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Note

**COPYRIGHT MISUSE OR A RIGHT TO COMPETE?: A CRITIQUE OF ALCATEL USA V. DGI
TECHNOLOGIES**

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***270 I. Introduction**

In the face of increasing pressures to more clearly define the scope and extent of a copyright in software, Congress created the Digital Millenium Copyright Act, ostensibly aimed at promoting competition and interoperability among computer software programs. However, the Act effectively conferred new power upon software copyright owners to restrict access to the ideas, concepts, procedures and processes embedded in copyrighted material. Against this tide, the Fifth Circuit has taken a strict approach, finding that an attempt by an owner of copyrighted software to restrict access to ideas through use-restriction licensing agreements effectively forfeits its copyright, creating a right to compete.

Alcatel manufactures telephone switching devices, a system which upon activation by a traversing phone call converts analog signals into digital signals and vice versa enabling more efficient long-distance calling.¹ Inside these ‘switch’ devices lay three principal components, a central software operating system containing software which ‘runs’ the system, an interface system which receives the phone call, and microprocessor cards which, upon activation, download the system software into a random access memory chip which direct the calls through the system.² Alcatel manufactured and sold the system as a package, along with a license agreement directing its customers not to use the software in conjunction with any non-Alcatel microprocessor cards.³

DGI, manufacturer of telephone switch expansion cards, sought to establish a market in Alcatel-competing microprocessor cards capable of functioning along with or in lieu of Alcatel’s own cards.⁴ DGI acquired an Alcatel card, reverse *271 engineered⁵ it to discover its functional components, and developed its own version of Alcatel’s microprocessor card.⁶ The process could not be completed, however, without discovering how the card would interact with and capture a download from the Alcatel operating system software.⁷ Undeterred by the fact that the only way to gain access to the software was via a license agreement, DGI convinced an Alcatel customer (NTS) to allow it to ‘test’ its card on the switch.⁸ Unbeknownst to the customer, DGI then made a copy of the software and took it back to DGI laboratories, where it was able to develop a fully compatible and competitive card.⁹

The Fifth Circuit in *DSC Communications Corp. v. DGI Technologies, Inc.* (DSC I) upheld partial injunctive relief in favor of Alcatel against further infringing use of its software system, which still enabled DGI to test its cards on the NTS switch.¹⁰ The court refused to grant tighter injunctive relief because Alcatel was not likely to overcome a possible misuse defense to infringement to succeed in its infringement action.¹¹ Following a jury trial in which both DSC and DGI were found to have “unclean hands,” the district court permanently enjoined DGI from “developing any new microprocessor cards with the assistance of DSC’s operating system and from selling any other DIG microprocessor card designed to use DSC’s software.”¹² In *Alcatel USA, Inc. v. DGI Technologies, Inc.* (Alcatel), the Fifth Circuit Court of Appeals addressed the issue of whether a license agreement prohibiting licensees from using copyrighted software in conjunction with certain hardware was copyright misuse. The case sought to balance public policy interests with intellectual property rights; balancing a right of access to ideas and functions *272 of copyrighted software with a copyright holder’s right to control its dissemination and use.

Copyright misuse doctrine as applied by the court in Alcatel extends this doctrine too far, confusing equitable public policy balancing for a right to compete policy, ignoring Congressional mandate granting greater protective ability to software copyright holders, and devaluing copyright by encouraging infringement. Part I of this Comment provides an overview of the development and current state of copyright misuse and the holdings courts have made regarding the proper scope of copyright. Part II summarizes the holding and reasoning of Alcatel. Part III analyzes the failure of the Alcatel court to address

the distinction between idea and expression fundamental in copyright policy. This failure obscured the distinction between access to underlying ideas and a right to use the expression, resulting in a holding which suggests any potential competitor has a right to access and a right to compete--a right to take advantage of and profit by the copyright owner's investment.

This Comment proposes that in cases where a license agreement in fact extends an otherwise valid software copyright to protect an unprotected item that forms an essential component of the function of the software, courts should apply an equitable misuse doctrine which recognizes not only a balancing of copyright interests, but also a balancing of equities. Willful infringers should not be allowed to profit in hopes of a misuse finding. A use restriction in a software licensing agreement which actually restricts infringement and which incidentally effects an anti-competitive extension of copyright should not be grounds for misuse.

II. Overview of Software Copyrights and Misuse

A. Historical Developments

1. Introduction

Article I, Section 8, clause 8 of the Constitution provides Congress with the power to “promote the progress of science and useful arts, by securing for a limited time to authors and inventors the exclusive right to their respective writings and discoveries.”¹³ This provision found its roots at English common law, which recognized an author's right to make or authorize the making of copies of his own original expression, in the public interest, ostensibly to promote public dissemination of those works.¹⁴ Respecting the idea that granting federal copyright *273 protection over authors' works stimulates creativity, innovation, and public access to those ideas,¹⁵ Congress established the Copyright Act, which grants authors specific and limited rights to prohibit others from misappropriating the expressions of those ideas.¹⁶ The Act includes various provisions recognizing software as copyrightable subject matter.¹⁷ The dissemination into the public forum of copyrighted software usually involve license agreements granting licensees access to and use of copyrighted software while limiting or outright preventing “unauthorized” copying and access by third party non-licensees.¹⁸ The agreements recognize the economic value of dissemination, but restricting the distribution of software and conditioning license agreements on use and reverse engineering prohibitions necessarily prevents others from gaining access to the functions and ideas expressed.

2. Scope of Copyright

Presumptively, a copyright owner has the right to exclude others from using the copyrighted work,¹⁹ and, with limited exceptions, can refuse to grant a license.²⁰ On the other hand, the Copyright Act does not protect ideas, procedures, processes, systems, methods of operations, concepts, principles, or discoveries in general.²¹ Instead, this provision protects the public right of access to these areas, codifying the idea that public dissemination enables further development and innovation,²² by allowing certain otherwise infringing activity to be classified as fair use.²³ But software has established itself as a unique subject of copyright, encompassing both ideas and expression in a single, functional work the end *274 product of which may profoundly impact competition.²⁴ It is this functional expression which has confounded scholars and engineers alike as to whether to apply for copyright or patent protection. Arguably, the value of copyright protection for software is limited, because such value often derives from the results of the computer program text; these results can be achieved either by copying or by creating a new text.²⁵ Granting a software copyright owner the ability to restrict access to the copyrighted work through licensing agreements necessarily restricts access to the ideas and functional concepts within the software, subverting long-standing public policy.²⁶

Defining the scope of an intellectual property right in terms of a system or series of interacting components tied to a contractually limiting device has had a long and contentious history.²⁷ Because software is typically a functional device eligible for either copyright or patent protection,²⁸ and copyrights have traditionally been defined and interpreted with reliance on patent law,²⁹ an examination of how courts have treated patents in similar extension of right scenarios may best approximate how courts should treat ‘functional’ copyrights.

The Supreme Court in *Motion Picture Co. v. Universal Film Co.* analyzed the validity of a license agreement limiting its licensees of patented film projection devices to use of the machine in conjunction with a specific type of film.³⁰ The *275

court assessed the question in terms of the patentee's "exclusive right to make, use, or vend" the patented device.³¹ In rejecting the restrictive term, the Court held that such term seeks to restrict the use of materials not covered by the patent.³² The court stated that the scope of the patent is limited to the "exclusive right to use the mechanism to produce the result" described in the patent,³³ and cannot be expanded through contractual fiat.³⁴

B. Copyright Misuse

1. The Patent Connection

In light of the increasing complexity of an information economy, which by its nature allows greater potential abuse of the grant of federal intellectual property protection,³⁵ courts have increasingly relied on misuse doctrine to temporarily prevent the patent or copyright holder from enforcing its respective rights.³⁶ Copyright misuse has developed as an equitable doctrine and an outgrowth of patent misuse; similar to copyright law in general, its interpretation and application may be best defined in the context of patent law devices.³⁷

***276** As first applied by the Court in *Morton Salt Co. v. G. S. Suppiger Co.* with respect to patents,³⁸ misuse is invoked as a matter of equity when the court finds that the patent or copyright holder attempted to extend the statutory monopoly beyond the scope of the grant, usually by leveraging control over products (or services) not covered by the grant, violating public policy behind the grant.³⁹ Patent misuse in this context closely resembles an antitrust violation, but the Court in *Morton Salt* rejected the notion of requiring an antitrust violation in order to find conduct eliciting a patent misuse defense.⁴⁰

A year later, the Supreme Court in *Mercoid Corp. v. Mid-Continent Inv. Co.* held that a plaintiff asserting contributory infringement⁴¹ will be barred from relief where it sought to expand the patent beyond the terms of the grant.⁴² The patent at issue was a combination patent, encompassing three principle components individually unprotected by patent which the plaintiff licensed under terms granting use of the device only if licensee agreed to use it only in conjunction with one of the components, thus deriving royalties from that particular unpatented component rather than the device itself.⁴³ The Court found that the plaintiff sought to use the patent to control competition in the manufacture and sale of competing unpatented component parts, thus violating the public policy behind the grant of patent.⁴⁴

Expanding upon earlier rulings, the Court stated that a patent owner cannot extend control over unpatented materials, even if forming an essential part of a patented whole, through private contract or licensing agreements.⁴⁵ The Court ***277** further asserted that a defendant who manufactures a competing non-patented component part, which otherwise obtains no other use than as a component in an infringing product, nevertheless avoids liability as a contributory infringer because the patent holder misused his patent.⁴⁶ Thus, irrespective of the fact that a defendant had willfully infringed or intended the product to be used in an infringing manner, a finding of patent misuse preempts any equitable analysis precisely because of the adverse competitive consequences of any extension of patent monopoly power.⁴⁷

This case signaled the end of contributory infringement as a meaningful offensive action against infringers,⁴⁸ but Congress responded by enacting section 271 of the Patent Act re-constructing the contributory infringement doctrine and exempting certain conduct that otherwise would constitute patent misuse under *Mercoid*,⁴⁹ providing that no patent misuse shall follow even where a patent holder in effect extends a patent to control unprotected products, so long as that unprotected product forms an essential part of the patent and where there is no substantial non-infringing use for that element.⁵⁰

Accordingly, the Supreme Court in *Dawson Chemical Co. v. Rohm & Haas, Co.*, relying on section 271, reiterated that patents confer a right upon the patent holder to exclude others from profiting by the patented invention, such that contributory infringement may be found when the defendant offers to the public an essential but unpatented component of a patented process.⁵¹ Because there was no ***278** substantial non-infringing use for the unpatented component, defendant enabled others to avoid paying royalties on the patented process to which the component attached.⁵² The Court recognized that such a rule would enable a patent holder who "ties"⁵³ the sale of the patented article to an unpatented article "to suppress competition" in that unpatented article,⁵⁴ but argued that such an outcome, however anti-competitive, effects a compromise between competing goals of patents of free competition and creating incentives to invest in research and development.⁵⁵ Permitting patent holders broad protection which may include unpatented components essential to the exercise or use of the patent allows patent holders to recoup the costs of development.⁵⁶ In the absence of such protection, "noninventors would be almost assured of an opportunity to share in the spoils, even though they had contributed nothing to the discovery."⁵⁷

Although the result in this case was controversial,⁵⁸ it seems clear that section 271 was intended to limit the availability of patent misuse as a defense to infringement and tilt the competition versus creativity battle slightly in favor of the patent holder when the patent derives its essential significance from a non-patented element, and where there is no substantial non-infringing use for that element. In 1988, Congress expanded section 271 to include provisions more closely resembling the factual underpinnings of Dawson Chemical and further disassociated the possession of an intellectual property right from market power presumptions.⁵⁹

***279 2. The Antitrust Approach--Copyright Abuse**

The function of antitrust law is to promote competition by weeding out anti-competitive or monopolistic behavior.⁶⁰ Traditionally, abuse of intellectual property rights by tying arrangements fell under the rubric of antitrust law, incurring per se antitrust liability under the Sherman Act.⁶¹ When antitrust violations are asserted against a copyright holder accused of 'tying' the purchase or license of a patented or copyrighted product to an unprotected product and thus using that intellectual property right outside the scope of the grant, courts have relied upon an equity-based 'rule of reason' analysis to determine whether pro-competitive justifications exist for such vertical restraints, and whether such patent or copyright holder has market power in the relevant market for the unprotected product.⁶²

Applied in abuse of software copyright cases, courts have found that copyright owners who tie the purchase of copyrighted software to the purchase of unprotected products or services will be found to have violated antitrust law only where the copyright owner has sufficient market power in the tied product and acts to eliminate competition in that market.⁶³ The Sixth Circuit in ***280** *Virtual Maintenance, Inc. v. Prime Computer, Inc.* found that by requiring Ford's suppliers to use software licensed exclusively to the defendant computer manufacturer, customers of defendant were in effect "locked-into" purchasing both hardware and software support services in order to achieve access to the software.⁶⁴ Because use of such software was necessary in order to conduct business as a design supplier of Ford, defendant was able to exercise complete control over its software support services by virtue of its position as exclusive distributor of Ford's basic software system, enabling the defendant the "ability to exploit control over the tying product to force the buyer to purchase an unwanted tying product."⁶⁵ Nevertheless, the court not suggest that the defendant had misused its copyright, rather it had abused the power of the copyright to achieve monopolistic market power over a separate product market.

Courts have struggled with the idea that a copyright by definition confers market power in the work.⁶⁶ There is general agreement among courts and scholars alike, however, that copyright does not presumptively confer market power.⁶⁷ Rather, a copyright may better be seen as a "barrier to entry and expansion to be analyzed along with market share."⁶⁸ Anti-competitive conduct satisfying the ***281** Sherman Act may include denying a competitor access to an essential facility,⁶⁹ or refusals to deal absent a valid business justification.⁷⁰ However, because federally conferred intellectual property rights allow the holder of that the right to determine the terms of its dissemination, involuntary licensing based on essential facilities doctrine "must be considered a narrow exception to this well-founded rule;"⁷¹ an antitrust essential facilities argument will rarely be sufficient to support a copyright misuse claim.⁷²

3. Misuse

a. Introduction as an Equitable Doctrine

In 1990, the Fourth Circuit court in *Lasercomb America, Inc. v. Reynolds* found that the license agreement under which the plaintiff licensed die-making software violated the public policy behind the grant of copyright because it attempted to suppress competition in the die-making software business.⁷³ This non-compete clause prohibited licensees from developing a competing version of the software for a period of 99 years,⁷⁴ which the court stated sought to prevent any attempt to "independently implement the idea which [the software] expresses."⁷⁵ Thus, the "misuse arises from Lasercomb's attempt to use its copyright in a ***282** particular expression . . . to control competition in an area outside the copyright."⁷⁶ Relying heavily on Morton Salt's patent misuse holding,⁷⁷ the court established that an antitrust violation, although it may be sufficient, is not necessary to support a copyright misuse defense.⁷⁸

b. Antitrust Approach

The Fourth Circuit in *Service & Training, Inc. v. Data General Corp.*, an antitrust case addressing the issue of to what extent a copyright holder may ‘tie’ service support with the sale of diagnostic software,⁷⁹ recognized copyright misuse as a valid defense based either on an equitable or antitrust approach, but refused to apply it in the case because the defendant failed to show that the plaintiff used its copyright in violation of antitrust law or any public policy.⁸⁰ The court found that a copyright owner may legitimately refuse to sell or license diagnostic software to independent service operators who provide similar support services to computers manufactured by the software owner.⁸¹ As a result, the court suggested that ***283** refusing access to its software, while perhaps harmful to some, is activity “protected as an exclusive right of the copyright owner.”⁸²

Under an antitrust-based analysis, some courts have emphasized that “antitrust laws are designed to protect competition, not competitors.”⁸³ As such, restrictive licensing aimed at defeating competition and excessive pricing schemes are not alone sufficient to amount to copyright misuse, so long as they do not attempt to control competition in an area outside of the scope of copyright.⁸⁴

c. Mixed Antitrust/Equitable Approach

Similarly, the Ninth Circuit in *Triad Systems Corp. v. Southeastern Express Co.* held that plaintiff’s practice of selling its diagnostic software along with maintenance services, and providing use restrictions in its license agreement did not raise an antitrust-based misuse defense to infringement.⁸⁵ Defendant-competitor provided computer hardware services to licensees of plaintiff’s software, which was packaged along with diagnostic service software under a license agreement prohibiting anyone other than the licensee or plaintiff from using either.⁸⁶ In providing its services, defendant used plaintiff’s diagnostic service software in violation of the use restriction, thus infringing plaintiff’s copyright each time it downloaded the software.⁸⁷ The court insisted that the defendant was “getting a free ride when it uses that software to perform precisely the same service” that the plaintiff offers, and that such use “has undoubtedly diminished the value of Triad’s copyright.”⁸⁸ The court concluded by suggesting that because the licensing agreement does not prohibit the defendant from independently developing its own competing service software, copyright misuse is unavailable.⁸⁹

***284 d. Equitable Approach**

The Ninth Circuit recently asserted an equitable approach to misuse doctrine, and held that a licensing agreement prohibiting a licensee from using or developing competing software rendered the copyright unenforceable because it amounted to an anti-competitive extension of the copyright in violation of public policy.⁹⁰ The court stated that regardless of whether there is an actual anti-competitive effect, the mere fact of conditioning access to the software upon a promise not to use a competing product during the term of the license gave the copyright owner “a substantial and unfair advantage over its competitors.”⁹¹ Similarly, copyright misuse has been found where a best efforts clause in a license agreement in effect prevented licensee from independently developing a competing product expressing the same ideas embraced in the licensed software.⁹² The clause, while enforceable in contract, “served to suppress any independent expression of the idea,” resulting in an anti-competitive effect.⁹³

The application of misuse to copyright has not been resolved.⁹⁴ In addressing copyright misuse defense with respect to licensing agreement restrictions, most courts which have endorsed the defense take either an antitrust or an equitable approach involving anti-competitive conduct, although some courts have relied on a pure equitable doctrine.⁹⁵ Most software copyright cases that have addressed copyright misuse involve blanket licensing,⁹⁶ tying arrangements,⁹⁷ or refusals to ***285** license⁹⁸ claims, although some courts rejected the misuse defense where the plaintiff-copyright holder’s conduct was merely anti-competitive.⁹⁹ Regardless of the approach, copyright misuse effects a subtle balancing of the interests behind copyright protection and competition; a copyright “misuse defense would appear to sanction at least some infringement as a necessary measure of self-help.”¹⁰⁰ All of these cases share the common concern with a copyright holder’s attempt to exclude others from obtaining free access to the ideas and functions within copyrighted work.

C. Reverse Engineering

Courts have attempted to balance these competing interests in spite of the complex nature of software.¹⁰¹ The court in *Sega Enterprises Ltd. v. Accolade, Inc.* held that the defendant’s reverse engineering of plaintiff’s copyrighted software constituted fair use under Section 107 of the Copyright Act,¹⁰² where such reverse engineering “provides the only means of access to those elements of ***286** the code that are not protected by copyright¹⁰³ and the infringer has a legitimate reason for seeking

such access.”¹⁰⁴ In so holding, the court rejected defendant’s contention that any intermediate copying incident to reverse engineering was fair use so long as the end result or product did not infringe the copyrighted work.¹⁰⁵ Instead, the court instructed that such copying would be permissible, irrespective of the end result, but only where there is statutory exception such as fair use.¹⁰⁶

Defendant purchased a Sega console and game cartridges, and reverse engineered both in order to develop its own competing cartridges which could operate on a Sega console. Under a fair use analysis,¹⁰⁷ the court concluded that irrespective of the fact that defendant’s ultimate aim in ‘copying’ plaintiff’s software was commercial, defendant copied “solely in order to discover the functional requirements” which would enable it to develop compatible systems.¹⁰⁸ This served the public policy behind copyright by stimulating “the growth of creative expression, based on the dissemination of other creative works and the unprotected ideas contained in those works.”¹⁰⁹ Although the court was neither addressing copyright misuse nor analyzing a license agreement, the court appeared concerned with the ability of software copyright holders to restrict access to unprotectable elements contained within the program,¹¹⁰ allowing it to gain a “de *287 facto monopoly over the functional aspects of the work,” and in effect extending copyright beyond the scope of its grant.¹¹¹

The Federal Circuit in *Atari Games Corp. v. Nintendo of America, Inc.* noted that such a fair use defense to infringement could be available only upon defendant’s having obtained lawful access to copyrighted software or its protected elements.¹¹² Because the defendant obtained a copy of the plaintiff’s object code by misrepresentation before the copyright office, defendant was barred from asserting fair use as a defense to infringement.¹¹³ Furthermore, if fair use were available to the defendant, it would be available only to the extent that such copying did not result in “commercial exploitation of protected expression.”¹¹⁴ Thus, intermediate copying in the context of reverse engineering is limited to that necessary to understand the function of the work; “it is not an invitation to misappropriate protectable expression.”¹¹⁵

The ability to restrict access relates to the ability of copyright owners to exert control over the distribution of software to the public. The court in *Sega* dealt with the reverse engineering of a validly obtained and owned copy of the software at issue; the defendant’s use of the copyrighted work was not governed by a license agreement. While the court in *Sega* permitted reverse engineering and its requisite intermediate copying as a permissible fair use exception to a copyright holder’s exclusive right to reproduce a copyrighted work,¹¹⁶ other courts have extended the *288 definition of copying to include the mere act of turning on a computer by which software is downloaded into a Random Access Memory cache.¹¹⁷ While this holding was vitiated by the Digital Millennium Copyright Act,¹¹⁸ it remains a fundamental premise that in the absence of a specific exception, unauthorized copying of copyrighted software occurs when software not owned by the user is copied by an act of downloading.¹¹⁹ This issue arises most distinctly in the context of independent service operators’ activities of servicing computers containing software, the use of which is governed by a license agreement.

D. Digital Millennium Copyright Act

Realizing the failure of some courts to adequately balance the interests of the public against the interests of software copyright holders,¹²⁰ Congress enacted the Digital Millennium Copyright Act which carves out reverse engineering and computer maintenance exceptions to exclusive rights.¹²¹ The computer maintenance provision reflects Congress’ assessment that an absolute ability to restrict access to either a software’s ideas or expressions violates the public policy by granting too much power to copyright holders at the expense of competition.¹²² This exception provides that independent service operators may, in the course of servicing computer hardware and software, make an unauthorized copy of software, including diagnostic software automatically engaged, without risking an infringement claim.¹²³ However, the provision is “narrowly crafted to . . . ensuring *289 that an independent service provider may turn on a client’s computer machine in order to service its hardware components,”¹²⁴ and may not be read as allowing independent service operators access to and use of protected diagnostic software.¹²⁵

Section 1201’s broad new proscription against circumventing “a technological measure that effectively controls access” has been interpreted as effecting greater protection to authors to control access to works above and beyond traditional limitations¹²⁶ while recognizing fair use as a legitimate defense.¹²⁷ The reverse engineering exception was designed to support a distinction between “lawful” acts of infringement to gain access to ideas and acts designed merely to appropriate expressions.¹²⁸ However, this new provision grants the exception only to those *290 who have “lawfully obtained the right to use a copy of a computer program.”¹²⁹ Sections 1201(a)(2) and 1201(f)(2) and (3) suggest that while no person may develop and traffic in technology designed for reverse engineering, nothing forbids competitive reverse engineering so long as its purpose is for interoperability, the means employed are necessary for that purpose, and such activity does not otherwise

infringe against the targeted work.¹³⁰ Although Section 1201(c) guarantees that the provision does not impinge on traditional defenses to copyright infringement,¹³¹ it is not clear what effect obtaining unauthorized access through a circumvention of a license agreement in order to reverse engineer will have on a copyright misuse defense.

F. Divergent Views

As the foregoing discussion suggests, courts and scholars alike differ on the correct approach to analyzing copyright misuse. Nevertheless, several commentators argue that an antitrust approach leads to unworkable judicial standards because of inherently conflicting policy objectives aimed at achieving a similar result.¹³² These commentators urge a public policy-based analysis with ***291** references to antitrust principles to determine the scope of any anti-competitive conduct with respect to a copyright.¹³³ Other commentators argue that copyright principles provide sufficient structure by which to measure its economic and statutory scope; requiring an antitrust violation may confuse copyright principles for an antitrust violation.¹³⁴ Others urge that any analysis should be predicated upon the nature of the copyright holder's anti-competitive conduct,¹³⁵ because the misuse defense itself obscures copyright policy when the underlying conduct raises antitrust concerns,¹³⁶ the misuse doctrine should be discarded altogether when the alleged copyright misconduct involves a tying arrangement.¹³⁷ Still others argue that because copyright misuse doctrine is a judicially created consumer-protection device, it has the potential to alienate the larger public interest copyright was intended to promote.¹³⁸

***292** Whatever the merits of any argument, it seems clear that software is a unique form of functional work capable of harboring both idea and expression and therefore falls under numerous categories of intellectual property protection. Nevertheless, Congress and the courts have seen fit to give software a certain amount of copyright protection, making it inevitable that a court will define the scope and economic strength of a copyright by importing standards from other areas, including antitrust and contract law. To do this belies the fact that copyright misuse, like patent misuse, is an affirmative defense to an otherwise infringing activity, requiring a court to ask only two questions: whether the copyright holder has misused the protection afforded its work and whether such misuse could ever justify infringing conduct.

III. Alcatel v. DGI

A. Anti-Competitive Equitable Misuse Analysis

The Fifth Circuit court in Alcatel addressed the issue of whether a software copyright holder's licensing agreement prohibiting licensees from using software in conjunction with competitors' hardware and from disclosure to third parties amounted to copyright misuse.¹³⁹ The issue was framed as an affirmative defense to Alcatel's claim of copyright infringement and trade secret misappropriation. The court found the DGI had "clearly infringed [[Alcatel's] exclusive right to reproduce its software" and misappropriated trade secrets when DGI illegally obtained and copied Alcatel's operating system software.¹⁴⁰ The court also found that DGI engaged in contributory infringement each time an Alcatel licensee activates its system, allowing a DGI microprocessor card to download a copy of Alcatel's licensed software.¹⁴¹

Nevertheless, the court took the copyright misuse doctrine to a new level of uncertainty by holding that preventing a competitor access to and copying of ***293** copyrighted software is anti-competitive conduct and misuse of copyright where a license agreement enables the copyright holder to gain indirect commercial control over an unprotected product used in connection with the copyrighted software.¹⁴² The fact that the license agreement did not actually prevent independent development of the ideas within the software was not dispositive to issue of whether or not Alcatel extended its copyright protection.¹⁴³ The court found anti-competitive conduct in violation of copyright principles in the fact that the license agreement effectively prevented competitors from using Alcatel's software to test its competing hardware such that it could achieve "technically feasible" development of competing hardware.¹⁴⁴ As such, even though the license agreement did not prevent its licensees or defendant from independently developing a compatible product,¹⁴⁵ the combined effect of the license agreement and the existence of copyright-protected software specifications otherwise needed to design a competitive and workable interoperable system secured for Alcatel a "limited monopoly over its uncopyrighted microprocessor cards."¹⁴⁶ Furthermore, the court adopted a strict pro-defendant equitable approach in holding that irrespective of the nature and breadth of DGI's unclean hands, a copyright misuse defense does not require a balancing of equities; indeed the converse is true: a finding of misuse of copyright precludes a court from considering the equities.¹⁴⁷

B. No Antitrust Violation

The decision by the court followed its dismissal as a matter of law the defendant's antitrust counter-claim, in which DGI argued that plaintiff's license agreement prohibiting licensee from using its software in conjunction with competing hardware violated section 2 of the Sherman Act.¹⁴⁸ DGI argued that *294 Alcatel maintained a monopoly in the relevant market for expansion cards by "locking" its licensees into Alcatel's expansion card line through its licensing agreement.¹⁴⁹ The court, relying heavily on Eastman Kodak,¹⁵⁰ found otherwise arguing first that because Alcatel's product was not superior or unique as compared with similar competing products, Alcatel could and did not engage in supra-competitive pricing. Second, Alcatel's licensees obtained its licenses through negotiated life-cycle pricing schemes,¹⁵¹ thus the licensees did not face "substantial information and switching costs."¹⁵² Third, Alcatel's license agreement prohibiting licensees from using the software in conjunction with competing hardware remained a long-standing policy erected prior to DGI's entry into the market.¹⁵³ Finally, a relevant market for section 2 of the Sherman Act could not be found because Alcatel's licensees were free to obtain competing switch equipment using competing expansion cards and software, as well as obtain used and aftermarket expansion cards.¹⁵⁴ In such a case, a "characterization of the expansion products market as the relevant market is at odds with market realities."¹⁵⁵

In so holding, the court correctly found that Alcatel had not attempted to monopolize the sale of expansion cards even though it bundled its software with its component hardware. By finding that there was no relevant market in expansion cards, the court implied that Alcatel did not assert control over or suppress any market in unprotected expansion cards through its licensing requirements, thus the effect of its licensing agreement was not to use its copyright to control an unprotected product.¹⁵⁶

***295 IV. Redefining Equitable Copyright Misuse in Terms of Anti-Competitive Effects**

While the finding that Alcatel's license agreement extended the scope of copyright protection beyond its boundaries was correct, future courts should not rely on Alcatel's expansion of the Lasercomb-type principled approach to misuse doctrine because it confuses copyright policy for a right-to-compete policy. Such a policy encourages copyright infringement by suggesting that, regardless of its actual effects, third parties may infringe with impunity whenever a license agreement erects an anti-competitive barrier. The Alcatel finding leads to absurd and contradictory results in finding no infringement in unauthorized 'testing' while concurrently suggesting that such 'testing' will lead to further contributory infringement, and amounts to judicial usurpation of clear Congressional policy--after all, the Constitution grants to Congress the power to define the scope of copyright.

A. The Alcatel Court's Copyright Policy Interpretation Was Inconsistent with Precedent

While the court did not frame the issue in terms of fair use or antitrust policy, it found that restricting use of the software to its own hardware components amounted to use of a copyright "to indirectly gain commercial control over products DSC does not have copyrighted."¹⁵⁷ Such a finding is consistent with the principle that a copyright attaches solely to the work described by the copyright, and may not be used to garner additional royalties or control over a separate component not protected by that copyright.¹⁵⁸ In effect, then, the court invalidated the license term and refused to grant an injunction against infringement (by a non-licensee) precisely because enforcement would allow Alcatel to control the use of the copyrighted software so as to preclude competitors from gaining access necessary to compete in a separate market. Thus, by refusing to permit DGI to infringe its copyright for a commercially competitive purpose, Alcatel extended its valid copyright beyond the terms of the grant.¹⁵⁹

This type of analysis ignores the principle outlined by Motion Picture, which is premised on a distinction between use and access; a patent holder may not offer access in exchange for restrictions on post-sale use of the protected device by a bona fide licensee.¹⁶⁰ The license agreement at issue in Alcatel prevented licensees from using the software with competing hardware. Under a Motion Picture-type analysis, Alcatel's licensees presumptively have the power to use the software in *296 any non-infringing way they wish; a contract term restricting this right should be invalid.¹⁶¹ In other words, so long as the protected expression is not copied in a way which would deny the copyright holder the benefit of a royalty, one who has paid for access to the copyright cannot be denied the right to use it.¹⁶² But the Alcatel court's reasoning mistakenly suggests that contract and intellectual property are equivalent;¹⁶³ an impermissible contract term between a licensor and a licensee is in effect treated by the court as an impermissible term of contract between the world and the copyright holder, not just as between the parties, rendering the copyright at least temporarily invalid and giving anyone the right to use the work based

upon a relationship between the copyright holder and the world. Such a result does not comport with the traditional scope of copyright cases.¹⁶⁴

B. Granting a Right to Compete

1. Lasercomb is Distinguishable on Its Facts

The result suggested above, however, may be consistent with the result sought by the copyright misuse doctrine, which does not require a contractual or competing relationship between the copyright holder and the infringer, relying instead on an equitable balancing of the protections and limits of copyright.¹⁶⁵ The Lasercomb court's holding, recognizing a fundamental distinction between idea and expression, found that a license agreement which prevents its licensees from developing any competing software acted to extend copyright protection to unprotectable ideas.¹⁶⁶ This effected an extension of the protections copyright affords to an area outside of its allowable scope, preventing any independent development of the idea which the software expressed,¹⁶⁷ albeit reminding us of the inherent difficulties of offering copyright protection to software.¹⁶⁸

The license agreement in Alcatel did not involve a non-compete clause; it did not prevent anyone from exploiting the ideas expressed in Alcatel's software, or from exploiting anyone else's ideas.¹⁶⁹ Instead, and without analysis, the court found that the result of restricting the use of Alcatel's software to its own *297 components somehow limited third-party access to both ideas and its expression, rendering the 'extension' of the copyright anti-competitive.¹⁷⁰ Thus, the Alcatel court in effect ignored the distinction between ideas and expression, instead reasoning that the anti-competitive result of a license agreement which restricted access made it technically difficult, but not impossible, for a competitor to develop a microprocessor card with which it could effectively compete.¹⁷¹ Was the court suggesting that Alcatel's software was an 'essential facility?'¹⁷²

Furthermore, the court assumed, without analysis, that an independent market for microprocessor cards compatible with or capable of interacting with Alcatel's system existed.¹⁷³ As a result, by granting DGI the freedom to test its product, which involves downloading a copy of Alcatel's software in violation of the license agreement, the court effectively granted DGI a right to compete--a right to exploit the copyright without compensation such that it may develop a derivative competitive market for microprocessor cards.¹⁷⁴ The court suggested that enjoining DGI from future infringement would help Alcatel secure a limited copyright-based monopoly in microprocessor cards,¹⁷⁵ despite the court's expansive analysis and rejection of any antitrust-based monopolistic claim.¹⁷⁶

Indeed, although the court did not suggest that Alcatel attempted to use its copyright to violate antitrust law, by suggesting that Alcatel attempted to erect a vertical restraint of trade to achieve a monopolistic aim by refusing to allow access for competitive purposes, the court incorrectly imported an antitrust standard into its analysis.¹⁷⁷ Such an inference fails primarily because refusals to license and refusals to grant access are not alone sufficient to overcome the exclusive rights behind copyrights,¹⁷⁸ and secondarily because the court already had found that there was no 'relevant market' in expansion cards for Alcatel to monopolize. Because copyrights necessarily restrict competition and potentially allow limited monopolies over the distribution of the attached expression, incantations of anti-competitive conduct based on a perceived future effect of a use-restriction in a *298 license agreement are improper where the license agreement does not actually restrict competition¹⁷⁹ in either the switch software or its microprocessor card market, if indeed the components comprise independent parts of a separate market.¹⁸⁰ But irrespective of the court's antitrust finding, the assertion that Alcatel may not preclude DGI from using Alcatel's software to develop a competing hardware component suggests that Alcatel may not refuse to grant access or license its software. Such a suggestion is not consistent with the idea that "a copyright holder can exercise its right to exclude others from using the protected expression, even if the exclusion impacts competition in more than one relevant antitrust market."¹⁸¹

2. The Alcatel Court Fails to Consider the Result of Infringement

The court in Triad Systems held that the bundling of copyrighted software in a system including non-protected hardware with a restrictive license agreement did not give carte blanche to competitors to appropriate that software to provide competing services, even though the effect of the agreement was to tie the purchase of the software with an obviously unprotectable service agreement.¹⁸² The license agreement prohibited third-party access to and use of the diagnostic software without an additional fee, the use of which being necessary to perform the (unprotectable) service.¹⁸³ The court in Triad Systems found that the license agreement did not inhibit independent development of diagnostic service software capable of competing.¹⁸⁴

Unlike Triad Systems, the court in Alcatel failed to consider whether DGI's use of Alcatel's software would result in DGI's commandeering Alcatel's software to profit from "using it for the very purpose for which, and in precisely the same manner in which, it was designed to be used."¹⁸⁵

DGI's use of the software for 'testing' purposes cannot properly be seen as using the software to provide the same essential service: enabling the switch matrix to guide and convert telephone signals through the system.¹⁸⁶ However, because DGI's purpose behind its misappropriation and infringement was to develop a product which would collaterally infringe upon Alcatel's copyright, it is arguable that the effect of this development would enable DGI to provide a 'service' which would necessarily require access to and use of Alcatel's software, thus getting a *299 free ride by using that copyrighted software to compete in an Alcatel-type microprocessor card market.¹⁸⁷

Although the microprocessor cards are not an essential part of a protected process, they necessarily access and use Alcatel's software in performing the function of the software, and the court found that DGI would be participating in contributory infringement of Alcatel's software copyright.¹⁸⁸ As such, DGI's potentially competing microprocessor cards could not perform but one function: to interact with and download Alcatel's software. Under current law, unauthorized downloading results in the making of an infringing copy, thus the making of a device which copies and 'uses' the software would be contributory infringement because it derives economic benefit from the use of the substitute copy for precisely the same purpose for which the original was intended.¹⁸⁹ Because the microprocessor card retrieves a copy of the software--the ideas plus the expression--the card can be seen as part of an integrated medium of expression, embodying a copyrighted software 'process' by which the system functions. Under a Dawson Chemical and an amended § 271 public policy analysis,¹⁹⁰ even though the process itself is not protected and Alcatel is not properly 'denied' royalties from the sale of such cards, the cards nevertheless access, copy, and use the software, form an essential and integrated component of exercising the software copyright, and there is no substantial 'non-infringing' use for the DGI-built microprocessor card. Alcatel's licensing agreement extending the protection of the copyright to the microprocessor card may be within the public policy in assuring that others do not "share in the spoils, even though they had contributed nothing" to the development of the software and the expression embodied within.¹⁹¹

3. Testing as Reverse Engineering

The licensing agreement at issue in Alcatel did not prevent independent development of Alcatel's software ideas, although it did restrict unauthorized access to the ideas expressed, raising the concern that such restriction impinges upon the public policy behind the grant of copyright.¹⁹² As such, the court in Alcatel assumed away DGI's testing of its cards (by which copying occurs) at *300 Alcatel's licensee's location as non-infringing use.¹⁹³ The court found that these acts did not amount to copyright infringement, and by its holding effectively characterized such 'reverse engineering' processes as necessary to satisfy a general competitive need.¹⁹⁴

The court seemed preoccupied with Alcatel's ability to restrict access to its software, and while the court did not address a fair use claim, such a public policy focus recalls a Sega-type analysis, the question to be asked whether such copying provided the only means by which to obtain access to unprotectable elements contained within Alcatel's software.¹⁹⁵ Indeed, the court seemed to stake its misuse analysis heavily upon its assumption that the only way DGI could gain access to the functional elements of Alcatel's software was through 'infringing' activity.¹⁹⁶

Fair use, unlike copyright misuse, is a statutory defense to infringement premised upon a public policy of encouraging creative expression, requiring a court to address whether access to the software itself was authorized.¹⁹⁷ The court in Alcatel should have used a fair use analysis to determine whether DGI's activities fell within a valid reverse engineering context.¹⁹⁸ DGI did not reverse engineer in the traditional sense; it used a copy to test whether or not it could market its product. Arguably, such testing activity is not "commercial exploitation of protected expression" as DGI made no attempt to market a 'copy' of Alcatel's software.¹⁹⁹ Use of a fair use analysis for copyrighted software more properly balances copyright and competition policy without coming to the untenable conclusion that unauthorized access and infringement is essentially a fair use even where the purpose is to develop an infringing-capable product.²⁰⁰

*301 C. The Alcatel Decision in Light of the Digital Millennium Copyright Act

The legislative history behind the Digital Millennium Copyright Act is instructive. Congress recognized the utility of fully

maximizing the social gain achieved by the dissemination of ideas by allowing reverse engineering of software lawfully obtained.²⁰¹ Congress also sought to minimize the potentially destructive market impact copyright protection can obtain by permitting service providers the ability to utilize the function of a computer (which is to ‘run’ software) for the limited purpose of servicing computer hardware.²⁰²

Implicit in these provisions is the notion that software developers should be able to restrict and otherwise assert control over access to the software itself, rather than merely the expression.²⁰³ The provision authorizing specific and limited use by service providers in the course of servicing hardware raises the presumption that copyright holders are blessed with the ability to exert control over how and where their copyrighted software is copied and used.²⁰⁴

Without reflecting on the wisdom of these provisions, they tend to suggest that in the absence of authorized or licensed use, or fair use,²⁰⁵ restricting access through license agreements or technical measures will rarely be violative of copyright policy,²⁰⁶ thus a defendant’s misuse defense may not succeed where he has infringed or induced an infringement of a copyright to obtain access to the software.²⁰⁷ Applied in the context of Alcatel, allowing DGI to test its equipment using Alcatel’s software is not within the allowable exception expressed by the DMCA; DGI gained access to and copied the software without a right to use the software, which sets DGI’s act outside the permissible scope of Section 1201(f).²⁰⁸ Alcatel’s holding that such testing is necessary for DGI to compete ignores the Congressional mandate that, while recognizing reverse engineering as a legitimate means of better balancing the competition vs. creativity dichotomy in ‘functional’ software, grants greater power to copyright owners to negotiate access to the ideas embedded in software by defining who may use the expression in the software.²⁰⁹

***302 V. Conclusion**

The court in Alcatel expanded the scope copyright misuse beyond its equitable scope. The license agreement in Alcatel sought to tie its copyright protection in its software over its hardware by prohibiting the use of the software on non-Alcatel microprocessor cards. Such post-sale use restrictions are generally beyond the scope of copyright traditionally defined and a misuse of copyright. However, if DGI, as the court found, intended to contributorily infringe Alcatel’s copyright by providing competing cards which act solely to access, copy, and use the copyrighted work in an integrated medium of expression, the effect of the license restriction merely prevents its software copyright from infringement and unauthorized use. The use restriction does not prevent a lawful licensee from gaining access to the ideas within the work, does not prevent its licensees from using competing products, does not garner market power over unprotected products, and does not undermine incentives to innovate.

The court’s holding provides little guidance to copyright holders over the extent to which a license agreement can prevent or refuse third-party access to its software, and can be interpreted to mean that competitors have a right to gain access, irrespective of the generally understood principle that copyright holders have the freedom to control and restrict access through imposing a cost on the right to use the copyrighted work. The mere fact that such a license agreement has anti-competitive affects should not be grounds for copyright misuse. A copyright confers a limited monopoly over the reproduction of that work, and anti-infringement use-restrictions, applied in the context of this case, are consistent with the policy Congress has directed. While an equitable copyright misuse doctrine provides the most appropriate guidance in determining the scope and strength of a copyright, courts should ‘balance’ the equities and relative weight of the goals behind intellectual property protection.

Footnotes

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¹ DSC Communications Corp. v. DGI Techs., Inc., 81 F.3d 597, 598, 38 U.S.P.Q.2d (BNA) 1699, 1700 (5th Cir. 1996) [hereinafter DSC]. Alcatel USA, Inc. was formerly DSC Communications Corporation. Alcatel USA, Inc. v. DGI Technologies, Inc., 166 F.3d 772, 777, 49 U.S.P.Q.2d (BNA) 1641, 1642 (5th Cir. 1999) [hereinafter Alcatel].

² Id. The three components are more properly defined as a switch matrix, a trunk/line interface system containing microprocessor

cards, and a mass storage frame containing the software operating system. Id.

3 Id. at 599, 38 U.S.P.Q.2d at 1700.

4 DGI competed with Alcatel in manufacturing telephone expansion cards able to function on Alcatel's equipment but not containing firmware capable of downloading software. See Alcatel, 166 F.3d at 778, 49 U.S.P.Q.2d at 1643.

5 Also referred to as decompilation, "reverse engineering is the act of starting with the known product and working backward to derive or divine the process which aided in its development or manufacture." John G. Mills, Possible Defenses To Complaints For Copyright Infringement and Reverse Engineering of Computer Software: Implications For Antitrust And I.P. Law, 80 J. Pat. & Trademark Off. Soc'y. 101, 105 (Feb. 1998). Reverse engineering involves abstracting a software program's source and object code, and necessarily involves 'intermediate' copying of the software. Computer software is written using a computer language such as Fortran or Pascal, the finished 'manuscript' being its 'source code'. Id. A 'compiler' translates this source code into its binary elements, or 'object code.' Id. "In order...to make an improved software product or to make diagnostic software for aftermarket services, these companies must have access to the source code of their competitor's products that will teach them how the program actually functions." Id. at 106.

6 Alcatel, 166 F.3d at 779, 49 U.S.P.Q.2d at 1644 .

7 Id. According to the court, DGI "could have developed its own computer code to operate its card, but [DGI] realized that copying [Alcatel's] system was faster and cheaper." Id. at 790, 49 U.S.P.Q.2d at 1654.

8 DSC Communications Corp v. DGI Technologies, Inc., 81 F.3d 597, 599, 49 U.S.P.Q.2d (BNA) 1699, 1701 (5th Cir. 1996).

9 Id.

10 Id. at 599-600, 38 U.S.P.Q.2d at 1701

11 Id. at 600-02, 38 U.S.P.Q.2d at 1701-02 (rejecting Alcatel's claim that the lower court abused its discretion in finding that Alcatel failed to demonstrate for a preliminary injunction that it was likely to succeed on the merits of an infringement claim. Id. at 600).

12 Alcatel, 166 F.3d at 780, 49 U.S.P.Q.2d at 1645.

13 U.S. Const. art. I, § 8, cl. 8.

14 Jay Dratler, Licensing of Intellectual Property, § 6.01 (1999 Edition) (citing An Act Concerning Monopolies and Dispensations with Penal Laws, and the Forfeitures thereof, 21 Jac. 1, ch. 3 (1623)) (opining that idea of conferring limited intellectual property protection stimulates innovation in the short run in return for long term economic and competitive growth found its roots in Statute of Monopolies, enacted in 1623 England which prohibited monopolies but protected patents for limited duration). The author suggests that adherence to this principle requires a careful balancing of the principles behind intellectual property and antitrust law, with intellectual property allowing its holders a limited monopoly by which to recover a financial "reward" through supply-side supra-competitive pricing, which may in fact harm consumers and competitors. Id. Nevertheless, the author notes that patents (but not necessarily other forms of intellectual property protection) in and of themselves have always been exempt from antitrust scrutiny precisely because the benefits of innovation outweigh adverse effects on competition. Id.

15 See Raymond T. Nimmer, The Law of Computer Technology, 1-8 (1999)

- 16 See, e.g., 17 U.S.C. § 103 (1994); 17 U.S.C. § 106 (1994 & Supp. V 1999); 17 U.S.C. § 106A (1994).
- 17 See 17 U.S.C. § 117 (1994 & Supp. V 1999). See also National Commission on New Technological Uses of Copyrighted Works, Final Report 1 (1979) (recommending extension of copyright protection to software programs).
- 18 See generally, William C. Holmes, *Intellectual Property & Antitrust Law*, Section 36 (1999) (citing and discussing several cases).
- 19 See generally Dratler, *supra* note 14, at § 5.02.
- 20 See, e.g., *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 32 U.S.P.Q.2d (BNA) 1385 (1st Cir. 1994) (referring a copyright holder's constructing terms of making copyrighted work available, while exclusionary, is nevertheless presumptively valid exercise of copyright power). See *infra* note 98 and accompanying text.
- 21 See 17 U.S.C. § 102(b) (1994).
- 22 See *supra* note 14 and accompanying text.
- 23 See 17 U.S.C. §§107-121 (1994 & Supp. V 1999).
- 24 See Ramsey Hanna, Note, *Misusing Antitrust: The Search For Functional Copyright Misuse Standards*, 46 *Stan. L. Rev.* 401, 409-10 (Jan. 1994) (noting that because "software serves a functional purpose," competitors may not be able to "compete by introducing functionally equivalent products if they lack access to necessary productive resources"). "[S]oftware copyrights may serve as exclusionary devices," because software derives its value only where hardware is capable of reading it, thus raising the concern that a successful producer of both may be able to restrict competition by preventing competitors from developing compatible products. *Id.*
- 25 Christopher S. Cantzler, *State Street: Leading the Way to Consistency for Patentability of Computer Software*, 71 *U. Colo. L. Rev.* 423, 433 (2000).
- 26 A copyright confers upon the holder upon execution of an original work in a tangible form. There is no need for the holder to submit its copyrighted work to the Copyright Office unless the holder initiates an infringement action. Thus, unlike patents which attach upon submission to the Patent and Trademark Office, a copyright enables the holder to maintain a greater level of control over its dissemination into the public forum, although with respect to software, the greater protection afforded copyrights over patents is of little economic consequence because of the rapid development rate. See Robert C. Scheinfeld & Gary M. Butter, *Using Trade Secret Law to Protect Computer Software*, 17 *Rutgers Computer & Tech. L.J.* 381, 405-407 (1991).
- 27 See, e.g., *Motion Picture Co. v. Universal Film Co.*, 243 U.S. 502 (1917) (overruling *Henry v. A. B. Dick Co.*, 224 U.S. 1 (1913)); *Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co.*, 77 F. 288 (6th Cir. 1896).
- 28 See Cantzler, *supra* note 25 (noting that computer software code language can serve multiple functions and exist in both copyright and patent "provinces," including use to express an author's idea and use as a "tool which is used to produce a certain result in the computer").
- 29 See, e.g., *Sony Corp. v. Universal City Studios*, 464 U.S. 417, 439, 220 U.S.P.Q. (BNA) 665 (1984) (noting that patent law is an appropriate reference in copyright law cases "because of the historic kinship between patent law and copyright law").
- 30 243 U.S. 502.

31 Id. at 509. But cf. 17 U.S.C. §106 (1994 & Supp. V 1999) (establishing that the copyright owner has the exclusive right to reproduce and distribute copies).

32 Id. at 512-13.

33 Id. at 512, 516. (“The exclusive right granted in every patent must be limited to the invention described...it is not competent for the owner of a patent to in effect extend the scope of its patent monopoly by restricting the use of materials necessary in its operation, but which are no part of the patented invention.”).

34 See id. at 514-15 (rejecting argument that because the inventor may withhold the patented device from the public he may impose any condition upon its use in exchange for its becoming public, arguing that once “he consented to use it himself or through others, such use immediately fell with the terms the statute...he is thereby restricted to the use of the invention as it is described...”).

35 See James A.D. White, *Misuse or Fair Use: That is the Software Copyright Question*, 12 *Berkeley Tech. L.J.* 251, 283 (1997) (arguing that because a software copyright confers greater power upon its holder than traditional works in the fact that it is a functional expression of ideas, it necessarily “can be used to withhold access to the ideas underlying the expression, and can also prevent others from building compatible products”). But cf. supra note 99 (discussing *Supermarket of Homes*).

36 A defendant in a copyright or patent infringement action may allege misuse as an affirmative defense, which will not invalidate the patent or copyright, but merely prevent the holder from succeeding in injunctive relief. A finding of misuse does not prevent the plaintiff from correcting the “misuse” and reasserting infringement. Furthermore, a defendant need not be in a competitive relationship with the plaintiff alleging infringement for the defense to succeed. See Raymond T. Nimmer, *The Law of Computer Technology*, § 7.03[2] (1999).

37 See also *Lasercomb Am., Inc. v. Reynolds*, 911 F.2d 970, 15 U.S.P.Q.2d (BNA) 1846 (4th Cir. 1990) (relying on *Morton Salt Co. v. G. S. Suppiger* patent misuse doctrine in developing copyright misuse doctrine). But see Note, *Clarifying The Copyright Misuse Defense: The Role of Antitrust Standards and First Amendment Values*, 104 *Harv. L. Rev.* 1289 (1991) (arguing that copyright misuse defense more effectively represents and protects values underlying copyright when courts look first to whether alleged misuse contravenes copyright and first amendment policy by inhibiting dissemination of ideas, rather than rely on incantations of patent misuse).

38 See *Morton Salt Co. v. G. S. Suppiger Co.*, 314 U.S. 488, 52 U.S.P.Q. (BNA) 30 (1942) (holding that plaintiff who attempted to use patent to restrain competition in sale of unpatented item used patent in manner violative of public policy behind patent grant, invoking equitable decision not to grant relief against infringing defendant).

39 See Nimmer & D. Nimmer, *Nimmer On Copyright*, §13.09 (1990) (discussing copyright misuse).

40 *Morton Salt*, 314 U.S. at 494 (reiterating that a patent holder, having “an exclusive privilege granted in furtherance of a public policy, may not claim protection of his grant by the courts where it is being used to subvert that policy,” where the conduct has an “adverse effect upon the public interest”). See also Marshall Leaffer, *Engineering Competitive Policy and Copyright Misuse*, 19 *U. Dayton L. Rev.* 1087, 1101 (noting that prior to enactment of Patent Misuse Reform Act of 1988, patent misuse doctrine had received continual criticism for having “vague principles that overlap antitrust law...reduc[ing] the incentive to innovate while discouraging pro-competitive licensing practices that disseminate patented technology”).

41 320 U.S. 661, 60 U.S.P.Q. (BNA) 21 (1943). See, e.g., 35 U.S.C. § 271(b) (1994 & Supp. IV 1998) (stating that “whoever actively induces infringement of a patent shall be liable as an infringer”).

42 *Mercoid Corp.*, 320 U.S. at 661, 60 U.S.P.Q. at 21.

43 Id. at 663-64, 60 U.S.P.Q. at 24.

44 Id. at 667. The court insisted that permitting a patent owner to use a patent to protect parts of patented device which are not covered by the patent would result in the patent being “diverted from its statutory purpose and become a ready instrument for economic control in domains where anti-trust acts or other laws not the patent statutes define public policy.” Id. at 666. The Court continued that “such a vast power to multiply monopolies at the will to the patentee would carve out exceptions to the anti-trust laws which Congress has not sanctioned.” Id. at 667, 60 U.S.P.Q. at 26.

45 Id. at 668, 60 U.S.P.Q. at 27.

46 Id. at 668-69, 60 U.S.P.Q. at 27 (overruling *Leeds & Catlin Co. v. Victor Talking Machine Co.* (213 U.S. 325 (1909))), which held that anyone who sells an unpatented part of a combination patent may be liable under contributory infringement doctrine.

47 See id. at 667-69, 60 U.S.P.Q. at 26-27.

48 “The result of this decision, together with those that preceded it, is to limit substantially the doctrine of contributory infringement.” Id. at 669.

49 See *Dawson Chem. Co. v. Rohm & Haas, Co.*, 448 U.S. 176, 203, 206 U.S.P.Q. (BNA) 385, 407 (1980)

50 See 35 U.S.C. §271 (1994 & Supp. IV 1998). Subsection (c) provides that
Whoever offers to sell or sells...a component of a patented machine...for use in practicing a patented process, constituting a material part of the invention...and not a...commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.
Subsection (d) provides that
No patent owner...shall be denied relief or deemed guilty of misuse or illegal extension of the patent right [for] (1) deriv[ing] revenue from acts which if performed by another without his consent would constitute contributory infringement...(2) licens[ing] or authoriz[ing] another to perform acts which if performed without his consent would constitute contributory infringement....

51 See *Dawson Chem.*, 448 U.S. at 222, 206 U.S.P.Q. at 389. Rohm manufactured and sold a chemical, the commercial application of which was limited to use in connection with Rohm’s patented process, and which was sold to customers with an implied license to use the chemical in the application of the patented process, its only possible use. Id. at 186, 206 U.S.P.Q. at 391. Rohm claimed that Dawson had contributorily infringed by manufacturing and selling the chemical, which deprived Rohm of its royalties on the patented process, to which Dawson replied by alleging that Rohm had misused its patent by tying the sale of patent rights to the purchase of the chemical. Id.

52 The Court noted that “the provisions of § 271(d) effectively confer upon the patentee, as a lawful adjunct of his patent rights, a limited power to exclude others from competition in [unpatented] nonstaple goods.” Id. at 201, 206 U.S.P.Q. at 399. Furthermore, “his power to demand royalties from others for the privilege of selling the nonstaple item itself implies that the patentee may control the market for the nonstaple good; otherwise, his ‘right’ to sell licenses for the marketing of the nonstaple good would be meaningless, since no one would be willing to pay him for a superfluous authorization.” Id. at 201, 206 U.S.P.Q.2d at 399.

53 A ‘tying’ arrangement involves conditioning the purchase of one item (tying item) upon the purchase of another item (tied item). When the tying item is a copyrighted work, some courts resolved in favor of ruling this practice illegal per se under antitrust law. However, recent decisions indicate that proof of sufficient market power which in effect forces customers to accede to such an arrangement is required. See, e.g., *In re Independent Service Org. Antitrust Litig.*, 910 F. Supp. 1537, 38 U.S.P.Q.2d (BNA) 1273 (D. Kan. 1995).

54 *Dawson Chem.*, 448 U.S. at 222, 206 U.S.P.Q. at 389.

55 See id. at 221-22, 206 U.S.P.Q. at 389-90.

- 56 See *id.* at 222, 206 U.S.P.Q. at 389.
- 57 *Id.* at 222, 206 U.S.P.Q. at 389.
- 58 See *id.* at 223, 206 U.S.P.Q. at 390 (White, J. dissenting) (marking that this decision is a “radical departure from our prior construction of the patent laws” and extended too far the interpretation of §271).
- 59 See Patent Misuse Reform Act of 1988, 35 U.S.C. 271(d) (1994 & Supp. IV 1998), providing that:
no patent owner...shall be denied relief or deemed guilty of misuse of illegal extension of the patent right by reason of his...(4) refus[ing] to license or use any rights to the patent; or (5) condition[ing] the license... or the sale of the patented product on...[the] purchase of a separate product, unless, in view of 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.
See also *infra* notes 67-68 and accompanying text.
- 60 See Nimmer, *The Law of Computer Technology*, at 4-63.
- 61 See, e.g., *PSI Repair Serv., Inc. v. Honeywell, Inc.*, 104 F.3d 811, 815 n.2 (6th Cir. 1997) (noting that *per se* and “rule of reason” analyses have merged when tying arrangements are at issue). Under §1 of the Sherman Act, a restraint of trade, in the form of tying or exclusive dealing arrangements, will be found unreasonably anti-competitive if it acts to suppress competition without a pro-competitive justification, and where there has been some concerted action by two or more parties to achieve a monopolistic end. See *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2 (1984). A monopolization violation will be found under § 2 by a finding, under a rule of reason analysis, that the accused have sufficient market power and anti-competitive conduct improperly achieving or sustaining monopoly power. See *Image Technical Serv., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 44 U.S.P.Q.2d 1065 (9th Cir. 1997).
- 62 See *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36 (1977) (applying rule of reason analysis to decide whether restrictive practice imposes unreasonable restraint of trade under Sherman Act). See also U.S. Department of Justice and FTC, *Antitrust Guidelines for the Licensing of Intellectual Property*, Section 3.4 (issued Apr. 6, 1995) (stating that application of rule of reason analysis, while generally requiring an analysis of market conditions, may be truncated where an intellectual property license restraint has no likely anti-competitive effects or where it “appears to be of a kind that would always or almost always tend to reduce output or increase prices,” and where there is no pro-competitive business justification).
- 63 See *Image Technical Serv., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 44 U.S.P.Q.2d (BNA) 1065 (9th Cir. 1997). Nevertheless, market power derived from a “superior product, business acumen, or historic accident” will not be sufficient. See U.S. Department of Justice and FTC, *supra* note 62, at §2.2. Sufficient market power may be found when a copyright owner is able to manipulate prices or control competition in a separate ‘aftermarket,’ such as computer support or software services. *Dratler*, *supra* note 14, at § 5.02, n.170. In order to determine whether a tied product market exists, courts have also had to assess whether the two “products” are sufficiently distinct. See, e.g., *PSI Repair Serv., Inc. v. Honeywell, Inc.*, 104 F.3d 811 (6th Cir. 1997). To this end, courts have required an analysis of the actual market effect of such conduct. See *Dratler*, *supra* note 14, at § 5.02, n.160 (discussing several approaches courts have taken in assessing separate markets for antitrust purposes, including economic “cross-elasticity of demand,” interchangeability, “practical indicia of market separation,” an assessment of barriers to entry and expansion, among other factors).
- 64 *Virtual Maintenance, Inc. v. Prime Computer, Inc.*, 11 F.3d 660 (6th Cir. 1993). See also *Eastman Kodak, Co. v. Image Technical Serv., Inc.*, 504 U.S. 451 (1992) (finding that customers were “locked-in” to service aftermarket where the costs of switching to a competing copier product were far greater than incurring Kodak’s higher service aftermarket costs); *Image Technical Serv., Inc v. Eastman Kodak*, 125 F.3d at 1195 (explaining that customer’s lack of access to life-cycle pricing information resulted in a “locked-in” effect).
- 65 *Virtual Maintenance*, 11 F.3d at 666.

- 66 See, e.g., *Jefferson Parish Hosp. Dist. No. 2*, 466 U.S. at 38 (O'Connor, J., concurring) (“A common misconception has been that a patent or copyright, a high market share, or a unique product that competitors are not able to offer suffices to demonstrate market power. While each of these three factors might help to give market power to a seller, it is also possible that a seller in these situations will have no market power”). Cf. *United States v. Loew’s, Inc.*, 371 U.S. 38, 135 U.S.P.Q. (BNA) 201 (1962) (market power presumed in copyrighted films).
- 67 See *Virtual Maintenance*, 11 F.3d at 666. See also *Dratler*, supra note 14, at §5.02 (asserting that “market power should not be presumed to flow from the mere existence of intellectual property protection, but should be a required element of proof in any antitrust claim to which it is relevant”). Comparatively, courts presumed a patent conferred market power in assessing whether a patent holder misused the patent by a tying arrangement. Congress in 1988 enacted the Patent Misuse Reform Act which, while leaving it to the courts to determine the scope of patent misuse, nevertheless imposed a requirement that for purposes of assessing a vertical restraint, courts must analyze the level of actual market power a patent holder obtains, rather than presume it. See 35 U.S.C. §271(d) (1994 & Supp. IV 1998). See also U.S. Department of Justice and FTC, supra note 62, at § 2.2 (stating that “[t]he agencies will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner” because of the likely existence of close substitutes that would prevent the exercise of market power).
- 68 *Dratler*, supra note 14, at §.02 n.143 (arguing that to show barriers to entry “impede entry and expansion,” resulting in antitrust violation, level market power requires an analysis of the structural makeup (such that pro-competitive conduct is not ipso facto considered an antitrust barrier) and the actual market effect of such barrier).
- 69 *Id.* at n.190.1 (defining an essential facility as “a facility that cannot reasonably be duplicated and to which access is necessary if one wishes to compete...If a monopolist controls an essential facility, its refusal to share the essential facility with competitors may constitute an act of monopolization”) (quoting *Fishman v. Estate of Wirtz*, 807 F.2d 520, 539 (7th Cir. 1986)). (noting that the doctrine has never been endorsed by the Supreme Court and has been interpreted strictly in lower courts.)
- 70 See e.g., *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 32 U.S.P.Q.2d 1385 (1st Cir. 1994) (holding that under the Sherman Act, “while exclusionary conduct can include a monopolist’s refusal to license a copyright, an author’s desire to exclude others from use of its copyrighted work is a presumptively [but rebuttable] valid business justification for any immediate harm to consumers”).
- 71 *Dratler*, supra note 14, at § 5.02, n.190.40. But cf. *Intergraph Corp. v. Intel Corp.*, 3 F. Supp.2d 1255 (N.D. Ala. 1998) (holding that even though plaintiff was non-competitive customer of defendant, defendant’s monopoly power in its microprocessors and related technical information was essential facility, requiring defendant continue supplying computer chips and information). Vacated, *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 52 U.S.P.Q.2d (BNA) 1641 (Fed. Cir. 1995).
- 72 See, e.g., *In Re Indep. Serv. Orgs. Antitrust Litig.*, 989 F. Supp. 1131 (D. Kansas 1997) (rejecting argument that Xerox had misused its patents and copyrights by denying access to an essential facility through refusals to license software necessary to provide service to Xerox’s copier equipment). “We find nothing in the Copyright Act which limits copyright holder’s right to exclude to a single relevant antitrust market. A copyright holder’s right to exclude is limited by the scope of protectable expression that is stated in the copyright, not by an analysis of the relevant antitrust markets... [A]ccordingly, Xerox’s unilateral refusal to license its copyrights does not constitute either copyright misuse or unlawful exclusionary conduct under the antitrust laws. *Id.* at 1143.
- 73 *Lasercomb Am., Inc. v. Reynolds*, 911 F.2d 970, 978, 15 U.S.P.Q.2d (BNA) 1846, 1853 (4th Cir. 1990).
- 74 See *id.* at 972, 15 U.S.P.Q.2d at 1849. According to the court, while the 99 year provision is not dispositive to the issue of misuse in the case, it nevertheless could itself be copyright misuse because it “could be longer than the life of the copyright itself.” *Id.* at 978, 15 U.S.P.Q.2d at 1853-54.
- 75 *Id.* at 977, 15 U.S.P.Q.2d at 1853.
- 76 *Id.* at 979, 15 U.S.P.Q.2d at 1854. The court noted that the area outside of the copyright which Lasercomb attempted to monopolize

through its license agreement was the idea of computer-assisted die-making software. *Id.*; See also Phillip Abromats, Copyright Misuse And Anticompetitive Software Licensing Restrictions: *Lasercomb America, Inc. v. Reynolds*, 52 U. Pitt. L. Rev. 629, 651 (1991) (asserting that the no-compete clause at issue in *Lasercomb* is objectionable precisely because it acts to deprive third-party software developers from an opportunity to improve upon the ideas embraced by particular company's software experience even though similar products appear on an industry-wide level). The author further notes that because non-compete clauses in general raise anti-competitive barriers to market entry, "the public is deprived of the best and most efficient efforts of software competitors who could otherwise study the vendor's product in action." *Id.* at 653.

77 *Lasercomb*, 911 F.2d at 975-77, 15 U.S.P.Q.2d at 1851-52. ("We are of the view...that since copyright and patent law serve parallel public interests, a misuse defense should apply to infringement action brought to vindicate either rights.").

78 *Id.* at 978, 15 U.S.P.Q.2d at 1853. "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 manner violative of the public policy embodied in the grant of copyright." *Id.* Nevertheless, "the analysis necessary to a finding of misuse is similar to but separate from the analysis necessary to a finding of antitrust violation." *Id.* at 979, 15 U.S.P.Q.2d at 1854.

79 *Service & Training, Inc. v. Data Gen. Corp.*, 963 F.2d 680, 683, 23 U.S.P.Q.2d (BNA) 1102, 1104 (4th Cir. 1992).

80 See *id.* at 690, 23 U.S.P.Q.2d at 1109. See also *Saturday Evening Post Co. v. Rumbleseat Press, Inc.*, 816 F.2d 1191, 1199-200, 2 U.S.P.Q.2d (BNA) 1499, 1505-06 (7th Cir. 1987) (holding valid a license agreement forbidding licensee from contesting validity of copyright (no-contest clause) unless found violative of antitrust law; copyright misuse improper method of analysis because agreement here was a bargained-for reduction of royalties due on copyright and did not prevent others from challenging validity). The court noted further that such a no-contest clause may be monopolistic and in restraint of trade, but because copyrights in general confer little market power, it makes little sense to erect a per se rule of misuse illegality without showing that it actually restrains trade. *Service & Training*, 963 F.2d at 690, 23 U.S.P.Q.2d at 1109.

81 *Id.* at 686, 23 U.S.P.Q.2d at 1105-06

82 *Id.* at 690, 23 U.S.P.Q.2d at 1109. See also *Tricom, Inc. v. Electronic Data Sys. Corp.*, 902 F. Supp. 741, 36 U.S.P.Q.2d (BNA) 1778 (E.D. Mich. 1995) (holding that as a matter of copyright law, licensor could not be compelled to license its software to a competitor in order for it to compete in a secondary market under license agreement precluding third-party access).

83 See *ISO Antitrust Litig. v. Xerox Corp.*, 910 F. Supp. 1537, 1542, 38 U.S.P.Q.2d (BNA) 1273, 1277 (D. Kansas 1995) (quoting *Service & Training, Inc. v. Data Gen. Corp.*, 737 F. Supp. 334, 344 (D. Md. 1990), *aff'd*, 963 F.2d 680, 23 U.S.P.Q. 2d (BNA) 1102 (4th Cir. 1992)).

84 See *ISO Antitrust Litigation*, 910 F.Supp. at 1542, 38 U.S.P.Q.2d at 1277 (finding that defendant used valid monopoly power over diagnostic software and related manuals to gain monopoly power over the market for services for its copiers, an area in which defendant had no copyright).

85 *Triad Sys. Corp. v. Southeastern Express Co.*, 64 F.3d 1330, 36 U.S.P.Q.2d (BNA) 1028 (9th Cir. 1995).

86 *Id.* at 1333, 36 U.S.P.Q.2d at 1030.

87 *Id.* at 1337, 36 U.S.P.Q.2d at 1033.

88 *Id.*

- 89 Id., 36 U.S.P.Q.2d at 1033-34.
- 90 Practice Management Info. Corp. v. The Am. Med. Ass'n., 121 F.3d 516, 520, 45 U.S.P.Q.2d (BNA) 1780, 1783 (9th Cir. 1997), cert. denied, 525 U.S. 810 (1998).
- 91 Id. at 521, 43 U.S.P.Q.2d at 1783.
- 92 See PRC Realty Sys., Inc. v. National Ass'n. of Realtors, Nos. 91-1125, 91-1143, 1992 WL 183682, at *11 (4th Cir. 1992).
- 93 Id. at *12.
- 94 See, e.g., Aaron Xavier Fellmeth, Copyright Misuse and the Limits of the Intellectual Property Monopoly, 6 Intell. Prop. L. 1 (1998) (arguing that copyright misuse should be primarily a public policy-based doctrine which references antitrust principles when conduct is anti-competitive in nature and outside the scope of copyright).
- 95 Cf. Atari Games Corp. v. Nintendo of Am. Inc., 975 F.2d 832, 24 U.S.P.Q.2d (BNA) 1015 (Fed. Cir. 1992). The court entertained a claim by defendant that plaintiff's licensing agreement prohibiting licensees from offering competing games for use with plaintiff's copyrighted software system amounted to copyright misuse. The court maintained that copyright misuse was an entirely equitable matter, requiring a showing of "clean hands." Id. at 846, 24 U.S.P.Q.2d at 1026. Thus, because the defendant obtained plaintiff's software source code by misrepresentation before the Copyright Office, defendant's own unclean hands precluded it from asserting copyright misuse. Id. See also QAD, Inc. v. ALN Assoc., Inc., 770 F. Supp. 1261, 19 U.S.P.Q.2d (BNA) 1907 (N.D. Ill. 1991) (rejecting antitrust violation requirement in copyright misuse doctrine, but finding that plaintiff misused copyright by filing an infringement claim where plaintiff had no lawful copyright).
- 96 See, e.g., Broadcast Music, Inc. v. Columbia Broad. Sys., 441 U.S. 1 (1979); F.E.L. Publications, Ltd. v. Catholic Bishop of Chicago, 214 U.S.P.Q. (BNA) 409, 214 U.S.P.Q. (BNA) 409 (7th Cir. 1982), cert. denied, 459 U.S. 859 (1982); M. Witmark & Sons v. Berger Amusement Co., 80 F. Supp. 843, 79 U.S.P.Q. (BNA) 6 (D. Minn. 1948), aff'd sub. nom. 177 F.2d 515 (8th Cir. 1949).
- 97 See supra note 53. See also Holmes, supra note 18, at § 36.01 (discussing distributional restraints of copyrighted material).
- 98 See, e.g., Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147, 36 U.S.P.Q.2d (BNA) 1385 (1st Cir. 1994) (holding that copyright holder's refusal to license is entitled to a valid business justification presumption absent clear exclusionary conduct by a monopolist unjustifiably harming competitive process). According to the court, because defendant based a copyright misuse defense on an antitrust-violative unilateral refusal to license which ultimately failed, defendant's misuse defense also failed. Id. at 1170, 36 U.S.P.Q.2d at 1343.
- 99 See, e.g., Supermarket of Homes v. San Fernando Valley Bd. of Realtors, 786 F.2d 1400, 1408, 230 U.S.P.Q. (BNA) 316, 320 (9th Cir. 1986) (holding copyright misuse defense without merit because alleged discriminatory conduct in order to force 'licensee' to comply with terms of agreement, even though anti-competitive, did not amount to violation of copyright law or antitrust law). Plaintiff sought copyright misuse in response to defendant's counter-claim for infringement in case where 'license' limited access to home listings compilation to real estate brokers, providing specific access and use restrictions. Id. at 1404, 230 U.S.P.Q. 316, 317-18.
- 100 Data Gen. Corp., 36 F.3d at 1170, n.43, 32 U.S.P.Q.2d at 1419.
- 101 See e.g., Lotus Dev. Corp. v. Borland Int'l., Inc., 49 F.3d 807, 34 U.S.P.Q.2d (BNA) 1014 (1st Cir. 1995) (holding that a computer software menu command hierarchy is functional method of operation not copyrightable). The court noted that "[t]he primary objective of copyright is not to reward the labor of authors, but to promote the Progress of Science and useful Arts....

[[C]opyright...encourages others to build freely upon the ideas and information conveyed by a work,” thus entitling the public to build upon the uncopyrightable portion of a computer software program. *Id.* at 818, 34 U.S.P.Q.2d at 1023 (quoting *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349-50 (1991)).

¹⁰² *Sega Enter. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 24 U.S.P.Q.2d (BNA) 1561 (9th Cir. 1992). Cf. *Allen-Myland v. International Bus. Mach. Corp.*, 746 F. Supp. 520, 16 U.S.P.Q.2d (BNA) 1817 (E.D. Penn. 1990) (holding that under fact-intensive equitable rule of reason fair use analysis, defendant’s copying of licensed software program not fair use because defendant had not in fact reverse engineered, but merely copied). See also 17 U.S.C. § 107 (1994) (providing that fair use may be found by considering “the purpose and character of the use...the nature of the copyrighted work...the amount and substantiality of the portion used...and the effect of the use upon the potential market...”)

¹⁰³ *Sega Enter.*, 977 F.2d . at 1520, 24 U.S.P.Q.2d at 1567 (“The need to disassemble object code arises, if at all, only in connection with operations systems, system interface procedures, and other programs that are not visible to the user when operating--and only then when no alternative means of gaining an understanding of those ideas and functional concepts exists.”).

¹⁰⁴ *Id.* at 1518, 24 U.S.P.Q.2d at 1566. “Where there is good reason for studying or examining the unprotected aspects of a copyrighted computer program, disassembly for purposes of such study or examination constitutes fair use.” *Id.* at 1520, 24 U.S.P.Q.2d at 1568.

¹⁰⁵ *Id.* at 1519, 24 U.S.P.Q.2d at 1567.

¹⁰⁶ *Id.* See also *Atari Games Corp. v. Nintendo of Am., Inc.*, 975 F.2d 832, 24 U.S.P.Q.2d (BNA) 1522 (Fed. Cir. 1992).

¹⁰⁷ See 17 U.S.C.A. § 107 (1994) (providing an exception to § 106 grant of exclusive right, outlines a “rule of reason” analysis of factors including the 1) “purpose and character of the use,” 2) “nature of the copyrighted work,” 3) “amount and substantiality” of the copying, and 4) “the effect of the copying upon the potential market for or value of the copyrighted work”).

¹⁰⁸ *Sega Enter.*, 977 F.2d at 1522, 24 U.S.P.Q.2d at 1570.

¹⁰⁹ *Id.* at 1523, 24 U.S.P.Q.2d at 1570. See also *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 549 (1985) (stating, in addressing the fair use defense, that “the author’s consent to a reasonable use of his copyrighted work had always been implied by the courts as a necessary incident of the constitutional policy of promoting the progress of science and the useful arts, since a prohibition of such [fair] use would inhibit subsequent writers from attempting to improve upon prior works and thus... frustrate the very ends sought to be attained” (quoting H. Ball, *Law of Copyright and Literary Property* 260 (1944)).

¹¹⁰ The court noted computer programs are usually distributed in object code format, which necessarily “precludes public access to the ideas and functional concepts contained in those programs.” *Sega Enter.*, 977 F.2d at 1527, 24 U.S.P.Q.2d at 1573. Such a 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...in the public domain.” *Id.*, 24 U.S.P.Q.2d at 1573-74 (citing *Feist Publications, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340 (1991)).

¹¹¹ See *Sega Enter.*, 977 F.2d at 1526, 24 U.S.P.Q.2d at 1573. See also Leaffer, *supra* note 40, at 1095-97 (arguing that because computer software is cumulative technology, erecting a per se rule that reverse engineering is valid fair use exception to copyright protection will lead to greater efforts by software engineers and owners to implement tighter technological and contractual impediments to access, thus raising transaction costs). The author further opines that “Prohibitions of reverse engineering through decompilation would erect a serious obstacle to developers who legitimately desire to create compatible software, which may would argue is essential to innovation in the computer industry.” *Id.* at 1090-91.

¹¹² *Atari Games Corp. v. Nintendo of Am. Inc.*, 975 F.2d 832, 843, 24 U.S.P.Q.2d (BNA) 1015, 1024 (Fed. Cir. 1992) (noting in dicta that a fair use exception to infringement is available only when the alleged infringer has gained lawful access to copyrighted work).

- 113 Id. (“To invoke the fair use exception, an individual must possess an authorized copy of a literary work” (citing Harper & Row Publishers, Inc. v. National Enter., 471 U.S. 539, 562-63 (1985))
- 114 Id., 24 U.S.P.Q.2d at 1023-24. (“Fair use to discern a work’s ideas, however, does not justify extensive efforts to profit from replicating protected expression.”).
- 115 Id. “The fair use reproductions of a computer program must not exceed what is necessary to understand the unprotected elements of the work.... Any reproduction of protectable expression must be strictly necessary to ascertain the bounds of protected information within the work.” Id., 24 U.S.P.Q.2d at 1024
- 116 But see David Bender and M. Elaine Johnston, Antitrust Aspects of Reverse Engineering, 365 PLI/Pat 709, at VI(C) (June-July 1993) (observing that although Sega provides clear direction towards outlining the limits of copyright protection in terms of reverse engineering, it remains a minority view because most circuits have yet to encounter a scope of reverse engineering case). The authors also point out that contractual restrictions on reverse engineering, even if insufficient to provide grounds for a fair use defense, may nevertheless give rise to a copyright misuse defense or antitrust violation. Id. See also Leaffer, supra note 40, at 1103 (arguing that Sega may encourage misuse defenses because contractual restrictions may be seen as attempts to broaden the scope of copyright protection beyond its grant to include uncopyrightable ideas and “preclude public access to functional elements in the work”).
- 117 See MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511, 26 U.S.P.Q.2d (BNA) 1458 (9th Cir. 1993) (holding computer service provider’s activation of machine, which downloaded software into RAM, constituted copyright infringement because downloading amounts to copying in violation of Copyright Act § 106). The court reviewed software license agreements which prohibited licensee from allowing access to anyone other than licensee, and found that even though a RAM download does not fix the copyrighted work, it nevertheless is “sufficiently permanent or stable to permit it to be perceived, reproduced...for a period of more than transitory duration.” Id. at 517-18, 26 U.S.P.Q.2d at 1463.
- 118 See infra note 120 (discussing Digital Millenium Copyright Act’s overturning holding in MAI Systems).
- 119 See, e.g., Alcatel USA, Inc. v. DGI Technologies, Inc., 166 F.3d 772, 791, 49 U.S.P.Q.2d 1641, 1655 (5th Cir. 1999) (noting that DGI infringed Alcatel’s copyright when “each time a DGI microprocessor card is booted, it downloads (makes a copy of) the DSC operating system...therefore, DGI knowingly induces...to violate DSC’s exclusive right to reproduce its software”).
- 120 See S. Rep. No. 105-190, at 56 (1998) (stating that “[a] clarification in the Copyright Act is necessary in light of judicial decisions,” referring specifically to the decision in MAI Sys. Corp. v. Peak Computer, 991 F.2d 511, 26 U.S.P.Q.2d 1458 (9th Cir. 1993), cert. denied, 510 U.S. 1033 (1994)). The report states that 17 U.S.C. §117(c) provides that a service provider may activate a machine for service purposes, but that the statute does not alter the scope of meaning of the term “reproduction.” Id. at 57.
- 121 See Digital Millenium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998) (enacting 17 U.S.C.A. §117(c) (Machine Maintenance or Repair) and 17 U.S.C. §1201(f) (permitting one who has “lawfully obtained the right to use a copy of a computer program” to reverse engineer “for the sole purpose of identifying and analyzing those elements...that are necessary to achieve interoperability”)
- 122 See 144 Cong. Rec. H10618 (daily ed. October 12, 1998) (statement of Rep. Knollenberg).
- 123 See id. See also S. Rep. 105-190, at 56-58 (explaining that the provision, while affirming the notion and prior case law holding that copying into a random access memory may amount to unlawful copying in violation copyright owners exclusive rights, seeks to “clarify” that merely turning on a computer will not constitute a copying when done for the purpose of servicing computer’s hardware).
- 124 S. Rep. No. 105-190, at 57 (1998).

- ¹²⁵ See *id.* “[T]he copy of the computer program must have been made solely and automatically by virtue of turning on the machine in order to perform repairs or maintenance on the hardware components...the resulting copy may not be used by the person performing repairs or maintenance...in any manner other than to effectuate the repair.” *Id.*
Section (c)(2) is not intended to legitimize unauthorized access to and use of such programs just because they happen to be resident in the machine itself and are reproduced with or as part of the operating system when the machine is turned on.... [I]f such a program is accessed or used without the authorization of the copyright owner, the initial reproduction of the program shall not be deemed exempt from infringement.
Id. at 58. But cf. 144 Cong. Rec. H10618 (daily ed. October 12, 1998) (statement of Rep. Knollenberg) (authoring computer maintenance provision, stating that “ISOs are prevented from reading diagnostics software and, subsequently, cannot service the computer’s hardware”). Mr. Knollenberg further stated that preventing such access “hurts the free market” and “limits the consumer’s choice of who can service their computers and how competitive a fee can be charged.” *Id.*
- ¹²⁶ See Editorial, *A Pay-Per-View World*, *Wash. Post*, Aug. 4, 1998, at A14 (expressing concern that while copyright law has traditionally made copyright infringement a crime, the new law proscribes acts which otherwise would amount to only a potential prelude to copyright infringement). See also 144 Cong. Rec. H7094 (daily ed. August 4, 1998) (statement of Rep. Bliley, Chairman of Commerce Committee) (recognizing that §1201 is a “tremendously powerful new right to control access to information that we are granting to information owners for the very first time”).
- ¹²⁷ See 17 U.S.C. §1201(a)(1)(A) (West Supp. 1999); See also *Digital Millennium Copyright Act of 1998: Hearings on H.R. 2281 Before the Subcommittee on Courts and Intellectual Property, 105th Cong. 1st Sess. (September 16, 1997)* (statement of Maybeth Peters, Register of Copyrights) (opining that the impact of §1201’s recognition and encouragement of right of authors to develop technological measures to prevent access to software or other works in electronic format “may eliminate the possibility of an unclean hands-type argument in an infringement case...a copyright owner would not be able to defeat a fair use claim by pointing to the fact that the defendant had circumvented a technological protection measure). Peters states further that while §1201(c) provides that the provision does not preclude other copyright defenses, it should not be read as “a signal to extend the concept of fair use as a judge-made defense.” *Id.* On the other hand, Representatives Scott Klug and Rick Boucher insisted that this provision essentially “bootstraps the limited monopoly [conferred by copyright] into a perpetual right.” See H.R. Rep. No. 105-551, pt. 2, at 85 (1998) (additional Views of Scott Klug and Rick Boucher) (August 8, 1998).
- ¹²⁸ 17 U.S.C. §1201(f) (West Supp. 1999) (providing that a “person who has lawfully obtained the right to use a copy of a computer program may circumvent a technological measure that effectively controls access...for the sole purpose of identifying and analyzing...necessary to achieve interoperability”). See also Jonathan Band, Taro Isshiki, *Peace At Last? Executive And Legislative Branch Endorsement Of Recent Software Copyright Case Law*, 16 No. 2 *Computer Law*, 1, 4 (Feb. 1999) (opining that Section 1201(f) “represents the first congressional recognition of the legitimacy of software reverse engineering” and that this provision indicates Congress’ approval of copying incidental to reverse engineering so long as the underlying reverse engineering was not an infringement. *Id.*
- ¹²⁹ See 17 U.S.C. § 1201(f)(1) (West Supp. 1999).
- ¹³⁰ 17 U.S.C. § 1201(a)(2) (West Supp. 1999) provides that
No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology...that --
(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work...or
(C) is marketed by that person or another acting in concert with that person with that person’s knowledge for use in circumventing a technological measure that effectively controls access....
Section 1201(f)(2) (West Supp. 1999) provides that
Notwithstanding...(a)(2) and (b), a person may develop and employ technological means to circumvent a technological measure...for the purpose of enabling interoperability of an independently created computer program with other programs, if such means are necessary to achieve such interoperability, to the extent that doing so does not constitute infringement.... (3) The information acquired through the acts permitted... may be made available to others if the person...provides such information or means solely for the purpose of enabling interoperability...to the extent that doing so does not constitute infringement...
- ¹³¹ 17 U.S.C. §1201(c) (West Supp. 1999) (“Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title.”).

- ¹³² See e.g., Hanna, *supra* note 24, at 427 (arguing that basing a misuse finding upon an antitrust violation inherently presumes the copyright as the “source” of market power; “any market power accruing to copyright and patent holders is assumed to be a product of their legal monopolies, and consequently evidence of misuse,” therefore a finding of threshold antitrust violation would automatically translate into copyright misuse even though the function of a copyright is to guarantee a legal monopoly in order to enable recovery of innovation costs--such result is not violative of the public policy underlying copyright). The author further argues that because a newly copyrighted software program’s introduction into the market provides a comparatively lower barrier to a substitute’s entry than patented products and as such provides only a fleeting market advantage, importing antitrust standards “would therefore lead courts to find misuse even where first entrants make no effort to undermine competition, but merely enjoy a temporary advantage until competitors catch up and consumers catch on.” *Id.* at 431-32.
- ¹³³ See, e.g., Fellmeth, *supra* note 94, at 37 (arguing that a copyright policy analysis should precede any antitrust analysis because of a risk that the “copyright owner will be subjected to antitrust liability for behavior that borders on proper use of the copyright monopoly”).
- ¹³⁴ See, e.g., David McGowan, *Free Contracting, Fair Competition, And Article 2B: Some Reflections of Federal Competition Policy, Information Transactions, and ‘Aggressive Neutrality,’* 13 *Berkeley Technologies L.J.* 1173 (1998). Professor McGowan, in arguing that a copyright misuse defense analysis should accrue independent of any antitrust violation, establishes that a copyright entails a structural ceiling on the social losses derived from rights and limitations directed in a statutory grant of monopoly. *Id.* at 1225-26. Thus the proper focus should rely on a copyright rate of return, balancing the costs and benefits inherent in a case requiring construction of statutory rights and limitations. *Id.* at 1227-28. As such, because antitrust law focuses on the social costs of monopolistic conduct, requiring an analysis of a distinct type of market failure, application of antitrust may therefore obfuscate the principles underlying copyright law. *Id.*
- ¹³⁵ See Troy Paredes, *Copyright Misuse and Tying: Will Courts Stop Misusing Misuse?*, 9 *High Tech. L.J.* 271, 321-22 (1994) (suggesting that because the presumption--that a tying arrangement undermines incentives to innovate-- has been superceded in favor of rule of reason analysis in determining whether a practice unreasonably restrains trade, courts should not presume that a tying arrangement amounts to copyright misuse without an anti-trust analysis).
- ¹³⁶ See *id.* at 329-31. Paredes argues that the misuse defense encourages copyright infringement by protecting the willful infringer against copyright enforcement, and by undermining a “potential competitors’ incentive to create new works to compete...[because] competitors may opt to divert resources...in an effort to capture the copyright holder’s market share and profits.” *Id.* at 329-30. Thus even though an antitrust violation has not been permitted as a defense, its inclusion under a misuse defense raises the incentive to seek an antitrust counterclaim, thereby increasing the probability that the willful infringer may obtain both remedies. *Id.* at 331-32. As such, “[b]y increasing the expected cost of tying, the stacking of misuse on antitrust sanctions deters both legal and illegal ties.” *Id.* at 333.
- ¹³⁷ See *id.* at 335.
- ¹³⁸ See J.H. Reichman, Jonathan A. Franklin, *Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract With Public Good Uses of Information*, 147 *U. Pa. L. Rev.* 875, 925 (1999) (arguing that copyright misuse “makes the most sense when the relevant judicial or administrative inquiry focuses on exercises of market power that adversely affect consumers”). The authors further note that copyright misuse has arisen as a judicial gap-filler, appearing in substance only in response to the uncritical extension of traditional intellectual property rights “to new subject matter for reasons of expedience.” *Id.* at 923. For this reason, the authors suggest that misuse may “not adequately sensitize courts to the kind of public-interest concerns familiar from classical intellectual property laws...that mass contractual transactions in information goods under Article 2B seem likely to raise. *Id.* at 924. But cf., McGowan, *supra* note 134, at 1189 (suggesting that copyright misuse may provide a better alternative than either antitrust or contract law to assessing relative strength of an intellectual property right as against a contractual provision imposing upon that right, in part because of a fundamental distinction that “[a] contract defines rights between the parties to an agreement, while a property right creates rights against all the world”) (quoting U.C.C. Article 2B, Preface at 11 (Apr. 15, 1998 Draft)).
- ¹³⁹ *Alcatel USA, Inc. v. DGI Technologies, Inc.*, 166 F.3d 772, 49 U.S.P.Q.2d (BNA) 1641 (5th Cir. 1999). A complete outline of the facts and technologies involved can be found in *DSC Communications Corp. v. DGI Technologies, Inc.*, 81 F.3d 597, 38 U.S.P.Q.2d (BNA) 1699 (5th Cir. 1996). See discussion *supra* notes 1-9 and accompanying text.

140 Alcatel, 166 F.3d at 791, 49 U.S.P.Q.2d at 1655.

141 Id., 49 U.S.P.Q.2d at 1654-55. The court notes, however, that “DGI could have avoided liability for contributory infringement by proving that its customers owned copies of the DSC operating system software, and were therefore authorized to make additional copies, provided such reproduction was ‘an essential step in the utilization of the computer program.’” Id., 49 U.S.P.Q.2d at 1655 (citing 17 U.S.C. §117).

142 Id. at 793, 49 U.S.P.Q.2d at 1656 (citing DSC Communications Corp. v. DGI Technologies, Inc., 81 F.3d 597, 38 U.S.P.Q.2d (BNA) 1699 (5th Cir. 1996) .

143 See id. at 794, 49 U.S.P.Q.2d at 1657.

144 Id. (“DGI could have developed its own software...[but] it was not technically feasible to use a non-[Alcatel] operating system because the switch has a common control scheme in which each microprocessor card in a network of such cards runs the same operating system.”) (emphasis added).

145 While the court relied primarily on Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 15 U.S.P.Q.2d (BNA) 1846 (4th Cir. 1990) in supporting its recognition of an equitable approach to misuse doctrine, it rejected plaintiff’s contention that the Lasercomb reasoning was inapplicable here because the license agreement at issue did not act to prevent licensees from independently developing a competing product, arguing that the effect of the restriction is dispositive; it attempted to extend the copyright monopoly beyond the terms of the grant. Id. at 794, 49 U.S.P.Q.2d at 1656.

146 Id.

147 See id. at 794-95, 49 U.S.P.Q.2d at 1657-58 (finding that the lower court’s rejection of DGI’s misuse defense for the fact of DGI’s own unclean hands was an abuse of discretion).

148 Id. at 781, 49 U.S.P.Q.2d at 1646. Section 2 of the Sherman Act requires a showing of “(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.” Id. (citing Eastman Kodak Company v. Image Technical Services, Inc., 504 U.S. 451, 481 (1992)).

149 Id. at 781-82, 49 U.S.P.Q.2d at 1646. DGI supported this contention by showing that the license agreement prohibited licensees from using the software with non-Alcatel switch equipment. Id.

150 Eastman Kodak Co. v. Image Technical Serv., Inc., 504 U.S. 451 (1992). See supra note 64 and accompanying text.

151 Alcatel, 166 F.3d at 783, 49 U.S.P.Q.2d at 1647. Life-cycle pricing involves “factor[ing] in not only the purchase price of the equipment, but also the post-acquisition costs of operation, maintenance, and expansion at the time of purchase. By engaging in life-cycle pricing, a customer links together the primary equipment market and any aftermarket for parts and service for the equipment of particular manufacturers.” Id.

152 Id.

153 Id. The court noted that this finding alone may have been sufficient to defeat an antitrust counter-claim, because several circuits have found that “an antitrust plaintiff [such as DGI] cannot succeed on a Kodak-type theory when the defendant [such as Alcatel] has not changed its policy after locking-in some of its customers, and the defendant has been otherwise forthcoming about its pricing structure and service policies.” Id. at 783, 49 U.S.P.Q.2d at 1647-48 (quoting PSI Repair Servs., Inc. v. Honeywell, Inc., 104 F.3d 811, 820 (6th Cir.), cert. denied, 520 U.S. 1265 (1997).

154 Id., 49 U.S.P.Q.2d at 1648.

155 Id.

156 See id. at 783-84, 49 U.S.P.Q.2d at 1648 (asserting that DGI's attempt to narrowly define the relevant market in order to support an antitrust claim failed largely because there are several alternative and competitive ways for Alcatel customers to provide equivalent services without relying on Alcatel equipment, and no other company provided hardware to run Alcatel's software prior to DGI entering the market).

157 Alcatel, 166 F.3d at 793, 49 U.S.P.Q.2d at 1656 (citing DSC Communications, Inc. v. DGI Technologies, Inc., 81 F.3d 597, 38 U.S.P.Q.2d (BNA) 1699 (5th Cir. 1996)).

158 See supra notes 30-44 and accompanying text.

159 Alcatel, 166 F.3d at 793, 49 U.S.P.Q.2d at 1656.

160 See supra note 34 and accompanying text.

161 See supra notes 30-34 and accompanying text.

162 See id.

163 Cf. U.C.C. art. 2B, pref. at 11 (Draft Apr. 15, 1998) ("A contract defines rights between parties to an agreement, while a property right creates rights against all the world. They are not equivalent.").

164 See supra notes 30-47 and accompanying text.

165 See supra note 36 and accompanying text.

166 Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 977, 15 U.S.P.Q.2d (BNA) 1846, 1854 (4th Cir. 1990). See also supra notes 75-78 and accompanying text.

167 See supra notes 75-78 and accompanying text.

168 See supra notes 24-26 and accompanying text.

169 See supra notes 143-144 and accompanying text.

170 See supra note 145 and accompanying text.

171 See supra notes 146-147 and accompanying text.

172 See supra notes 69-72 and accompanying text.

173 Alcatel USA, Inc. v. DGI Technologies, 166 F.3d 772, 793-94, 49 U.S.P.Q.2d (BNA) 1641, 1657 (5th Cir. 1999).

174 The court equated a licensee's freedom to use its lawfully acquired software in conjunction with any hardware with a non-licensee's freedom to test its hardware on protected software (which requires a downloading copy). Without such freedom, a potential competitor is "effectively prevented from developing its product," which, the court insisted by assumption, would enable a licensor to gain a monopoly over unprotected hardware. See *id.* at 794, 49 U.S.P.Q.2d at 1657.

175 *Id.*

176 See *id.* at 780-84, 49 U.S.P.Q.2d at 1645-48.

177 See supra notes 61 and 63 and accompanying text.

178 See supra notes 70 and 81-84 and accompanying text.

179 See supra notes 62 and 65 and accompanying text.

180 See supra notes 63 and accompanying text.

181 *In Re Indep. Serv. Org. Antitrust Litig.*, 989 F. Supp. 1131, 1144 (D. Kan. 1997).

182 See supra note 85 and accompanying text.

183 *Triad Systems Corp. v. Southeastern Express Co.*, 64 F.3d 1330, 1333, 36 U.S.P.Q.2d (BNA) 1028, 1030 (9th Cir. 1995) cert. denied, 516 U.S. 1145 (1996).

184 *Id.* at 1337, 36 U.S.P.Q.2d at 1034.

185 *Id.*, 36 U.S.P.Q.2d at 1033.

186 See supra notes 2-3 and accompanying text.

187 *Alcatel USA, Inc. v. DGI Technologies Inc.*, 166 F.3d 772, 791, 49 U.S.P.Q.2d (BNA) 1641, 1655 (5th Cir. 1999). ("DGI engaged in contributory infringement as a matter of law...each time a DGI microprocessor card is booted up, it downloads...the [Alcatel] operating system.... By selling its DMP-2800 card, therefore, DGI knowingly induces and causes its customers--i.e., [[Alcatel] switch owners--to violate [Alcatel's] exclusive right to reproduce its software.").

188 See *id.*

189 See supra notes 117-119 and accompanying text.

190 See supra notes 51-59 and accompanying text.

191 Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 222, 206 U.S.P.Q. (BNA) 385, 407 (1980).

192 The license agreement prohibited Alcatel's licensees from disclosing or transferring the software to unauthorized parties. Alcatel, 166 F.3d at 777, 49 U.S.P.Q.2d at 1643.

193 See id. at 793-94, 49 U.S.P.Q.2d at 1656-57. In order to market competing microprocessor cards, DGI lawfully obtained one of Alcatel's microprocessor cards, and by reverse engineering, was able to develop a similar microprocessor card, the competitive purpose of which would enable the card to accept a download of Alcatel's software upon activation in the switch system. Id. at 779, 49 U.S.P.Q.2d at 1644. For DGI to complete the process, it needed either to develop its own software or analyze Alcatel's software operating system to "understand which parts of the DSC firmware were accessed during the 'boot' of the operating system." Id.

194 Id. at 793-94, 49 U.S.P.Q.2d at 1656-57.

195 See supra notes 102-105 and accompanying text.

196 See Alcatel, 166 F.3d at 793-94, 49 U.S.P.Q.2d at 1656-57.

197 See supra note 102 and accompanying text.

198 Arguably, such a claim would not have succeeded insofar as DGI misappropriated a copy of Alcatel's software by downloading a copy of that software onto a laptop, and returning with it to its own labs. See Alcatel, 166 F.3d at 791, 49 U.S.P.Q.2d 1654. See also supra note 113 and accompanying text.

199 Atari Games Corp. v. Nintendo of Am. Inc., 975 F.2d 832, 843, 24 U.S.P.Q.2d (BNA) 1015, 1022 (Fed. Cir. 1992).

200 Recall that the Court in Sega based its finding of fair use on the fact that permitting defendant to make an intermediate copy in the course of reverse engineering was a transformative use, enabling defendant to make its games-firmware compatible with Sega's software and hardware system served to stimulate "the growth of creative expression, based on the dissemination of other creative works." Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510, 1523, 24 U.S.P.Q.2d (BNA) 1561, 1570 (9th Cir. 1992). Although the court stated that fair use is a public policy-centered analysis, it is nonetheless a statutorily achieved defense. Id. at 1518, 24 U.S.P.Q.2d at 1566. See also supra notes 105-106 and accompanying text.

201 See supra notes 126-131 and accompanying text.

202 See supra notes 120-125 and accompanying text.

203 See supra note 126.

204 See supra notes 119-125 and 127-131 and accompanying text.

- 205 See supra note 127 and accompanying text.
- 206 See supra notes 126-131 and accompanying text.
- 207 See supra notes 126-131 and accompanying text.
- 208 See supra notes 128-129 and accompanying text.
- 209 See supra notes 126 and 128-130 and accompanying text.