LEXMARK INTERNATIONAL, INC. V. STATIC CONTROL COMPONENTS, INC. & CHAMBERLAIN GROUP, INC. V. SKYLINK TECHNOLOGIES, INC.: THE DMCA AND DURABLE GOODS AFTERMARKETS

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The advent of the Internet brought with it the specter of digital piracy. Infringers had at their disposal an efficient means for replicating and distributing copyrighted works. Concerned by this prospect, content industries, such as software and movie companies, began protecting their works via encryption and other digital techniques.[1] However, technologically savvy users could develop methods to bypass any such digital defense.[2] As a result, the content industries lobbied Congress to prohibit the circumvention of technological protection measures that safeguard copyrighted content.[3]

Congress responded by enacting the Digital Millennium Copyright Act (DMCA or "the Act")[4] in 1998. The DMCA contains the so-called anti-circumvention provisions, which prohibit the acts of circumventing and trafficking in devices that circumvent technological measures designed to protect copyrighted works from unauthorized access or use.[5] But while these broad prohibitions function as the shield that the content industries

1. *See* Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 134 (2003).

2. *See* INFO. INFRASTRUCTURE TASK FORCE, U.S. DEP'T OF COMMERCE, INTELLECTUAL PROPERTY RIGHTS AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 230 (Sept. 1995) [hereinafter WHITE PAPER] ("[T]echnology can be used to defeat any protection that technology may provide."), http://www.uspto.gov/web/offices/com/doc/ipnii/ipnii.pdf.

3. *See* Menell, *supra* note 1, at 133.

4. Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified in scattered sections of 5, 17, 28, and 35 U.S.C.).

5. 17 U.S.C. § 1201(a)–(b) (2000). For an in-depth analysis of the anti-circumvention provisions, see 3 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 12A.03 (2003).

desired, other industries not traditionally seen as "content providers" have wielded them as a sword.[6]

In two recent cases, durable goods manufacturers used the DMCA in an attempt to stifle competition in aftermarkets for replacement parts. In *Lexmark International, Inc. v. Static Control Components, Inc.*,[7] a laser printer manufacturer sued a supplier of toner cartridge refurbishing equipment under the DMCA, seeking to enjoin the manufacture and marketing of a microchip that enabled unauthorized toner cartridges to work in the plaintiff's printers by circumventing an authentication sequence. Similarly, in *Chamberlain Group, Inc. v. Skylink Technologies, Inc.*,[8] a manufacturer of garage door openers invoked the DMCA in an effort to prevent a competing company from selling replacement transmitters.

This Note explores the legitimacy of these new applications of the DMCA's anti-circumvention provisions. Part I outlines the legal and economic contexts in which these new cases arise. Part II details the *Lexmark* and *Chamberlain* cases, both of which diverge from the archetypal application of the DMCA, yet represent foreseeable efforts to extend the Act's reach in light of the economics of aftermarkets. Part III evaluates whether the DMCA should be revised in order to prevent this unintended application of the law. This Note concludes that no such revision is necessary so long as courts interpret the anti-circumvention provisions in a manner consistent with legislative intent; the provisions should only apply to those cases where a technological measure protects an independently marketable copyrighted work. Furthermore, certain safeguards built into the DMCA, as well as the equitable defense of misuse in the anti-circumvention context, will provide other tools for preventing abuse of the Act.

I. LEGAL AND ECONOMIC BACKGROUND

As background for understanding the complex statutory issues presented in *Lexmark* and *Chamberlain*, this Part begins by explaining the development of the DMCA's anti-circumvention provisions and their subsequent application in the courts. From their inception, the provisions dealt almost exclusively with the interests of the content industries—namely,

6. *See* Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095, 1135-36 (2003).

7. 253 F. Supp. 2d 943 (E.D. Ky. 2003). The case was subsequently argued before the Court of Appeals for the Sixth Circuit. Static Control Components, Inc. v. Lexmark Int'l, Inc., No. 03-5400 (6th Cir. argued Jan. 30, 2004).

8. 292 F. Supp. 2d 1040 (N.D. Ill. 2003) [hereinafter *Chamberlain II*], *appeal docketed*, No. 04-1118 (Fed. Cir. Dec. 15, 2003); 292 F. Supp. 2d 1023 (N.D. Ill. 2003) [hereinafter *Chamberlain I*].

movie studios, book publishers, software developers, and music companies. Neither durable goods manufacturers nor aftermarket industries participated in the hearings and debates that shaped these provisions. Therefore, to provide further background for understanding the implications of extending the DMCA in this unexpected direction, this Part concludes with a description of aftermarket economics.

A. Development of the DMCA's Anti-Circumvention Provisions

In 1993, the Clinton Administration assembled the Information Infrastructure Task Force ("IITF") to contend with the effects of emerging digital technologies on intellectual property.[9] The Task Force conducted hearings at which content industries played a dominant role.[10] It then issued the White Paper—a report that proposed drastic changes to the Copyright Act.[11] One proposed change, which was chiefly inspired by the motion picture industry,[12] would have outlawed devices designed primarily to circumvent "copyright protection systems."[13] This proposal was prompted by the fear that piracy would dissuade content industries from marketing their products in digital form, particularly over the Internet.[14] Congress considered the suggestions set forth in the White Paper, but did not enact them.[15]

Shortly thereafter, the White Paper's proposals resurfaced in an international setting. At the 1996 diplomatic conference held by the World Intellectual Property Organization (WIPO) in Geneva, the U.S. delegation, realizing that the global reach of the Internet made digital piracy an inter-

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9. S. REP. NO. 105-190, at 2 (1998).

10. *See id.*; *see also* JESSICA LITMAN, DIGITAL COPYRIGHT 90-95 (2001).

11. *See* Pamela Samuelson, *The Copyright Grab*, WIRED, Jan. 1996, http://www.wired.com/wired/archive/4.01/white.paper_pr.html.

12. *See* Pamela Samuelson, *The U.S. Digital Agenda at WIPO*, 37 VA. J. INT'L L. 369, 410 (1997).

13. *See* WHITE PAPER, *supra* note 2, app. 1, at 6. The proposed legislation reads:

> § 1201. Circumvention of Copyright Protection Systems
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> No person shall import, manufacture or distribute any device, product, or component incorporated into a device or product, or offer or perform any service, the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent, without the authority of the copyright owner or the law, any process, treatment, mechanism or system which prevents or inhibits the violation of any of the exclusive rights of the copyright owner under section 106.

Id.

14. *See* S. REP. NO. 105-190, at 7-8 (1998); WHITE PAPER, *supra* note 2, at 10.

15. S. REP. NO. 105-190, at 4. Other unresolved issues, such as the extent to which Internet service providers should be liable for the infringing activities of their subscribers, prevented Congress from adopting the proposed omnibus legislation of which the anti-circumvention provision was a part. *Id.*

national problem, proposed anti-circumvention provisions similar to those found in the White Paper.[16] U.S. content industries also played a significant role at this international stage.[17]

The U.S. measure failed as originally proposed, but it was adopted with less imposing provisions in both the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty.[18] These provisions required that each participating country "provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures" used to protect copyrighted works.[19]

Although U.S. copyright law arguably already provided sufficient protection and remedies to satisfy the standards adopted in the two WIPO treaties,[20] the content industries lobbied for greater protection.[21] Congress thus considered legislation for implementing the treaties that would include more expansive anti-circumvention provisions than those proposed in the White Paper.[22] Congress eventually enacted these provisions as part

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16. *See* Samuelson, *supra* note 12, at 410-14.

17. *See* David Nimmer, *Time and Space*, 38 IDEA 501, 508-10 (1998) (stating that a disproportionate number of non-governmental organizations at the WIPO convention were of U.S. origin, and that the "world of copyright is now dancing to an American tune"); *see also* WORLD INTELLECTUAL PROP. ORG., DIPLOMATIC CONFERENCE ON CERTAIN COPYRIGHT AND NEIGHBORING RIGHTS QUESTIONS: LIST OF PARTICIPANTS 55-66 (1996), *at* http://www.wipo.int/documents/en/diplconf/distrib/pdf/inf2.pdf.

18. *See* Samuelson, *supra* note 12, at 414-15.

19. WIPO Copyright Treaty art. 11, Dec. 20, 1996, http://www.wipo.int/clea/docs/en/wo/wo033en.htm; WIPO Performances and Phonograms Treaty art. 18, Dec. 20, 1996, http://www.wipo.int/clea/docs/en/wo/wo034en.htm.

20. *See, e.g.*, Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519, 530-34 (1999). Samuelson contends:

> The [WIPO treaty's anti-circumvention norm] was, after all, very general in character and provided treaty signatories with considerable latitude in implementation. . . . The U.S. could have pointed to a number of statutes and judicial decisions that establish anti-circumvention norms. With U.S. copyright industries thriving in the current legal environment, it would have been fair to conclude that copyright owners already were adequately protected by the law.

Id. at 531-32. *But see* 3 NIMMER & NIMMER, *supra* note 5, § 12A.01[C], at 12A-9 to 12A-10 (stating that the *Sony* standard for legalizing technologies "capable of a commercially significant noninfringing use" gave insufficient protection under the WIPO treaties, thus requiring the United States to adopt new legislation).

21. *See* Samuelson, *supra* note 20, at 533-34.

22. *See id.* at 531-34; *see also* Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 YALE L.J. 1575, 1634 (2002).

of the DMCA, and intended them to "create[] the legal platform for launching the global digital on-line marketplace for copyrighted works."[23]

B. The DMCA Anti-Circumvention Provisions: § 1201

Congress crafted the DMCA anti-circumvention measures as a set of blanket prohibitions tempered by numerous narrow exceptions. These prohibitions give copyright owners rights in addition to, and independent from, those that inhere in copyright.[24] As a result, some have dubbed the interests protected by the anti-circumvention provisions "paracopyright."[25]

The primary prohibition set forth in § 1201 is against the act of "circumvent[ing] a technological measure that effectively controls access to a work protected under [the Copyright Act]."[26] This prohibition thus creates a new "right of access" in certain copyrighted works.[27] In explaining this right, Congress adopted the analogy of breaking into a locked room to obtain a copy of a book; it is the act of breaking in, rather than the subsequent use of the book, that is prohibited.[28]

The copyright owner's authority is an important aspect of the access prohibition. The statute defines "circumvent[ing] a technological measure" as the use of any means "to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure without the authority of the copyright owner."[29] Similarly, a technological measure "effectively controls access to a work" if it "requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work."[30]

The DMCA further prohibits the trafficking of tools used to circumvent two different classes of technological measures: those that control access to a copyrighted work and those that protect "a right of a copyright owner," such as the right to reproduce or distribute a work.[31] The first group of prohibited tools includes software that defeats video game con-

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23. S. REP. NO. 105-190, at 2 (1998).
24. *See* 3 NIMMER & NIMMER, *supra* note 5, § 12A.18[B], at 12A-186.
25. *Id.*
26. 17 U.S.C. § 1201(a)(1)(A) (2000).
27. *See* Jane C. Ginsburg, *Copyright Legislation for the "Digital Millennium"*, 23 COLUM.-VLA J.L. & ARTS 137, 140-43 (1999).
28. *See* H.R. REP. NO. 105-551, pt. 1, at 17 (1998).
29. 17 U.S.C. § 1201(a)(3)(A).
30. *Id.* § 1201(a)(3)(B).
31. *Id.* § 1201(a)(2), (b)(1).

sole mechanisms which prevent access to unlicensed games;[32] the second group includes software that defeats the new "copy-protection" feature on some music CDs.[33] For either group, the Act dictates that "[n]o person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof" that falls into any of three categories: (1) those "primarily designed or produced for the purpose of circumventing" a technological protection measure; (2) those that have "only limited commercially significant purpose or use other than to circumvent" a protection measure; and (3) those marketed for use in such circumvention.[34]

Section 1201 contains seven highly specific exceptions to both the access and anti-trafficking prohibitions, and the scope of these exceptions varies between the two forms of prohibition.[35] In general, there are limited exceptions for libraries and law enforcement agencies, for reverse engineering, encryption research, and security testing activities, and for the protection of minors and personal privacy.[36] Furthermore, the DMCA instructs the Librarian of Congress to periodically conduct rulemaking proceedings to exempt legitimate activities from the § 1201(a)(1)(A) prohibition on access control circumvention, but not from liability under the anti-trafficking provisions.[37]

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32. *See* Sony Computer Entm't Am., Inc. v. Gamemasters, 87 F. Supp. 2d 976, 987-88 (N.D. Cal. 1999).

33. *See* ELEC. FRONTIER FOUND., UNINTENDED CONSEQUENCES: FIVE YEARS UNDER THE DMCA 2 (Sept. 24, 2003), *at* http://www.eff.org/IP/DRM/DMCA/unintended_consequences.pdf.

34. 17 U.S.C. § 1201(a)(2), (b)(1).

35. *See* Burk, *supra* note 6, at 1104-05.

36. 17 U.S.C. § 1201(d)–(j).

37. *Id.* § 1201(a)(1)(C)–(E). On October 28, 2003, the Librarian of Congress announced the results of the second rulemaking proceeding. *See* U.S. COPYRIGHT OFFICE, RULEMAKING ON EXEMPTIONS FROM PROHIBITION ON CIRCUMVENTION OF TECHNOLOGICAL MEASURES THAT CONTROL ACCESS TO COPYRIGHTED WORKS, *at* http://www.copyright.gov/1201 (last visited Feb. 9, 2004). The four additional classes of works that will be subject to exemption from the prohibition in § 1201(a)(1)(A) through October 27, 2006, are:

> [1] Lists of sites blocked by commercial Internet filtering software, but not spam-fighting lists.
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> [2] Computer programs protected by hardware dongles that are broken or obsolete.
>
> [3] Computer programs or video games that use obsolete formats or hardware.
>
> [4] E-books that prevent read-aloud or other handicapped access formats from functioning.

The reverse engineering exception set forth in § 1201(f) is particularly relevant to the present discussion. It provides that one who "lawfully obtain[s] the right to use a copy of a computer program" may circumvent any access controls for the "sole purpose" of achieving interoperability with an "independently created computer program."[38] It further allows for the development of circumvention tools for enabling interoperability and for the distribution of those tools.[39] The statute defines interoperability as "the ability of computer programs to exchange information, and of such programs mutually to use the information which has been exchanged."[40]

C. Cases Interpreting § 1201

Few courts have interpreted the anti-circumvention provisions of the DMCA since its enactment in 1998. However, virtually all cases brought under § 1201 prior to Lexmark filing suit in December 2002 involved content industries,[41] and were thus the type of case contemplated by Congress when enacting the DMCA.[42] This section briefly outlines some of these pre-*Lexmark* cases.

Sony Computer Entertainment America, Inc. v. Gamemasters[43] was the first published case interpreting § 1201. Sony manufactured PlayStation video game consoles designed to operate only when encrypted data on a game CD verified that the game and console were licensed for the same

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John Borland, *Feds Grant DMCA Exceptions*, CNET NEWS.COM, Oct. 28, 2003, *at* http://news.com.com/2100-1028-5098639.html.

38. 17 U.S.C. § 1201(f)(1).

39. *Id.* § 1201(f)(2)-(3).

40. *Id.* § 1201(f)(4).

41. One of the few DMCA cases predating *Lexmark* that does not involve a content industry is *PortionPac Chemical Corp. v. Sanitech Systems, Inc.*, 210 F. Supp. 2d 1302 (M.D. Fla. 2002). In this case, the plaintiff, a food sanitation service provider, alleged that the defendant, also a food sanitation provider, had violated the DMCA anti-circumvention provisions. *Id.* at 1311-12. The opinion gives an extremely limited presentation of the facts, mainly because the court granted the defendant's motion to dismiss the DMCA claim:

> After looking at the sparse case law on the DMCA, and considering the legislative history behind the Act, the Court finds that the *Digital* Millennium Copyright Act does not allow a cause of action for Plaintiff's claim. As the Fourth Circuit pointed out, "[t]he DMCA was enacted . . . to preserve copyright enforcement in [sic] the Internet . . . ."

Id. at 1311-12 (quoting ALS Scan, Inc. v. RemarQ Cmtys., Inc., 239 F.3d 619, 625 (4th Cir. 2001)). This case lends further support to the proposition that the DMCA should not be extended beyond its intended purpose. *See infra* Part III.

42. *See infra* Part III.A.

43. 87 F. Supp. 2d 976 (N.D. Cal. 1999).

geographical region.[44] If this authentication procedure failed, the console would not operate the game.[45] The defendant's product allowed PlayStation owners to bypass the authentication procedure and play "non-territorial" games.[46] The court determined that this activity constituted the circumvention of a technological measure designed to control access to copyrighted works.[47] Because this circumvention was the primary purpose of the defendant's product, the court held that the defendant would likely be liable for trafficking in unauthorized devices under § 1201(a)(2)(A), and enjoined distribution of the defendant's product.[48]

In *RealNetworks, Inc. v. Streambox, Inc.*,[49] the plaintiff offered to consumers software that enabled Internet streaming of audio and video files encoded in a special digital format.[50] Defendants marketed software that bypassed a "secret handshake" authentication sequence required for accessing these files, and further permitted users to make unauthorized copies of the files.[51] The court determined that the plaintiff was likely to prevail under both § 1201(a)(2) and (b)(1), and issued an injunction.[52]

In *Universal Studios, Inc. v. Corley*,[53] a group of eight motion picture studios sought to enjoin Internet web site owners from posting a computer program known as DeCSS.[54] This program circumvented CSS, which is the encryption system that protects access to content on digital versatile disks (DVDs).[55] The Second Circuit upheld an injunction based on the finding that the distribution of DeCSS violated § 1201(a)(2)(A) of the DMCA.[56]

United States v. Elcom Ltd.[57] represents the first criminal case brought under the DMCA.[58] The defendant company marketed software that re-

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44. *Id.* at 980. For example, Sony licensed certain games for use exclusively in Japan and Europe. *Id.*

45. *Id.* at 981.

46. *Id.* at 987. The court referred to those games which were not licensed for a particular geographical region as "non-territorial" for that region. *Id.*

47. *Id.*

48. *Id.* at 987, 989-91.

49. No. 2:99CV02070, 2000 WL 127311 (W.D. Wash. Jan. 18, 2000).

50. *Id.* at *1. "Streaming" refers to the distribution of an audio or video clip in a format that leaves no trace of the clip on the receiving computer, unless the content owner has additionally permitted downloading. *Id.*

51. *Id.* at *4.

52. *Id.* at *8, *12.

53. 273 F.3d 429 (2d Cir. 2001).

54. *Id.* at 435-36.

55. *Id.* at 436-38. CSS is short for "Content Scramble System." *Id.* at 436.

56. *Id.* at 441, 460.

57. 203 F. Supp. 2d 1111 (N.D. Cal. 2002).

moved copying and distribution restrictions from digitally formatted books, or "ebooks."[59] The government contended that the marketing of such software violated the § 1201(b) anti-trafficking provision.[60] Although many saw this as a prime example of the type of case for which the DMCA was enacted, the jury ultimately acquitted the defendant.[61]

All of these cases have the common feature of protecting content industry products—video games, music files, videos, and books are all goods whose value lies in the copyrighted content they contain. In contrast, *Lexmark* and *Chamberlain* involve durable goods—products whose value is independent of any ancillary copyrighted software. Nonetheless, manufacturers of durable goods have attempted to incorporate the anti-circumvention provisions in their business models. The following section lays the groundwork for understanding their motivations for doing so.

D. Economics of Durable Goods Aftermarkets

Durable goods are products that "yield a flow of services into the future" or that "can be used over and over again," such as washing machines, automobiles, laser printers, or garage door openers.[62] The goods or services supplied for a durable good after its initial sale, such as replacement parts or repair visits, constitute the aftermarket for that product.[63] Durable goods manufacturers thus focus on the full lifecycle of a product when determining its pricing and profitability, evaluating both initial and aftermarket sales.[64]

Many durable goods manufacturers depend on the aftermarkets of their products to turn a profit, and are thus highly protective of them.[65] These

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58. Criminal liability attaches under the DMCA for willful violations of the anti-circumvention provisions done "for the purpose[] of commercial advantage or private financial gain." 17 U.S.C. § 1204(a)(1)-(2) (2000).

59. *Elcom*, 203 F. Supp. 2d at 1118-19.

60. *Id.* at 1119.

61. *See* Lisa M. Bowman, *ElcomSoft Verdict: Not Guilty*, CNET NEWS.COM, Dec. 17, 2003, *at* http://news.com.com/2100-1023-978176.html ("Some lawyers speculated that the jury might have been rendering an opinion on the law itself, as well as on the strict legality of ElcomSoft's activities.").

62. *See* Michael S. Jacobs, *Market Power Through Imperfect Information: The Staggering Implications of* Eastman Kodak Co. v. Image Technical Services *and a Modest Proposal for Limiting Them*, 52 MD. L. REV. 336, 364 (1993).

63. *See* Carl Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of* Kodak, 63 ANTITRUST L.J. 483, 485-86 (1995).

64. *See* CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 118-21 (1999).

65. *See id.* at 118-19; Hiawatha Bray, *Time to Rethink Digital Copyright Act*, BOSTON GLOBE, Jan. 13, 2003, at C3, 2003 WL 3374778.

manufacturers sell primary products at or below cost in order to attract customers, then inflate the prices of aftermarket goods or services to make their primary sales profitable.[66] For example, a manufacturer may include a free laser printer with the purchase of a new computer, but sell replacement toner cartridges at a significant markup. When the aftermarket costs imposed on consumers are less than the "switching costs" required to transfer to a different primary product, consumers are "locked in" to both the original durable good and its aftermarket.[67] Such lock-in pricing strategies fail if aftermarket competitors drive down prices.[68] As a result, primary goods manufacturers seek to exclude aftermarket rivals, sometimes in violation of antitrust laws.[69]

Where primary goods manufacturers have intellectual property rights in aftermarket products, they may legally exercise their right to exclude in order to curtail competition.[70] For example, patent holders have the right to prevent others from making, using, or offering to sell their patented

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66. *See* Severin Borenstein et al., *Antitrust Policy in Aftermarkets*, 63 ANTITRUST L.J. 455, 459-60 (1995); *Legal Battle Could Determine Future Price of Printer Cartridges*, USA TODAY, Jan. 29, 2003, http://www.usatoday.com/tech/news/techpolicy/2003-01-29-printer-battle_x.htm.

67. *See* SHAPIRO & VARIAN, *supra* note 64, at 103-04. Switching costs include not only the price of a new primary product, but also the inconvenience and additional expenditures required to make a switch. *Id.* Shapiro and Varian give the example of a consumer who has owned a Macintosh computer for several years; if the consumer were to buy a Unix machine, the switching costs would include the price of new software and peripherals, as well as the time and inconvenience of learning how to operate a new system. *Id.* at 104.

68. *See* Benjamin Klein & John Shepard Wiley Jr., *Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal*, 70 ANTITRUST L.J. 599, 603-06 (2003).

69. The leading antitrust case in the context of aftermarkets is *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451 (1992). Kodak manufactured high-volume photocopier and micrographics equipment and also provided service and replacement parts for these machines. *Id.* at 455. In the early 1980s, independent service organizations ("ISOs") began competing with Kodak in the servicing aftermarket for these machines, often performing at prices substantially lower than Kodak's. *Id.*; *see* Benjamin Klein, *Market Power in Aftermarkets*, 17 MANAGERIAL & DECISION ECON. 143, 143 (1996). Kodak then limited its supply of proprietary replacement parts to the ISOs, making it difficult for these companies to compete. *Kodak*, 504 U.S. at 455. The Court ruled that such activity could violate antitrust law, even if Kodak did not have market power in the original equipment market. *Id.* at 481-82. The Ninth Circuit eventually upheld an injunction against Kodak's anticompetitive practices. Image Technical Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195 (9th Cir. 1997). A flurry of aftermarket antitrust suits followed in the wake of *Kodak*. *See* Daniel M. Wall, *Aftermarket Monopoly Five Years After* Kodak, ANTITRUST, Summer 1997, at 32, 32.

70. *See Image Technical Servs.*, 125 F.3d at 1214-20.

products.[71] Some manufacturers of computer printers have successfully exerted this right to suppress third-party competition in the replacement ink and toner cartridge aftermarket.[72] However, in one prominent case, a printer manufacturer failed in its attempt to prevent a competitor from remanufacturing its patented disposable ink cartridges and converting them to a reusable form.[73] The Federal Circuit held that the competitor's activities were "more akin to permissible 'repair' than to impermissible 'reconstruction,'" and thus not actionable under patent law.[74]

II. CASES EXTENDING THE REACH OF THE DMCA

Perhaps because of their mixed results in trying to exclude aftermarket competition by enforcing patent rights, printer manufacturers were quick to see the DMCA's paracopyright as a new opportunity for controlling the printer aftermarket. However, unlike exerting rights that inhere in an ink or toner cartridge itself, a manufacturer who invokes the DMCA against aftermarket rivals leverages the paracopyright over uncopyrightable products. The manufacturer shelters its functional products in a fortress of copyrighted software protected by technological measures, a breach of which constitutes a violation of the DMCA. Although a printer manufacturer has successfully used this technique, a garage door opener manufacturer's attempt failed. Thus the legitimacy of this extension of the DMCA is still in question.

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71. 35 U.S.C. § 271 (2000).

72. *See, e.g.*, Seiko Epson Corp. v. Nu-Kote Int'l, Inc., 190 F.3d 1360 (Fed. Cir. 1999) (upholding a preliminary injunction against a third-party manufacturer of replacement ink cartridges for Epson printers and reversing findings of patent invalidity entered by a district court); Canon Computer Sys., Inc. v. Nu-Kote Int'l, Inc., 134 F.3d 1085 (Fed. Cir. 1998) (upholding a preliminary injunction against a third-party manufacturer because its replacement ink cartridges for Canon's Bubble Jet printers infringed Canon's patent).

73. Hewlett-Packard Co. v. Repeat-O-Type Stencil Mfg. Corp., 123 F.3d 1445 (Fed. Cir. 1997).

74. *Id.* at 1452. For a discussion of the possible effects of this ruling on primary product manufacturers, see Elaine Stracker, Note, Hewlett-Packard Co. v. Repeat-O-Type Stencil Manufacturing Corp., 13 BERKELEY TECH. L.J. 175 (1998).

A. *Lexmark*

1. Background

Lexmark International, Inc. ("Lexmark") is a major competitor in the laser printer industry.[75] In 1997, Lexmark instituted a new marketing strategy known as the Prebate program whereby consumers could obtain an up-front rebate on laser printer toner cartridges through a shrinkwrap agreement.[76] The agreement required consumers to return used cartridges to Lexmark for remanufacturing.[77] In order to ensure compliance with the terms of this agreement, Lexmark began installing microchips on Prebate cartridges that would cause printers to malfunction when the cartridges were refurbished by someone other than Lexmark.[78]

In early 2001, Lexmark introduced a new line of microchips for Prebate cartridges used in its T520/522 and T620/622 printers.[79] Lexmark programmed these chips with copyrighted software known as the Toner Loading Program, which monitored the amount of toner remaining in a cartridge.[80] The printers themselves contained copyrighted software known as the Printer Engine Program, which controlled various printer operations, such as paper movement and motor control.[81] Neither program would function unless the printer and the microchip on a toner cartridge successfully executed an authentication sequence.[82]

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75. Lexmark Int'l, Inc. v. Static Control Components, Inc., 253 F. Supp. 2d 943, 946 (E.D. Ky. 2003).

76. *Id.* at 947-48.

77. *Id.* The shrinkwrap agreement that Lexmark printed on each Prebate cartridge box read:

> RETURN EMPTY CARTRIDGE TO LEXMARK FOR REMANUFACTURING AND RECYCLING. Please read before opening. Opening this package or using the patented cartridge inside confirms your acceptance of the following license/agreement. This all-new cartridge is sold at a special price subject to a restriction that it may be used only once. Following this initial use, you agree to return the empty cartridge to Lexmark for remanufacturing and recycling. If you don't accept these terms, return the unopened package to your point of purchase. A regular price cartridge without these terms is available.

Id. at 947 n.1.

78. Defendant's Memorandum in Opposition to Motion for Preliminary Injunction at 2, *Lexmark* (No. 02-571-KSF) [hereinafter SCC Opposition].

79. *See Lexmark*, 253 F. Supp. 2d at 946; SCC Opposition, *supra* note 78, at 2.

80. *Lexmark*, 253 F. Supp. 2d at 949.

81. *Id.* at 948.

82. *Id.* at 952.

Static Control Components, Inc. ("SCC") manufactures component parts for refurbished toner cartridges.[83] By October 2002, SCC had developed the Smartek microchip for use with remanufactured Prebate cartridges.[84] This microchip mimicked the authentication sequence to allow interoperability between Lexmark printers and Prebate cartridges refurbished by unauthorized parties.[85] Although SCC had independently reverse engineered a means for bypassing the authentication sequence, it programmed wholesale copies of the Toner Loading Program onto its Smartek chips.[86]

On December 30, 2002, Lexmark brought suit and moved for a preliminary injunction against SCC.[87] Lexmark claimed that SCC's Smartek chips infringed its copyright in the Toner Loading Program, and that distribution of the chips violated the § 1201(a)(2) anti-trafficking provision of the DMCA.[88]

2. *Analysis*

The district court first concluded that Lexmark's claim of copyright infringement was likely to prevail on the merits.[89] This conclusion was based on SCC's admission that it had made wholesale copies of the program onto its Smartek chips.[90] Furthermore, the court rejected all of SCC's defenses for copying the program.[91] Most notably, SCC raised the defense of copyright misuse, contending that Lexmark had used its programs to secure "an exclusive right or limited monopoly not expressly granted by copyright law."[92] However, the court viewed Lexmark's actions as merely an attempt to protect the right of access—a right created by the DMCA, which is a subset of copyright law.[93]

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83. *Id.* at 946.

84. SCC Opposition, *supra* note 78, at 4.

85. *Lexmark*, 253 F. Supp. 2d at 955.

86. *Id.* Although the court, acting as fact finder, determined that SCC copied the Toner Loading Program in its entirety, this crucial fact apparently remains in dispute. *See* Marybeth Peters, Recommendation of the Register of Copyrights in RM 2002-4: Rulemaking on Exemptions from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies 176 (Oct. 27, 2003), *at* http://www.copyright.gov/1201/docs/registers-recommendation.pdf.

87. *Lexmark*, 253 F. Supp. 2d at 947.

88. *Id.*

89. *Id.* at 957.

90. *Id.* at 955.

91. *Id.* at 958-66.

92. *Id.* at 966; *see also infra* Part III.C.

93. *Lexmark*, 253 F. Supp. 2d at 966.

The court then determined that Lexmark's DMCA claims were also likely to prevail on the merits.[94] The court began its interpretation of the Act by stating that the plain meaning of the statutory language is clear and unambiguous and that, therefore, any appeal to legislative history would be inappropriate.[95] After quoting the § 1201(a)(2) anti-trafficking provision and its accompanying definitions provided in § 1201(a)(3)(A)-(B), the court noted that the term "access" is nowhere defined in the statute and thus the customary, dictionary meaning of the term would apply: the "ability to enter, to obtain, or to make use of."[96]

Interpreting the statute in a strictly textual manner, the court concluded that the Smartek microchips violated each of the three alternative tests for liability under § 1201(a)(2) with respect to both the Toner Loading Program and the Printer Engine Program.[97] Noting the similarities between the authentication procedure in *Gamemasters* and that employed by the Lexmark printers, the court found that Lexmark's authentication sequence constituted a "'technological measure' that 'controls access' to a copyrighted work."[98] Indeed, the sequence controlled "access" to two different copyrighted works because a proper authentication sequence was necessary for a printer owner to "make use of" both the Toner Loading Program and the Printer Engine Program.[99] The court also noted that Lexmark, the copyright owner of the programs, did not authorize access to its programs.[100] Thus the Smartek chips violated § 1201(a)(2)(A)-(C) because (1) SCC specifically developed the chips to circumvent, (2) the chips had no commercial purpose other than to circumvent, and (3) SCC marketed the chips for their ability to circumvent Lexmark's authentication sequence.[101]

Turning to SCC's defenses, the court again remarked that the clarity of the DMCA's language prevented any consideration of the congressional

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94. *Id.* at 966-71.
95. *Id.* at 967.
96. *Id.*
97. *Id.* at 968-69.
98. *Id.* at 968-70.
99. *Id.* at 968-69.
100. *Id.* The court merely stated that "the printers access, without Lexmark's authority, the copyrighted Toner Loading Program[] . . . [and] the Printer Engine Program." *Id.* at 968. It is thus unclear whether the court considered Lexmark's consumers or SCC to be the relevant party from which Lexmark withheld its authority, although the shrinkwrap license made it clear that neither party was authorized to access Lexmark's programs. *See id.* at 947 n.1, 968. The DMCA is not explicit on this point either. *See* 17 U.S.C. § 1201(a)(3) (2000); *see also infra* note 138.
101. *Lexmark*, 253 F. Supp. 2d at 968-69.

intent behind the Act.[102] The court rejected SCC's assertion that the drafters of the DMCA were only concerned with preventing digital piracy and had therefore not intended such an expansive application of the statute.[103] According to the court, the § 1201(b) ban on tools used to circumvent use controls is sufficient to prevent digital piracy, thus SCC's restricted reading of the DMCA would render the ban on tools used for access in § 1201(a)(2) "mere surplusage."[104] The court further stated that, as drafted, the DMCA is not limited to copyrighted works that have independent market value, such as books, CDs, and motion pictures.[105] Rather, any work entitled to protection under the Copyright Act is also entitled to the DMCA's anti-circumvention provisions, including computer programs that control the operation of durable goods.[106]

The court concluded that the reverse engineering exception under § 1201(f) did not apply to the Smartek microchips because they contained verbatim copies of the Toner Loading Program.[107] Although the Smartek chips contained independently created software that mimicked the authentication sequence, the Toner Loading Program itself was copied, and therefore was not "independently created" as required by the Act.[108]

B. *Chamberlain*

1. *Background*

Chamberlain Group, Inc. ("Chamberlain") is the leading manufacturer of garage door openers ("GDOs") in the United States,[109] and Skylink Technologies, Inc. ("Skylink") markets and distributes GDO components.[110] Chamberlain sued Skylink under the DMCA, claiming that Skylink's distribution of universal transmitters provided unauthorized access to its "Security+" line of GDOs in violation of § 1201(a)(2).[111] The court granted summary judgment in favor of Skylink.[112]

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102. *Id.* at 969.
103. *Id.* at 969-70.
104. *Id.* at 969.
105. *Id.*
106. *Id.* at 969-70.
107. *Id.* at 970-71.
108. *Id.*
109. Defendant's Opposition to Motion for Summary Judgment at 1, *Chamberlain I*, 292 F. Supp. 2d 1023 (N.D. Ill. 2003) (No. 02 C 6376).
110. *Chamberlain I*, 292 F. Supp. 2d at 1026.
111. *Id.*
112. *Chamberlain II*, 292 F. Supp. 2d 1040, 1045 (N.D. Ill. 2003).

GDOs typically consist of a garage-based receiver and a portable transmitter that emits a fixed digital signal to activate the system.[113] For increased security, Chamberlain created Security+ GDOs that used "rolling code" to continually alter a transmitted signal.[114] For these GDOs, copyrighted software within the transmitter encoded the signal with both a fixed identification number and a variable number that changed by a factor of three with each use.[115] Copyrighted software within the receiver determined whether the variable portion of a signal fell within an acceptable range of values, or "forward window," before operating the door.[116] Signals falling within the "rear window" of previously-used values would not operate the door.[117]

Chamberlain included a failsafe measure to ensure that a GDO would still function if a user were to inadvertently advance the rolling code past the upper range of the forward window.[118] This process, called "resynchronization," required a user to depress the transmitter button twice; the receiver software would compare the two signals and operate the GDO if the variable values were separated by a factor of three.[119]

Skylink sold a universal transmitter capable of operating many different GDOs, including Chamberlain's Security+ line.[120] Rather than using rolling code software in its transmitter, Skylink exploited the resynchronization process to operate Chamberlain's GDOs.[121] Chamberlain claimed that Skylink's transmitters circumvented the rolling code technology, thereby gaining unauthorized access to the copyrighted software in the receivers.[122] The court denied Chamberlain's motion for summary judgment

113. *Chamberlain I*, 292 F. Supp. 2d at 1026.

114. *Id.* at 1026-27. According to Chamberlain, the Security+ system was designed to prevent burglars from gaining unauthorized entry to a house by recording a transmitted signal and retransmitting it later. *Id.*

115. *Id.* at 1027-28.

116. *Id.* at 1028.

117. *Id.*

118. *Id.* at 1028-29.

119. *Id.*

120. *Id.* at 1031.

121. *Id.* at 1032.

122. *Id.* This explanation of Chamberlain's DMCA claim is somewhat simplified. In reality, Chamberlain programmed the receivers with only one computer program. *Id.* at 1028. In order to fit this program into the contours of § 1201(a)(2) of the DMCA, Chamberlain needed to classify one part of the program—the part that verified the rolling code—as a technological protective measure that protected the rest of the program—the part that activated the GDO motor. *Id.* In essence, Chamberlain argued that "the rolling code computer program has a protective measure that protects itself." *Id.* This convoluted

on August 29, 2003, but invited Skylink to file for summary judgment.[123] The court granted Skylink's motion on November 13, 2003.[124]

2. Analysis

The court denied Chamberlain's summary judgment motion based on several disputed issues of material fact.[125] First, the parties disagreed as to whether Skylink's universal transmitter was designed and marketed "primarily" to circumvent the rolling code protection measure, given that the transmitter could also operate other GDOs.[126] The court found it unnecessary to fully address this issue since the motion could be defeated on other grounds.[127]

The second disputed issue was whether the computer program in Chamberlain's rolling code was in fact protected by copyright.[128] Because the parties disagreed on facts material to this essential element for a prima facie case under § 1201(a)(2), the court denied summary judgment.[129]

Finally, the court addressed the issue of whether a consumer's use of the Skylink transmitter was an "authorized" act for purposes of the DMCA.[130] The Act defines circumvention as an act "without the authority of the copyright owner," and thus constitutes a separate element in the prima facie case that could independently defeat a summary judgment motion.[131] The court concluded that Chamberlain gave its authority to consumers to use any replacement transmitter they desired.[132] This authority was implicit, and was based on the fact that Chamberlain did not restrict consumers' aftermarket options by shrinkwrap agreement, as well as a history in the GDO industry of consumers' use of universal replacement transmitters.[133] Essentially, by not explicitly denying its consumers permission to access its copyrighted software, Chamberlain had implicitly given them authority for purposes of the DMCA.[134]

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reasoning indicates that Chamberlain's GDOs are not the type of product the Act was intended to protect.

123. *Id.* at 1040.
124. *Chamberlain II*, 292 F. Supp. 2d 1040, 1046 (N.D. Ill. 2003).
125. *Chamberlain I*, 292 F. Supp. 2d at 1036-40.
126. *Id.* at 1036-38.
127. *Id.* at 1038.
128. *Id.*
129. *Id.*
130. *Id.* at 1038-40.
131. *Id.* at 1038.
132. *Id.* at 1038-40.
133. *Id.*
134. *See id.*

The court also noted that consumers had a reasonable expectation to access their garages if they were to lose an original transmitter.[135] Under Chamberlain's literal interpretation of the DMCA, a homeowner would violate the Act by accessing her garage via her GDO if she were to lose her transmitter but find some other way to bypass the rolling code software.[136] Although it neither explained its reasoning nor supported its finding with the text of the Act, the court concluded that "the DMCA does not require such a conclusion."[137]

In granting Skylink's motion for summary judgment, the court focused solely on the fact that Chamberlain had failed to prove that it had not granted authority, either to its consumers or Skylink, to access the copyrighted software in the Security+ GDO receivers.[138] As to the consumers' authority, the court reiterated its reasoning from its previous opinion.[139] The court then concluded that Skylink also had authority to access the GDO computer program based on three factors:

> (1) there is a history in the GDO industry of marketing and selling universal transmitters; (2) Chamberlain has not placed any restrictions on the use of competing transmitters to access its Security+ GDOs; and (3) in order for the Skylink transmitter to activate the Chamberlain garage door, the homeowner herself must choose to store Skylink's transmitter signal into the Chamberlain GDO's memory.[140]

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135. *Id.* at 1040.

136. *Id.*; *see also* Transcript of Proceedings: Oral Arguments and Motion Before the Honorable Rebecca R. Pallmeyer at 48-51, *Chamberlain I* (No. 02 C 6376).

137. *Chamberlain I*, 292 F. Supp. 2d at 1040. The court reiterated this point in *Chamberlain II*, but again did not base its reasoning on the statutory text. *See* 292 F. Supp. 2d 1040, 1045-46 (N.D. Ill. 2003).

138. *Chamberlain II*, 292 F. Supp. 2d at 1043-45. As in *Lexmark*, the *Chamberlain* court did not determine whether consumers or third parties are the relevant group in determining the question of authority. *See id.*; *see also supra* note 100. Whereas neither group had authority to access Lexmark's computer programs in *Lexmark*, the *Chamberlain* court determined that both groups had implicit authority to access Chamberlain's software. *See Chamberlain II*, 292 F. Supp. 2d at 1043-45; *see also supra* note 100. The DMCA does not distinguish between the two groups, but merely prohibits access without the copyright owner's authority. *See* 17 U.S.C. § 1201(a)(3) (2000). It thus remains to be seen whether third parties who have been denied authority to circumvent a technological measure may nonetheless distribute circumvention tools to consumers who have been granted that authority. One court's analysis of a similar issue indicates that the DMCA probably prohibits this practice. *See* Universal City Studios, Inc. v. Reimerdes, 111 F. Supp. 2d 294, 317 n.137 (S.D.N.Y. 2000).

139. *Chamberlain II*, 292 F. Supp. 2d at 1045-46.

140. *Id.* at 1046.

The court's conclusion that Chamberlain had implicitly authorized access to its programs defeated the company's DMCA claim.[141]

III. DISCUSSION

Application of the DMCA to durable goods aftermarkets raises significant concerns for the aftermarket industry as a whole.[142] For example, the Automotive Aftermarket Industry Association ("AAIA") fears that the *Lexmark* decision could prompt automobile manufacturers to install inexpensive microchips programmed with copyrighted software that would lock out unauthorized brake shoes, air filters, or other replacement parts, thereby jeopardizing the multi-billion dollar independent automotive aftermarket industry.[143] Successful attacks on aftermarket industries would also negatively affect consumers by increasing prices[144] and limiting selection of aftermarket products.[145] However, these fears need not be realized. So long as courts adhere to the language and purpose of the Act, and develop the equitable doctrine of misuse in the anti-circumvention context as needed, they can prevent use of the DMCA to stifle aftermarket competition.

A. Legislative Intent

Although the *Lexmark* court properly started its analysis of the DMCA anti-circumvention provisions with the text of the statute, the legislative history of the Act indicates that Congress did not intend for the result this

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141. *Id.*

142. *See* James E. Guyette, *Aftermarkets Urged to Challenge 'Intellectual Property' Ruling*, AFTERMARKET BUS., Oct. 14, 2003 ("[A]ftermarkets serving all types of industries are being asked to challenge the law regulating coded computer chips."), http://www.aftermarketbusiness.com/aftermarketbusiness/article/articleDetail.jsp?id=72502.

143. *See* Motion of Automotive Aftermarket Industry Association at 2, Lexmark Int'l, Inc. v. Static Control Components, Inc., 253 F. Supp. 2d 943 (E.D. Ky. 2003) (No. 02-571-KSF).

144. *See* Brief of Amicus Curiae Consumers Union at 1, *Chamberlain I*, 292 F. Supp. 2d 1023 (N.D. Ill. 2003) (No. 02 C 6376). Some scholars argue that the economic harm to consumers is slight when durable goods manufacturers control the aftermarkets for the goods they produce. *See, e.g.*, Shapiro, *supra* note 63, at 485. They contend that "even if aftermarket prices are supracompetitive, equipment market competition leads to offsetting low equipment prices, and thus the overall 'system' price is set competitively." Borenstein et al., *supra* note 66, at 469. However, even where this assertion proves true, consumers are still harmed: "In practice, the high aftermarket price will reduce the amount of use, and therefore value, that consumers will get out of the product." *Id.*

145. *See* Brief of Amicus Curiae Consumers Union, *supra* note 144, at 3; Memorandum of the Automotive Parts Rebuilders Association at 2, *Lexmark* (No. 02-571-KSF).

court reached, or at least did not consider the consequences of the language adopted in the Act.[146] In view of the ambiguity and complexity of the statute, courts should look beyond its wording to its legislative history in order to enforce Congress' manifest intent.

Language that appears clear on its face may actually be more nuanced when cast in the light of legislative history.[147] Thus, while the *Lexmark* court repeatedly referred to the statutory language as "unambiguous" and "clear,"[148] many copyright scholars who closely followed the protracted development and adoption of the provisions found the exact opposite to be true.[149]

One example of an ambiguity in the Act is the meaning of the word "access."[150] The *Lexmark* court used a dictionary to determine this word's "ordinary, customary meaning,"[151] but this basic definition could apply to either the initial act or the initial and all subsequent acts of accessing a work.[152] This distinction is important because the latter interpretation potentially renders part of the statute superfluous—a technological measure that prevents access to a work also prevents the copying, distribution, or other use of that work.[153] Under this interpretation, § 1201(a)(2) would absorb § 1201(b).[154] Although the *Lexmark* court adopted this latter interpretation of "access,"[155] it refused to consider the legislative intent behind

146. *See* Brief Amicus Curiae of Law Professors at 5, *Lexmark* (No. 02-571-KSF) ("We find no suggestion anywhere in the legislative history that Congress considered, no less intended, Section 1201(a) to apply to the type of computer program at issue in the Lexmark complaint.").

147. *See* William N. Eskridge, Jr. & Philip P. Frickey, *Statutory Interpretation as Practical Reasoning*, 42 STAN. L. REV. 321, 342-43 (1990).

148. *See Lexmark*, 253 F. Supp. 2d at 967-69.

149. *See, e.g.*, David Nimmer, *Appreciating Legislative History: The Sweet and Sour Spots of the DMCA's Commentary*, 23 CARDOZO L. REV. 909, 964 (2002) ("[W]ithout the context that legislative history furnishes, the already impenetrable language of the Digital Millennium Copyright Act would become utterly unfathomable . . ."); Samuelson, *supra* note 20, at 524 ("[T]he anti-device provisions of the DMCA are highly ambiguous . . . .").

150. *See* LITMAN, *supra* note 10, at 144.

151. *Lexmark*, 253 F. Supp. 2d at 967.

152. *See* LITMAN, *supra* note 10, at 144.

153. *See id.* ("If . . . 'access' includes all subsequent actions to gain access to a work, the ban on circumvention of access-protection swallows up circumvention of copy-protection as well, since one will normally need to gain access to a work in order to engage in any use of it . . . .").

154. *See id.*

155. The court determined that "[Lexmark's] authentication sequence . . . runs each time a toner cartridge is inserted into a Lexmark printer, the printer is powered on, or whenever the printer is opened and closed." *Lexmark*, 253 F. Supp. 2d at 952. The court

the Act because, ironically, it reasoned that "[i]f the DMCA were only intended to protect copyrighted works from digital piracy," then § 1201(b) would render § 1201(a)(2) "mere surplusage."[156]

Another important ambiguity arises in defining the "work" at issue in a given DMCA anti-circumvention suit. The scope of the Act extends only to those technological measures that protect a copyrighted work.[157] In *Lexmark*, the court defined the copyrighted works protected by the authentication sequence as the Toner Loading Program and the Printer Engine Program.[158] However, Lexmark designed the authentication sequence not so much to protect these programs as to prevent third parties from refurbishing its toner cartridges.[159] Indeed, the Toner Loading Program was not even necessary for the proper operation of a cartridge, and the Printer Engine Program was free to public use and available over the Internet.[160] On these facts, the court could have defined the protected "work" as the cartridge itself, rather than the programs, and dismissed the DMCA claims. The Copyright Act does not protect durable goods such as toner cartridges,[161] and, as a result, neither does the DMCA.[162]

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also found that the authentication sequence controlled "access" to both programs because neither one would work until the sequence "successfully occur[red]." *Id.* at 952-53. Finally, the court determined that SCC's Smartek chips violated the access provision because they circumvented the startup sequence. *Id.* at 968. Thus, according to the court's interpretation, the Smartek chips violated the access provision each and every time they circumvented the startup sequence.

156. *Id.* at 969.

157. 17 U.S.C. § 1201(a)(1)(A), (a)(2), (b)(1) (2000).

158. *Lexmark*, 253 F. Supp. 2d at 967-68.

159. *See* SCC Opposition, *supra* note 78, at 26; *see also* Burk, *supra* note 6, at 1110.

160. *Anti-Circumvention Rulemaking: Hearing Before the Library of Congress and Copyright Office* at 11-12 (May 9, 2003) [hereinafter *Hearing*] (statement of Seth Greenstein), *at* http://www.copyright.gov/1201/2003/hearings/transcript-may9.pdf. This situation contrasts sharply with the scenario contemplated by the framers of the DMCA. Whereas Lexmark made its program publicly available on the Internet because the program was of no value without an accompanying printer, Congress enacted the DMCA to inhibit the unauthorized distribution over the Internet of copyrighted materials whose value lies primarily in their copyrighted aspects. *See* S. REP. NO. 105-190, at 8 (1998).

161. *See* 17 U.S.C. §§ 101, 102(a)(5). Copyrights can inhere in "sculptural works," and one could arguably classify a toner cartridge as such a work. *See id.* § 102(a)(5). However, when a sculptural work is also a "useful article," as in the case of a toner cartridge, copyright law attaches special exceptions. *Id.* § 101. Only the artistic form of sculptural works are copyrightable, "not their mechanical or utilitarian aspects." *Id.* Because toner cartridges are almost purely mechanical and utilitarian (few would argue that their aesthetic qualities render them valuable), these works are not protected by copyright. *See id.*

162. *See* 17 U.S.C. § 1201(a)(1)(A), (a)(2), (b)(1).

Such textual ambiguities allow courts to appeal to legislative history to determine whether Congress intended for the DMCA to apply to durable goods aftermakets.[163] Congress' primary purpose in enacting the anti-circumvention provisions was to curtail piracy of intellectual property, particularly over the Internet.[164] The House and Senate reports explicitly and repeatedly indicate that the DMCA was designed "to make digital networks safe places to disseminate and exploit copyrighted materials."[165] Consistent with this purpose, the anti-trafficking provisions were "drafted carefully to target 'black boxes,' and to ensure that legitimate multipurpose devices can continue to be made and sold."[166] Furthermore, these provisions were "designed to protect copyright owners, and simultaneously allow the development of technology."[167] This language highlights Congress' intent to preserve competition in the marketplace—a goal Congress reiterated in the materials describing the reverse engineering exception.[168]

Given these express objectives, it is unlikely that Congress intended the result reached in *Lexmark*. That case involved a scenario wholly separate from the circumstances to which Congress tailored the Act—namely, the distribution of content industry products over the Internet—and the decision will likely stifle, rather than promote, competition in the marketplace. When, as in *Lexmark*, strict adherence to the language of a statute generates results so demonstrably at odds with the purpose of that statute, appeal to an oft-stated canon of statutory interpretation becomes appropriate: "[I]nterpretations of a statute which would produce absurd results are to be avoided if alternative interpretations consistent with the legislative purpose are available."[169] The *Chamberlain* court adhered to this canon when it rejected Chamberlain's literal interpretation of the DMCA—regardless of what the Act indicated on its face, the court reasoned that a

163. *See Lexmark*, 253 F. Supp. 2d at 967.

164. *See, e.g.*, S. REP. NO. 105-190, at 8 ("Due to the ease with which digital works can be copied and distributed worldwide virtually instantaneously, copyright owners will hesitate to make their works readily available on the Internet without reasonable assurance that they will be protected against massive piracy.").

165. *Id.* at 2; *see also* Burk, *supra* note 6, at 1135 & n.239.

166. S. REP. NO. 105-190, at 29.

167. *Id.*

168. *Id.* at 32 ("The purpose of this section is to foster competition and innovation in the computer and software industry.").

169. Griffin v. Oceanic Contractors, Inc., 458 U.S. 564, 575 (1982); *see also* Haggar Co. v. Helvering, 308 U.S. 389, 394 (1940) ("All statutes must be construed in the light of their purpose. A literal reading of them which would lead to absurd results is to be avoided when they can be given a reasonable application consistent with their words and with the legislative purpose.").

homeowner should "be able to access [his] garage even if his transmitter is misplaced or malfunctions."[170] By pressing on the ambiguities inherent in the Act's language, courts can achieve Congress' purpose in enacting the anti-circumvention provisions: protecting the content industries from widespread piracy while preserving legitimate competition.

B. Statutory Exceptions

Appeal to the exceptions built into the DMCA serves as an alternate means for limiting its expansion into durable goods aftermarkets. The most effective provision for this purpose is the reverse engineering exception set forth in § 1201(f).[171] First, § 1201(f)(1) permits an aftermarket competitor to access a technologically protected computer program in order to create software that is interoperable with that program—an act that would otherwise violate § 1201(a)(1)(A).[172] Second, § 1201(f)(2) allows the competitor to create tools for bypassing the protection measure to allow both programs to communicate with each other—an act otherwise prohibited by § 1201(a)(2) and (b)(1).[173] Finally, § 1201(f)(3) permits distribution of those tools.[174] Therefore, under § 1201(f), an aftermarket competitor may create and distribute circumvention devices, independent of the primary manufacturer's authorization.[175] SCC would likely have prevailed on its § 1201(f) defense had it independently created a program similar to Lexmark's Toner Loading Program, rather than making a wholesale copy of that program.[176] Thus, the DMCA already contains a provision that limits its application in durable goods aftermarkets.

In addition, the Act provides for the Librarian of Congress to conduct rulemaking proceedings in order to adopt additional exceptions.[177] However, these new exceptions only apply to the access prohibition in § 1201(a)(1)(A), and are therefore less effective than § 1201(f).[178] Nevertheless, SCC proposed three new exceptions during the last round of rulemaking proceedings.[179] The most general of these was for "[c]omputer

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170. *See Chamberlain I*, 292 F. Supp. 2d 1023, 1040 (N.D. Ill. 2003); *see also supra* Part II.B.2.

171. *See* Peters, *supra* note 86, at 178-83.

172. *See* 17 U.S.C. § 1201(a)(1)(A), (f)(1) (2000); *see also* Peters, *supra* note 86, at 178-79.

173. *See* 17 U.S.C. § 1201(a)(1)(A), (f)(1); *see also* Peters, *supra* note 86, at 179-80.

174. *See* 17 U.S.C. § 1201(f)(3); *see also* Peters, *supra* note 86, at 180.

175. *See* Peters, *supra* note 86, at 177-83.

176. *See id.* at 182-83.

177. *See* 3 NIMMER & NIMMER, *supra* note 5, § 12A.03[A][2].

178. *See* 17 U.S.C. § 1201(a)(1)(E); *see also* Peters, *supra* note 86, at 179-81.

179. *See* Peters, *supra* note 86, at 172.

programs embedded in a machine or product and that control the operation of a machine or product connected thereto, but that do not otherwise control the performance, display or reproduction of copyrighted works that have an independent economic significance."[180] This proposed exception touches on the most apparent difference between the works Congress intended to protect under the DMCA and the durable goods in *Lexmark* and *Chamberlain*: the copyrighted programs used in durable goods are not independently marketable. The Librarian of Congress rejected SCC's proposals because § 1201(f) already covers the three situations SCC delineated.[181] However, rulemaking proceedings may prove useful in the future as durable goods manufacturers develop new technologies.[182]

C. Misuse

Even if courts determine that they are bound by the text of the anti-circumvention provisions or find § 1201(f) inapplicable to certain defendants, they may still limit the extension of the Act into durable goods aftermarkets by acknowledging the defense of misuse in the paracopyright realm. Misuse is an equitable doctrine under which a court refuses to enforce the rights of a plaintiff who has violated the rights of others.[183] This doctrine, which is well-established in both patent and copyright law, applies where the ends to which an intellectual property right is put exceed the reasonable grant of that right.[184] For example, a defendant in a patent infringement suit may successfully raise the misuse defense if the plaintiff has contracted to collect royalties beyond the term of its patent.[185]

As seen in *Lexmark*, the copyright misuse defense will usually fail in DMCA cases; a plaintiff does not overextend its right in copyright by enforcing the anti-circumvention provisions because paracopyright is essentially a new right that inheres in copyright.[186] However, one legal scholar has proposed that courts should extend the misuse defense to apply directly to paracopyright.[187] Based on the preceding evaluation of the legis-

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180. *Id.*

181. *Id.* at 177-83.

182. *See Hearing*, *supra* note 160, at 44-45 (statement of Jane Ginsburg) (asserting that § 1201(f) may not apply to those situations where the copyrighted software in a durable good and an independently created computer program are not technically "interoperable" because they do not exchange information).

183. Burk, *supra* note 6, at 1115.

184. *Id.* at 1116-31, 1135.

185. *Id.* at 1118.

186. *See* Lexmark Int'l, Inc. v. Static Control Components, Inc., 253 F. Supp. 2d 943, 965-66 (E.D. Ky. 2003).

187. *See* Burk, *supra* note 6, at 1095.

lative intent behind the DMCA, it is apparent that the anti-circumvention measures were intended to protect independently-marketable copyrighted works. Extending the anti-circumvention measures into the realm of durable goods, where copyrighted software is only ancillary to a product's desirability, can therefore be classified as a misuse since this constitutes extending the paracopyright beyond its intended scope.[188] Thus, under the misuse doctrine, courts may refuse to enforce the paracopyright of a plaintiff who has restricted the types of toner cartridges, GDO transmitters, or other aftermarket products its consumers may use.

IV. CONCLUSION

Congress adopted the DMCA's anti-circumvention provisions with the intent of defending copyright industries from digital piracy, and initial cases brought under the Act reflected this concern. However, manufacturers of durable goods recognized in these provisions the potential for a broader application: the exclusion of competitors from aftermarkets. If left unchecked, this troubling extension of the DMCA could have drastic effects on U.S. aftermarket industries and consumers alike. But this result is neither required nor warranted by the DMCA. Indeed, appeal to the legislative history of the Act, proper interpretation of the reverse engineering exception contained in the statute itself, and application of principles drawn from the equitable doctrine of misuse provide means for curtailing the expansion of the DMCA into durable goods aftermarkets.

188. *See id.* at 1135-36.