar the use of equipment other than that of the licensor when the restriction prevents the development of new works.\(^{121}\) While it is certainly possible that creative and profit-hungry copyright owners may devise improperly anticompetitive license provisions that do not fall into one of these categories, there is little reason to believe that courts will not be able

\(^{121}\) Thomson & Chu, *supra* note 79, at 4 (footnotes omitted). Thomson and Chu, noting that courts have focused on the close relationship between patent and copyright misuse, also speculate that the following situations where courts have found patent misuse may constitute copyright misuse in analogous situations as well:

A patent owner commits misuse if the grant of a license is conditioned upon the use of unpatented materials, supplies or components purchased from the patent owner or his designee and, under the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned.

A policy of mandatory or coercive package licensing under which the patent owner refuses to license patents separately can constitute misuse since it is viewed as a species of tying arrangements.

If the grant of a license is conditioned upon the licensee's agreement to pay royalties based on total sales regardless of actual use of the patented product or process, it is an improper extension of the patent monopoly and, thus, patent misuse, unless the parties voluntarily and for convenience agree to such a royalty structure.

... Territorial and/or field of use restrictions in assignments or licenses are judged in terms of their relation to the patentee's right to exclude all or part of the patent grant, and may constitute patent misuse if the restriction involves anticompetitive effects extending beyond the patentee's statutory right to exclude.

*Id.* at 4-5 (footnotes omitted).
to adapt to the changes in technology and business practices, just as they have adapted in traditional copyright and antitrust analysis.

In a case like *Alcatel*, then, a court is left with little choice but to embrace the copyright misuse defense, as least if it is serious (as, happily, most courts seem to be) about furthering the goal of healthy competition. Other related doctrines—fair use, copyright scope, preemption, and antitrust—are no doubt important, but they do not necessarily have much relevance to business relationships that are governed by software licenses. Copyright misuse, though resurrected only a decade ago, stands to play an increasingly important role in filling the gap where these other doctrines fail to adequately promote interoperability among copyrighted works.

IV. CONCLUSION

In *Alcatel*, the Fifth Circuit properly validated copyright misuse as a defense to infringement, holding that a copyright owner may not assert its statutory rights when it seeks to leverage those rights to exclude competitors from markets for compatible though non-infringing products. The decision can best be seen as an additional judicial endorsement of the principle of interoperability.\(^{122}\) Allowing intellectual property owners to gain a monopoly not just over their products, but over any that work in conjunction with them, would stifle competition and innovation, ultimately tilting copyright’s “delicate balance”\(^{123}\) too far in favor of owners at the expense of competitors and the public.\(^{124}\)

*Alcatel* will not be the definitive statement on copyright misuse; the doctrine’s contours will not be fully defined for some time as courts struggle to apply it to new technologies, market conditions, and license provisions. At some point, the Supreme Court, which has never explicitly opined on copyright misuse, may have to weigh in to resolve some of the unanswered questions regarding its application.\(^{125}\) Nonetheless, the opin-

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122. See Merges, *supra* note 4, at 4-9.
124. See Menell, *supra* note 95, at 709 (“Copyright should not grant more economic power than is necessary to achieve the incentive to create”) (citing NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT 12 (1979)).
125. There is at least one significant circuit split on a copyright misuse issue, specifically the question whether a defendant asserting copyright misuse may do so only if he comes to court with “clean hands.” The Federal Circuit has held that a defendant may not assert misuse if it has unclean hands. See Atari Games Corp v. Nintendo of Am., Inc., 975 F.2d 832, 846 (Fed. Cir. 1992). But the Fifth Circuit in *Alcatel* explicitly disagreed,
ion should serve as an important reminder to copyright owners that they may pay a steep price if they get a bit too greedy and seek to overstep the bounds of their statutory grant.

stating that it is only the plaintiff's hands that are at issue—not the defendant's. See Alcatel, 166 F.3d at 796-97.