: At the Crossroads of Copyright and Filtering Technology

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NOTES

Edelman v. N2H2

AT THE CROSSROADS OF COPYRIGHT AND FILTERING TECHNOLOGY

I. INTRODUCTION: A NECESSARY ROAD MAP

When Congress authorized the first American highway in 1806, it is unlikely that it envisioned the extent to which highways would one day connect previously remote parts of the country. Likewise, when former Vice President Al Gore first coined the term “information superhighway” in 1978, it is unlikely that he realized the extent to which the Internet would one day connect formerly unconnected parts of the world. Gore’s linguistic flourish likely sounded futuristic at the

5 According to the United Nations Conference on Trade and Development (UNCTAD), “[t]he number of Internet users worldwide [was] expected to reach 655
time, but it has since become today's cliché. Still, the parallels between the speed-limited network of United States highways and the speed-unlimited modern Internet are not entirely obsolete. As these asphalt and virtual highways connected formerly isolated locations, so has the digital crossroads of the Internet connected previously unconnected matters of law. To be sure, the future holds at least as many Internet-related legal controversies as there are cities and towns on the interstate.

One recent area of conflict is the Digital Millennium Copyright Act (DMCA), and the degree to which its anti-circumvention provisions limit the fair use of copyrighted material, such as movies stored on digital versatile disks (DVDs). Another recent controversy was whether, through the Children's Internet Protection Act (CIPA), the United States government could make the distribution of federal funds to public schools and libraries contingent on their use of Internet filtering software. While the courts have struggled with each of these dilemmas individually, no case had envisioned the collision course of circumvention and filtering technology – that is, until the summer of 2002. As this Note will discuss, that collision occurred in Benjamin Edelman v. N2H2, Inc., a suit filed in July 2002 in the District of Massachusetts.

million by the end of 2002, representing 30 percent growth over the same period [the previous] year . . . .” Laura Rohde, UN: Worldwide Use of Internet, E-Commerce Still Growing, INFOWORLD DAILY NEWS, Nov. 21, 2002.

Revah, supra note 4.

Id.


13 See supra notes 10, 12.

Edelman, a law student and computer researcher, filed suit through the American Civil Liberties Union (ACLU) against N2H2, the manufacturer of Internet filtering software used by many public schools and libraries. According to the complaint, Edelman wanted to write computer programs circumventing the encryption that protects the list of Web sites blocked by N2H2's filtering software (the "block list"). Accessing the list would then enable him to analyze the effectiveness of the filtering software. He also desired to publish and distribute the circumvention programs, the decrypted block list, and other information related to his research. However, he feared that in doing so, he would be "at risk of liability under the DMCA . . . and the non-negotiable N2H2 license."

This Note analyzes the legal and policy issues that intersect in the Edelman case. Part II details the history and philosophy behind the enactment of the DMCA, as well as provides an outline of its anti-circumvention provisions. Part III then gives an overview of Universal Studios, Inc. v. Reimerdes, the major case involving those anti-circumvention provisions. Part IV discusses Internet filtering software and CIPA, the law requiring public schools and libraries to use filtering software in order to receive certain federal funds. Part V outlines Edelman's case and the research Edelman wished to conduct. This Part also describes how his research could violate the DMCA's anti-circumvention provisions, and discusses the constitutional roadblock of standing that Edelman's suit was unable to overcome. Part VI discusses some of the implications of Edelman's case in the area of statutory interpretation, as well as the impact that filtering

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15 At the time of filing, Edelman was less than two months from starting his first year at Harvard Law School. For a brief background on Edelman, see infra Part V.A. Edelman's Harvard Web site can be found at http://cyber.law.harvard.edu/people/edelman (last visited Aug. 16, 2004).
16 The ACLU's Web site can be found at http://www.aclu.org (last visited Aug. 16, 2004).
17 N2H2's Web site can be found at http://www.n2h2.com (last visited Aug. 16, 2004).
18 Edelman Complaint, supra note 14, at 2. While this Note touches on the issue of N2H2's software license, it is ultimately beyond the scope of this Note. See infra note 172.
21 See supra notes 11-12 and accompanying text.
22 U.S. CONST. art. III, § 2, cl. 1.
software can have on the local level when government puts the force of law behind it. In Part VII this Note focuses on the impact Reimerdes and the DMCA have had on the doctrine of fair use. Part VIII further details how copyright and filtering software came to a crossroads in Edelman's case, and discusses the distinctions between Reimerdes and Edelman. This Part also explains how the court in Edelman had the opportunity to bring clarity to the confusion wrought by the DMCA. Finally, Part IX offers grease for the wheels of Edelman's cause by suggesting alternative solutions. However, while this Note provides such alternatives, it ultimately argues that the court should have addressed the merits of Edelman's case and interpreted the anti-circumvention provisions and exceptions of the DMCA in Edelman's favor.

II. THE FIRST ROAD: THE DIGITAL MILLENIUM COPYRIGHT ACT

A. WIPO: The Journey Begins

Recognizing the "challenges of protecting works in the realm of digital technology," the World Intellectual Property Organization (WIPO) conducted a diplomatic conference in Geneva, Switzerland in December 1996. The conference, by a consensus of 160 countries, resulted in two treaties: the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty (WIPO Treaties). The WIPO Copyright Treaty, among its various provisions, contained the requirement that parties to the Treaty

shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.  

23 S. TREATY DOC. NO. 105-17 (1997) (Former Deputy Secretary of State Strobe Talbott's "Provisions Common to the Treaties").
25 Id.
26 Id.
27 S. TREATY DOC. NO. 105-17.
28 WIPO Copyright Treaty, Apr. 12, 1997, art. 11, S. TREATY DOC. NO. 105-17 (1997).
As will be explained in more detail, Congress “went far beyond” what the Treaty provision required.\(^{29}\)

In response to the adoption of the WIPO Treaties, Congress conducted a number of hearings to address the myriad issues that the treaties raised,\(^{30}\) and in 1998 Congress enacted the Digital Millennium Copyright Act,\(^{31}\) the stated purpose of which was to, in part, implement the obligations of the WIPO Treaties.\(^{32}\) In doing so, Congress expressed a desire to “bring[] U.S. copyright law squarely into the digital age.”\(^{33}\)

However, not only did the DMCA legislate beyond the requirements of the WIPO Treaties,\(^{34}\) the DMCA was not necessary to implement the provisions of the WIPO Treaties because U.S. law already almost entirely comported with the provisions of the treaties.\(^{35}\) Therefore, the DMCA’s anti-circumvention provisions go too far.\(^{36}\)

**B. Speed Bumps in the Road: The Anti-Circumvention Provisions of the DMCA**

Prior to the enactment of the DMCA,\(^{37}\) enforcement of copyright traditionally focused on prosecution of the individual copyright infringer.\(^{38}\) However, as access to the Internet has increased\(^{39}\) and the price of digital technology has decreased,\(^{40}\)

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\(^{29}\) See Pamela Samuelson, Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised, 14 BERKELEY TECH. L.J. 519, 521 (1999). See also David Nimmer, Appreciating Legislative History: The Sweet and Sour Spots of the DMCA’s Commentary, 23 CARDozo L. Rev. 909, 962-63 (2002) (pointing out that the various amendments to 17 U.S.C. § 1201 were not necessary to comply with the WIPO Treaties).

\(^{30}\) See Reimerdes, 111 F. Supp. 2d 294, 316 (S.D.N.Y. 2000).


\(^{33}\) Id.


\(^{35}\) Samuelson, supra note 29, at 521 (“U.S. law already complied with all but one minor provision of [the WIPO treaties].”).

\(^{36}\) Id.


\(^{38}\) Glynn S. Lunney, Jr., The Death of Copyright: Digital Technology, Private Copying, and the Digital Millennium Copyright Act, 87 VA. L. Rev. 813, 818 (2001) (stating that the DMCA’s anti-circumvention provisions aim “to replace copyright’s traditional approach of direct legal action against each individual infringer”).

\(^{39}\) See supra note 5. In the United States alone, the percentage of households with Internet access increased from 26.2% in 1998 to 50.5% in 2001. Economics &
the ability to make "near-perfect and inexpensive copies" of digital works has spread throughout the world.\textsuperscript{42} With this technological evolution, the traditional tactic of pursuing each and every individual copyright infringer became impractical, if not impossible.\textsuperscript{43} Thus, according to Congress, the DMCA became necessary "to make digital networks safe places to disseminate and exploit copyrighted materials."\textsuperscript{44} Due to the "pervasive plague"\textsuperscript{45} that "digital piracy"\textsuperscript{46} has become, Congress explained, "copyright owners will hesitate to make their works readily available on the Internet without reasonable assurance they will be protected against massive piracy."\textsuperscript{47} This is the philosophy behind the anti-circumvention provisions of the DMCA.\textsuperscript{48}

The anti-circumvention and anti-tools\textsuperscript{49} provisions of the DMCA\textsuperscript{50} focus on defending\textsuperscript{51} the technological controls a

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  \item See generally Charles C. Mann, \textit{The End of Moore's Law?}, TECH. REV., May 1, 2000, at 42, available at 2000 WL 11038873 (describing how, as computer power and capabilities have increased, computer prices have decreased).
  \item Lunney, supra note 38, at 818.
  \item S. REP. NO. 105-190, at 8 (1998) (describing "the ease with which digital works can be copied and distributed worldwide virtually instantaneously").
  \item See Lunney, supra note 38, at 818-19 ("[I]n the face of widespread private copying, copyright's traditional approach of direct legal action against each individual infringer would likely prove ineffective.").
  \item S. REP. NO. 105-190, at 2.
  \item Id.
  \item S. REP. NO. 105-190, at 8.
  \item See \textit{Unintended Consequences}, supra note 34 at 2 ("[S]ections 1201(a)(2) and 1201(b) [of the DMCA] outlaw the manufacture, sale, distribution or trafficking of tools . . . that make circumvention possible.") (emphasis in original).
  \item Violation of the DMCA's anti-circumvention provisions can result in both civil liability, 17 U.S.C. § 1203, and criminal penalties, 17 U.S.C. § 1204. In a civil action brought under § 1201, courts "may grant temporary and permanent injunctions . . . to prevent or restrain a violation," and may award damages, costs, and attorney's fees. 17 U.S.C. § 1203(b)(1), (b)(3)-(5) (2000). As for criminal penalties, a person who violates § 1201 "willfully and for purposes of commercial advantage or private financial gain" can face a fine of up to $500,000, a prison term of up to five years, or both. Repeat offenders face a fine of up to $1,000,000, a prison term of up to ten years, or both. 17 U.S.C. § 1204(a) (2000). These criminal penalties do not apply to nonprofit libraries or schools. 17 U.S.C. § 1204(b) (2000).
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copyright owner places on the digital embodiment of his work by either outlawing the circumvention itself or outlawing the means to circumvent.\footnote{See generally Matt Jackson, Using Technology To Circumvent the Law: The DMCA's Push to Privatize Copyright, 23 HASTINGS COMM. \& ENT. L.J. 607, 626-28 (2001).} First, the anti-circumvention provision, section 1201(a)(1)(A), states in pertinent part that "[n]o person shall circumvent a technological measure that effectively controls access to [a copyrighted work]."\footnote{17 U.S.C. § 1201(a)(1)(A) (2000). To be precise, the section states: "controls access to a work protected under this title." Since I've seen so much variation and paraphrasing of "a work protected under this title," I thought it only fair to give my own paraphrase, rather than copy anyone else's.} For example, assume a consumer named Nigel lawfully purchased word processing software for his computer. Like most software buyers, in order to install and use the program Nigel had to type in an access code that came with the software's manuals and packaging.\footnote{If Nigel had purchased the software from the manufacturer's Web site and downloaded it, it is also likely that Nigel had to agree to a "clickwrap" license upon installing the program. For discussion on clickwrap licenses, see infra note 172.} Further assume that Nigel's next-door neighbor Phyllis somehow got her hands on an illegal, or "pirated," copy of the same software, but did not have the access code.\footnote{For illustration purposes, assume a third friend, Spanky, had a copy of the word processing software and used a program or software tool to create a copy on his CD burner, but Spanky forgot to give Phyllis the access code that came with his lawfully-purchased copy.} In order to use the software, she used a special program or software "tool" (which she probably downloaded from the Web) to fool the access code portion of the software into thinking she entered an access code. While Nigel's behavior was, of course, entirely legal, the actions of Phyllis would constitute circumvention of an access-protecting technological measure and would thus violate section 1201(a)(1)(A) of the DMCA.\footnote{As a matter of terminology, 17 U.S.C. § 1201(a)(3)(A) defines circumvention of a technological measure as "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," and § 1201(a)(3)(B) states that "a technological measure 'effectively controls access to a work' if the measure in the ordinary course of its operation, requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work."}

Second, the anti-tools provisions, sections 1201(a)(2) and 1201(b)(1), codify a prohibition on the means or "tools" used to circumvent technological protection of copyrighted programs. Section 1201(a)(2) says 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 . . . is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to [a copyrighted work].’ Similariy, section 1201(b)(1) outlaws the manufacture of or trafficking in technology that is designed to circumvent “protection afforded by a technological measure that effectively protects a right of a copyright owner under [the Copyright Act] or a portion thereof.” A cursory review of these two anti-tools provisions may not reveal the subtle difference between the two sections—the first anti-tools provision covers technology that provides unauthorized access, while the second anti-tools provision covers technology that enables copyright infringement.

In the terms of the illustration above, distributing the special program or software “tool” that allowed Phyllis to bypass the access code on the word processing software would violate section 1201(a)(2), and distributing whatever program allowed Phyllis’s friend to illegally copy the word processing software would violate section 1201(b)(1).

Thus far, the DMCA has yet to be successfully challenged, but that is not for the lack of an attempt. The major challenge to the DMCA to date involved the circumvention of the technological protection measures found on DVDs, discussed in the following section.

III. COPYRIGHT HITS THE SPEED BUMPS IN UNIVERSAL V. REIMERDES

Since Hollywood studios began releasing movies to consumers on DVD in 1997, the format has become immensely

\[\text{111 F. Supp. 2d 294 (S.D.N.Y. 2000). This section also refers to Universal City Studios v. Corley, 273 F.3d 429 (2d Cir. 2001) [hereinafter Corley], the Second Circuit decision that affirmed Reimerdes.}

\[\text{Corley, 273 F.3d at 437.} \]
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popular and also very lucrative for the studios. However, due to the fact that the DVD format is able to store a great deal more data than analog videotape, and that its digital format can enable users to easily make near-perfect copies, studios hesitated to release movies on DVD until adequate piracy protections were put in place. Thus, in 1996, the studios adopted the Content Scramble System (CSS) to protect their copyrighted movies on DVD. Today, almost all movies released on DVD are protected by CSS.

In September 1999, Norwegian teenager Jon Johansen and two people he met on the Internet reverse-engineered a licensed DVD player and discovered the CSS technology. This discovery enabled them to create DeCSS, a computer program that could decrypt CSS-encrypted DVDs, "thereby allowing playback on non-compliant computers" as well as the copying of DVDs.

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66 Corley, 273 F.3d 436 (2d Cir. 2001). To illustrate, the storage capacity of a 3.5 inch floppy disk is less than 1.5 megabytes. The capacity of a DVD, however, is more than 4,700 megabytes, or 4.7 gigabytes. Reimerdes, 111 F. Supp. 2d at 307.

67 Corley, 273 F.3d at 436.

68 Id.

69 Ryan L. Van Den Elzen, Decrypting the DMCA: Fair Use as a Defense to the Distribution of DeCSS, 77 NOTRE DAME L. REV. 673, 674 (2002). CSS encryption was developed for the studios by members of the consumer electronics and computer industries. Corley, 273 F.3d at 436. Unless a DVD player is equipped with the technology used to unlock the encryption, it cannot access the information stored on a DVD. Id. at 437. If the DVD player has the requisite decryption technology, it can "display the movie on a television or computer screen, but does not give a viewer the ability to use the copy function of the computer to copy the movie or to manipulate the digital content of the DVD." Id. In order to control the decryption technology, studios created a scheme for distributing and licensing the technology to DVD player manufacturers. In exchange for this technology, manufacturers paid an administrative fee and agreed to keep the technology confidential. Id. For a more detailed explanation of CSS and its development, see Reimerdes, 111 F. Supp. 2d at 309-10.

70 Reimerdes, 111 F. Supp. 2d at 310 ("All or most of the motion pictures released on DVD . . . continue to be . . . encrypted with CSS technology.").

71 Id. at 311.

72 At trial, Johansen claimed that he created DeCSS to allow DVDs to be played on computers running the Linux operating system. (Linux is a free, open-source operating system for computers, often used as an alternative to Windows. For basic information about Linux, see Linux Online Inc., What Is Linux, at http://www.linux.org/info/index.html (last visited Aug. 16, 2004).) However, DeCSS is actually a Windows program that can only be used on computers running the Windows
of decrypted files to computer hard drives.” Johansen then posted the executable object code for DeCSS on his personal Web site. Shortly thereafter, copies of DeCSS spread throughout the Internet.

Two months after DeCSS was created, Eric Corley wrote an article about the creation and uses of DeCSS and posted it to his Web site, 2600.com, along with the object and source code for DeCSS, and links to other Web sites that offered DeCSS for download. In an attempt to prevent the further distribution of DeCSS, the movie industry sent “cease-and-desist” letters to many of the Web sites that contained DeCSS. Some Web site operators removed DeCSS from their sites, but others, including Corley, refused. Consequently, a coalition of Hollywood studios filed suit against a few of these Web sites and their operators, including Corley.

In that case, Universal City Studios, v. Reimerdes, the court held that since DeCSS was created “solely for the purpose

operating system. Johansen further claimed that this was necessary because when he created DeCSS, Linux did not support the DVD format, making it necessary to decrypt a DVD with DeCSS on a computer running Windows and then play the decrypted files on a computer running Linux. Reimerdes, 111 F. Supp. 2d at 311. Nevertheless, the court stated that Johansen “created DeCSS in the full knowledge that it could be used on computers running Windows rather than Linux. Moreover, he was well aware that the files, once decrypted, could be copied like any other computer files.” Id.

As distinguished from source code. For an explanation of the difference between object code and source code, see Corley, 273 F.3d at 438-39, and Lora Saltarelli, The Digital Millennium Copyright Act and the Functionality Fallacy, 77 NOTRE DAME L. REV. 1647, 1662-63 (2002).

Id.


Corley has been publishing the print magazine 2600: The Hacker’s Quarterly since 1984, and also runs the Web site version at http://www.2600.com (last visited Aug. 16, 2004). The magazine covers issues ranging from online privacy to computer security systems. Corley, 273 F.3d at 439. The magazine has been referred to as a “hacker” publication, but the term “hacker” is often misunderstood. See Saltarelli, supra note 74, at 1656.

Corley, 273 F.3d at 439.

Reimerdes, 111 F. Supp. 2d at 312.

Corley, 273 F.3d at 439.

Reimerdes, 111 F. Supp. 2d at 312.

The suit, Universal City Studios, Inc. v. Reimerdes, was initially filed against Corley, Shawn C. Reimerdes, and Roman Kazan. Reimerdes and Kazan settled at an early stage of the litigation, “by agreeing to take down the DeCSS code and not provide links to sites that posted it.” Corley, 273 F.3d at 440 n.8; see also Damien Cave, A Hacker Crackdown?, SALON.COM, ¶ 9 (Aug. 7, 2002), available at http://archive.salon.com/tech/feature/2000/08/07/yoink_napster/.

of decrypting CSS," the program is therefore a product that is "primarily designed . . . for the purpose of circumventing a technological measure that effectively controls access to a work" protected by the DMCA. Thus, the court held, Corley's posting of DeCSS and links to other sites containing DeCSS on his Web site constituted "trafficking," thereby violating section 1201(a)(2)(A) of the DMCA.

The court further rejected the argument that posting DeCSS and links to other DeCSS sites fell under the reverse engineering exemption found in section 1201(f) because Corley did not engage in any reverse engineering — he merely obtained DeCSS from another Web site and posted it on his own Web site. In addition, the court held that Corley's actions were not protected by the doctrine of fair use. The court stated that while section 107 of the Copyright Act allows for fair use of copyrighted material, Corley was not being sued for copyright infringement, but rather for violating the anti-tools provision of section 1201(a)(2) of the DMCA. In the end, the court issued a permanent injunction, barring Corley from

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85 Id. at 319.
87 Reimerdes, 111 F. Supp. 2d at 319. See Saltarelli, supra note 74, at 1658.
88 17 U.S.C. § 1201(f) states, in part:
[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 to a particular portion of that program for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs . . . .

89 Reimerdes, 111 F. Supp. 2d at 320.
90 Id. at 321-24. For discussion on the fair use doctrine, see infra Part V.
92 Reimerdes, 111 F. Supp. 2d at 322. The court explained:
Section 107 of the Copyright Act provides in critical part that certain uses of copyrighted works that otherwise would be wrongful are 'not infringement[s] of copyright.' Defendants, however, are not here sued for copyright infringement. They are sued for offering and providing technology designed to circumvent technological measures that control access to copyrighted works and otherwise violating section 1201(a)(2) of the Act.

Id. (alteration in original).
posting the DeCSS program and linking to other sites that contained DeCSS. Corley subsequently appealed, but the Second Circuit upheld the injunction slightly more than one year later.

Approximately six months after the Corley decision was handed down, a different case was decided regarding the use of Internet filtering software in public schools and libraries – an issue that, at the time, seemed unrelated to the issues found in Reimerdes and Corley. As will be discussed later in this Note, the issue of filtering software would eventually intersect with the issues surrounding the DMCA in the Edelman case.

IV. THE SECOND ROAD: THE CHILDREN'S INTERNET PROTECTION ACT

The open and free nature of the World Wide Web (Web) allows virtually anybody to publish anything on the Internet, regardless of the quality of the material (or lack thereof). One of the features of the Web that gives anyone the ability to publish information, besides the generally low cost, is the Web's massive and constantly-expanding size: The Web

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93 See Corley, 273 F.3d 436, 441 (2d Cir. 2001).
94 Corley, 273 F.3d 429 (2d Cir. 2001).
96 See infra Part V.
97 As a long-time user of the Web, I personally remember the days before Yahoo!, Netscape, and Internet Explorer, when the majority of the Web seemed to consist of published research, free pornography, and pages upon pages of people's photographs of their pets, particularly cats. It appeared that few of the people who threw together "home pages" ever gave much thought to whether they should put their personal oddities on display for the world to see. While the scope of the Web has expanded dramatically since those days, some things never change.
98 Or, as Chief Judge Edward R. Becker wrote, "While the beneficial effect of the Internet in expanding the amount of information available to its users is self-evident, its low entry barriers have also led to a perverse result - facilitation of the widespread dissemination of hardcore pornography . . . the volume of pornography on the Internet is huge . . . ." ALA, 201 F. Supp. 2d 401, 405-06 (E.D. Pa. 2002), rev'd 539 U.S. 194 (2003).
99 See generally Bernard W. Bell, Filth, Filtering, and the First Amendment: Ruminations on Public Libraries' Use of Internet Filtering Software, 53 FED. COMM. L.J. 191, 193 (2001) ("[T]he Internet has empowered smaller entities and even individuals, enabling them to widely disseminate their messages and [reach broad audiences].").
100 An individual can even publish information on the Web for free, assuming he has access to the Internet. For example, Yahoo!'s Geocities, at http://geocities.yahoo.com, and the Lycos Networks' Tripod, at http://www.tripod.lycos.com, grant virtually anyone free Web pages.
contains at least four billion pages of content\textsuperscript{101} and expands by at least 1.5 million new pages daily.\textsuperscript{102} As a result of its vast content, the Web has become a valuable educational tool in schools\textsuperscript{103} and in public libraries. However, the massive expansion of the Web has brought with it a variety of tools to filter its content.\textsuperscript{104} Before turning to the legal implications of filtering, a brief explanation of how filtering software works is in order.

A. Speed Bumps Online: Internet Filtering Software

Filtering software, in its most basic sense, consists of programs designed to block or filter access to Web sites or other material on the Internet.\textsuperscript{105} Generally, such programs work as a “filter” between a computer’s Web browser and the Internet, and restrict Web access based on a preset list of Web site addresses, or “URLs,”\textsuperscript{106} compiled by the company that makes the filtering program.\textsuperscript{107} If a person attempts to access a Web site on the block list using a computer that either has filtering software installed or is connected to a network that employs filtering software,\textsuperscript{108} the Web browser may display a warning or error message explaining that the Web site is blocked.\textsuperscript{109}

\begin{itemize}
  \item[102] \textit{ALA}, 201 F. Supp. 2d at 408.
  \item[103] See Nancy Willard, \textit{Safe And Responsible Use of the Internet: A Guide for Educators} (2002) (“The Internet has emerged in the last decade as an extremely important conduit for information and communications. The objective of schools is to prepare students for active and effective participation in society. The information and communication resources of the Internet have become an essential component of this preparation.”), available at http://www.ntia.doc.gov/ntiahome/ntiageneral/cipacommments/comments/willard/Chapters.htm; \textit{ALA}, 201 F. Supp. 2d at 405 (“Approximately 10% of Americans who use the Internet access it at public libraries.”).
  \item[104] See, e.g., Adam Horowitz, \textit{The Constitutionality of the Children’s Internet Protection Act}, 13 ST. THOMAS L. REV. 425, 429 (2000) (“Since 1995, when only three Internet filtering tools were widely available, the filtering industry has exploded to over 100 devices.”).
  \item[105] \textit{ALA}, 201 F. Supp. 2d at 427. While there are other measures that people can use to block the variety of material available on the Internet, this Note is concerned with filtering software that blocks access to Web sites.
  \item[106] A URL, or “uniform resource locator,” is the “address” that identifies resources on the Web, such as pages, images, or downloadable files. See World Wide Web Consortium, \textit{Naming and Addressing: URIs, URLs, . . .} (1993), available at http://www.w3.org/Addressing/ (last modified Oct. 23, 2003). For example, “http://www.cnn.com” is the URL for the CNN Web site.
  \item[107] \textit{ALA}, 201 F. Supp. 2d at 428.
  \item[108] \textit{ALA}, 201 F. Supp. 2d at 428. Filtering software can work on one computer or over a network, depending on the product. Filtering software for networks is the
In addition to compiling block lists, filtering software companies usually divide the Web sites on their block lists into various categories based on the type of material found on the specific Web site. This allows a filtering software customer to choose which types of Web sites she wants to block. Examples of categories used by filtering software companies include “Adults Only,” “Chat,” “Drugs,” “Electronic Commerce,” “Hobbies & Recreation,” and “Religion.” Customers may add individual Web site URLs to, or remove Web site URLs from, their copy of the filtering software, but filtering software companies do not allow customers to see the entire block lists, as the companies consider the lists to be proprietary information.

In order to determine which Web sites to include on block lists, filtering software companies employ a variety of gathering methods that vary in effectiveness. These methods are usually considered as proprietary as the lists themselves. Generally, companies will first attempt to cull as many Web sites as they can from the “indexable” Web through, for example, the use of search engines, online directories such as Yahoo!, and site submissions from customers. Once the company has gathered Web sites, it must somehow decide whether to block each site. Decision methods may include simply searching each site for specific words or employing algorithms that detect the frequency and use of words and language on a Web site. In addition to using technical methods, companies may integrate some level of human review into their decision methodology. One company, in fact, has claimed that a human being checks every Web site before it is type “generally marketed to institutions, such as public libraries, that provide Internet access through multiple terminals.”

109 Id. at 429.
110 Id. at 428-29.
111 Id. at 429-30.
112 Id. at 430.
113 ALA, 201 F. Supp. 2d at 418 (“The publicly indexable Web is limited to those pages that are accessible by following a link from another Web page that is recognized by a search engine.”). While the Web contains billions of pages, not all of them have been indexed by search engines. If a Web site is not linked to via another already indexed Web site, or if the Web site has not been manually submitted to a directory like Yahoo!, there is no way for a person to know it is there unless someone has given them the URL. ALA, 201 F. Supp. 2d at 431. The problem is that only about half of the Web sites that could be indexed have been indexed, which leaves a great number of Web sites that filtering software companies are simply unable to locate. Id.
114 ALA, 201 F. Supp. 2d at 431.
115 Id. at 432.
finally categorized. However, since approximately 1.5 million Web pages are added to the indexable Web each day, it is questionable whether a company can actually review each site effectively, if at all.

While filtering software would seem to be an essential tool in protecting children from objectionable content on the Internet, its ineffectiveness has been the subject of a great deal of criticism. In addition, customers have been forced to stop using filtering software due to its ineffectiveness. The major criticism of filtering software has been its lack of precision — filtering software is notorious for blocking Web sites that contain no objectionable or obscene content, and for failing to block Web sites that do contain such content. Nevertheless, Congress passed CIPA, a law that made it very difficult for public schools and public libraries to choose not to use filtering software.

B. CIPA Is Challenged, but Wins the Race

The fact that virtually anyone can put anything on the Internet provokes a substantial concern about children accessing "adult" material through the Internet. Congress

116 Id. at 433. The SmartFilter company has claimed that "the final categorization of every Web site is done by a human reviewer." Id. N2H2, in contrast, claims on their Web site that they use a combination of technology and human review. N2H2, Inc., Filtering Categories, available at http://www.n2h2.com/products/categories.php (last visited Aug. 16, 2004).
117 ALA, 201 F. Supp. 2d at 433.
118 In fact, the effectiveness (or lack thereof) of filtering software was an essential part of the district court's decision in American Library Association v. United States, 201 F. Supp. 2d 401 (E.D. Pa. 2002), rev'd 539 U.S. 194 (2003). For discussion on the ALA case, see supra Part III.B.
119 See, e.g., Julie Elliott, GISD Stops Use of Internet Filter, DALLAS MORNING NEWS, July 10, 1998, at 1A, available at 1998 WL 13086903 (describing how a school board in Texas voted to stop using N2H2's filtering software "after six months of frustration" because it blocked Web sites useful to students).
120 See, e.g., Declan McCullagh, Smut Filter Snags Non-Smut, Too, WIRED, Mar. 27, 2002 (quoting Geoffrey Nunberg, an expert witness in the ALA case, who stated that being precise is "well beyond the capability of [filtering] technology"), available at http://www.wired.com/news/print/0,1294,51339,00.html.
121 See ALA, 201 F. Supp. 2d at 447-50.
122 See supra note 11.
123 See, e.g., Anick Jesdanun, Schools Limit Ride in Surfing the Web; U.S. Cities Scramble to Comply With New Federal Law Mandating Filters, WASH. POST, Oct. 6, 2002, at A18, available at 2002 WL 101066140 (explaining how a public school system information technology director chose to implement filtering programs in his schools because too much federal funding was at stake under CIPA).
responded to this concern by enacting CIPA,\footnote{See supra note 11.} which conditions the granting of federal funds to public schools and public libraries\footnote{Public Internet access is available in "approximately 95% of all public libraries in the United States." ALA, 201 F. Supp. 2d at 405. At least 75% of schools use filtering software. Katie Dean, Filters, Schools Like Oil, Water, WIRED, Sept. 6, 2002, available at http://www.wired.com/news/print/0,1294,54632,00.html.} on those entities complying with the requirement that they use filtering software\footnote{20 U.S.C. § 9134(f)(1)(A)(i) states that the library must use a "technology protection measure with respect to any of its computers with Internet access" that prevents access to harmful material. This is generally understood to mean filtering software. See Richard J. Peltz, Use 'The Filter You Were Born With': The Unconstitutionality of Mandatory Internet Filtering for the Adult Patrons of Public Libraries, 77 WASH. L. REV. 397, 427-28 (Apr. 2002). It should be noted, however, that CIPA was not Congress' first attempt to regulate content on the Internet. First, Congress enacted the Communications Decency Act (CDA), Pub. L. No. 104-104, §§ 501-561, 110 Stat. 56 (1996), which basically made it illegal to put pornography or other adult material on the Internet where anyone under the age of 18 could access it. John L. Krieger, Will the Third Time Be a Charm or a Strike? Regulating Sexually Explicit Content on the Internet, NEV. LAW., Aug. 2002, at 12, 13. The CDA was struck down for being overbroad in Reno v. ACLU, 521 U.S. 844 (1997). See Peltz, supra note 127, at 418-21. Next, Congress enacted the Child Online Protection Act (COPA), 47 U.S.C. § 230-31 (2000), which imposed civil and criminal penalties for knowingly making harmful material accessible to minors, unless they, in good faith, tried to restrict such access. Shea, supra note 124, at 190-91. COPA is currently being held back by an injunction. Ashcroft v. ACLU, 535 U.S. 564, 586 (2002) (stating that "the Government remains enjoined from enforcing COPA absent further action by the Court of Appeals or the District Court"), aff'd, 124 S. Ct. 2783 (2004). For a more detailed history of the CDA and COPA, see Peltz, supra note 127, at 417-25.} on their Internet-connected computers.\footnote{201 F. Supp. 2d at 407. As explained by the ALA court, "CIPA requires that libraries, in order to receive [certain federal funds], certify that they are using a 'technology protection measure' that prevents patrons from accessing 'visual depictions' that are 'obscene,' 'child pornography,' or in the case of minors, 'harmful to minors.'" Id. (citing 20 U.S.C. § 9134(f)(1)(A) and 47 U.S.C. § 254(h)(B) & (C)).} The claimed purpose of the filtering software was to protect users from obscene material, child pornography, or, in the case of minors, from material "harmful to minors."\footnote{The court, having concluded that the government has a compelling interest in protecting library patrons, particularly minors, from exposure to pornography and other obscene material, id. at 470-75, stated that strict scrutiny applies to "public libraries' content-based restrictions on patrons' access to speech on the Internet." Id. at 470-71. Thus, since strict scrutiny applied, if less restrictive alternatives existed, the government was required to use them. Id. at 471 (citing United States v. Playboy} At first, as applied to public libraries, CIPA was deemed unconstitutional in American Library Association v. United States.\footnote{201 F. Supp. 2d at 401 (E.D. Pa. 2002), rev'd 539 U.S. 194 (2003).} The district court in ALA held that due to the limitations of filtering software, and the availability to public libraries of less restrictive alternatives to prevent their computers from accessing the proscribed material,\footnote{The court, having concluded that the government has a compelling interest in protecting library patrons, particularly minors, from exposure to pornography and other obscene material, id. at 470-75, stated that strict scrutiny applies to "public libraries' content-based restrictions on patrons' access to speech on the Internet." Id. at 470-71. Thus, since strict scrutiny applied, if less restrictive alternatives existed, the government was required to use them. Id. at 471 (citing United States v. Playboy} CIPA
makes it impossible for a library to comply with the statute’s requirements without blocking a great deal of speech protected by the First Amendment. Approximately one year later, however, the United States Supreme Court reversed the decision. Ruling that CIPA was not unconstitutional, Chief Justice Rehnquist’s plurality opinion held, inter alia, that the use of Internet filtering software does not violate the First Amendment, and that conditioning the receipt of federal funds on the use of filtering software is "a valid exercise of Congress’ spending power." 

While the Supreme Court overturned the district court’s determinations regarding the First Amendment implications of the use of filtering software in public libraries, the most interesting aspect of the district court’s opinion, with respect to the merits of Edelman’s case, is the extensive attention the court gave to filtering software itself. Based on a variety of testimony, including expert testimony from Edelman, the district court determined that it is impossible for filtering software companies to gather and categorize Web sites with any great accuracy. The court found that the constant and rapid growth and evolution of the Web is one of the main causes of the lack of accuracy in filtering software. This unrelenting growth of the Web forces filtering companies to engage in “practices that are necessary to reduce underblocking, but inevitably result in overblocking.” Examples of these practices include blocking an entire Web site

Entm't Group, Inc., 529 U.S. 803, 813). The court's examples of less restrictive alternatives include requiring that minors be accompanied by a parent when using computers with unfiltered Internet access; requiring that minors, with parental consent, use unfiltered computers in view of library employees; and can offer adult patrons unfiltered Internet access only on computers that are not in view of other patrons to protect others from unwillingly seeing pornography. Id. at 489-90.

United States v. Am. Library Ass'n, 539 U.S. 194, 214 (2003). For a more detailed analysis of the Court's decision, see, for example, Internet Filtering as a Condition of Federal Library Funding, 117 HARV. L. REV. 349 (Nov. 2003). As much as I would like to criticize the Court's decision at length, such discourse is ultimately beyond the scope of this Note.


For Edelman’s background, see infra Part V.A.

See 201 F. Supp. 2d at 430.

See supra text accompanying notes 100-01. See also 201 F. Supp. 2d at 448.

201 F. Supp. 2d at 448.
based on the content of only a few pages found on that Web site, \(^{139}\) and failing to review Web sites that were previously categorized to determine whether they still should be blocked. \(^{140}\)

Due to the aforementioned problems with filtering software, Edelman wanted to continue the type of research he conducted as an expert witness in the ALA case. \(^{141}\) However, there were a number of potential roadblocks in his way, as the following sections will illustrate.

V. HEADING TOWARD THE CROSSROADS WITH BENJAMIN EDELMAN AND N2H2

A. The Driver

Benjamin Edelman entered Harvard Law School in the fall of 2002, \(^{142}\) and has been involved with computers since he was a teenager. \(^{143}\) In the spring of 2002, Edelman testified as an expert witness in ALA \(^{144}\) regarding the effectiveness of commercial Internet filtering programs. \(^{145}\) Crediting Edelman's testimony, \(^{146}\) the court explained that Edelman tested 500,000 unique Web pages out of over two billion estimated to exist on the Web, \(^{147}\) and that thousands \(^{148}\) of those pages tested were

\(^{139}\) Id. at 449. The court gives the example of blocking Salon.com, a well-known Web-based publication, in its entirety, simply because it has a sex column. \(\text{Id.}\)

\(^{140}\) As the court explains, not only does the Web site content change constantly, a Web site may go out of business, only to have its domain name purchased by a completely different type of entity. \(\text{Id.}\) Thus, if a filtering company does not “re-review” a Web site that it categorized previously, the blocking of that site may be based on content that is no longer there.


\(^{142}\) See supra note 15.

\(^{143}\) Yochi J. Dreazen, Computer Whiz Toils to Save Internet’s Soul, WALL ST. J., Sept. 16, 2002, at B1, available at 2002 WL-WSJ 3406138 (“A successful computer entrepreneur, [Edelman] launched his first business when he was only 13.”).


\(^{145}\) Id. at 442-46. Edelman tested four different commercial Internet filtering programs, one of which was manufactured by N2H2. However, since N2H2 considers their filtering or “block” list proprietary, Edelman was only able to estimate the number of sites blocked by N2H2’s filtering programs.

\(^{146}\) Id. at 442-45.

\(^{147}\) Id. at 445.

\(^{148}\) The court noted the following:

Edelman tested only 500,000 unique [Web pages] out of the 4000 times that many, or two billion, that are estimated to exist in the indexable Web. Even assuming that Edelman chose the [Web pages] that were most likely to be erroneously blocked by commercial filtering programs, we conclude that
erroneously blocked by the filtering programs. Ultimately, the district court in ALA discovered that "commercially available filtering programs erroneously block a huge amount of [content] . . . ."  

B. The Passenger

N2H2 is a small Seattle-based company that manufactures Internet filtering software and services. At the end of its fiscal year 2001, N2H2 held the dominant position in the education market, with its software being used in 25,000 schools in the United States. While the company offers filtering software to businesses, the company "has built its reputation on its presence in the K-12 education market." In addition, N2H2's "Bess" filtering program is one of three network-based filters that "currently have the lion's share of the public library market." Moreover, the enactment of CIPA has had "a large impact" on N2H2's sales to the educational market.

many times the number of pages that Edelman identified [6,775] are erroneously blocked by . . . the filtering programs that he tested. ALA, 201 F. Supp. 2d at 445.

The court listed numerous examples of Web sites erroneously blocked by N2H2, including a site for a California State Assembly candidate, the site for Wisconsin Right to Life, and the site for Southern Alberta Fly Fishing Outfitters. ALA, 201 F. Supp. at 446-47.

N2H2 lists 80 employees on their Fact Sheet. N2H2's two main products are Bess, which is used by schools and libraries, and Sentian, which is used by businesses and government entities. N2H2 Fact Sheet, supra note 151.


ALA, 201 F. Supp. 2d at 427.

Electronic Educ. Rep., supra note 152 (quoting Craig Blessing, N2H2's Vice President of Sales).
While the exact process N2H2 uses to compile its list of blocked sites is unknown, N2H2 claims that its “proprietary process uses a unique combination of technology and human review.” According to Kevin Fink, N2H2’s former Chief Technology Officer, the process basically contains three parts. First, so-called “automated agents” gather Web sites from various Internet sources. Second, their “Website Analysis Team” reviews the Web sites gathered by the automated agents and assigns each site to a category, such as “Adults Only” or “Hate/Discrimination.” Finally, users of N2H2’s software, upon finding a Web site that should or should not be blocked, can send that site to N2H2 for review. N2H2’s Website Analysis Team then adds the site to or removes the site from the block list.

In addition to the above claims regarding how they compile their block list, N2H2 claims that they use the most accurate filtering software available, based on a study commissioned by the U.S. Department of Justice. According to the study, N2H2’s filtering program correctly blocked Web sites 98 percent of the time, and only blocked one site out of 300 sample sites that it should not have blocked. However, as the district court in ALA pointed out, this study was flawed, and had “little probative value because of the methodology used to select the sample universe of Web sites to be tested.”

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157 N2H2 considers its block list proprietary. See infra notes 170, 196.
159 Fink Testimony, supra note 154.
160 See N2H2 Category Definitions, supra note 158.
162 Department of Justice Study Finds N2H2 Internet Filtering to be Most Effective, PR NEWSWIRE, Apr. 9, 2002, available at http://www.n2h2.com/about/press/releases.php. Philip Welt, president and chief executive officer of N2H2, stated that “statistical facts show that N2H2 provides the most effective and accurate filters . . . .” Id.
163 201 F. Supp. 2d at 437 (stating that each study of filtering software presented in the case “suffer[ed] from various methodological flaws”).
164 201 F. Supp. 2d at 438. As explained by the court, the study involved the compilation of a mere 197 Web sites that eTesting Labs “determined should be blocked according to the filtering programs’ category definitions,” Id. at 437-48 n.9, and a list ofWeb sites “that, although they should not be blocked according to the filtering programs’ category definitions, might have been mistakenly blocked.” Id.
addition to these findings, the Electronic Freedom Foundation’s (EFF) study of Internet filtering software[^165] demonstrated that N2H2’s filtering software incorrectly blocks a great number of Web sites in a variety of categories, due to either the Web sites being miscategorized or because the sites are categorized properly but do not merit blocking.[^166] While none of the studies is completely comprehensive due to the fact that N2H2 refuses to supply its complete block list,[^167] based on the ALA district court’s findings and the EFF study, N2H2’s claims of accuracy are questionable. It follows, then, that N2H2’s block list should be studied in its entirety, as Edelman proposed.

C. Edelman’s Desire to Go Under the Hood

Edelman wanted to continue his study of N2H2’s filtering programs, citing “the ongoing use of blocking programs by schools and other customers around the world, and the strong public interest in their accuracy . . .”[^168] Specifically, Edelman wanted to analyze the list of Web pages blocked by N2H2’s filtering programs.[^169] The problem is that the block list is encrypted, and, despite Edelman’s request, N2H2 refused to divulge the block list, which they consider proprietary.[^170] Thus, in order to access the block list, Edelman


[^166]: Id. at 73. The study examined close to one million Web sites by performing searches of all topics included in the state-mandated curriculums of California, Massachusetts, and North Carolina. The study found, for example, that N2H2’s filtering software blocked 36% of the Web sites regarding the Ku Klux Klan, but blocked 100% of sites found by searching for the phrase “examine the effect of political programs and activities of populists.” Id. at 45.

[^167]: See infra note 170.

[^168]: Edelman Complaint, supra note 14, at 15.


“[I] did considerable work for [the ACLU] in preparation for [ALA v. United States], and remained interested in the software,” Edelman said. “I started thinking about how to make my research that much better. What became clear to me was that what I really needed, one way or another, was a way to get the entire block list.”

[^170]: Id. at 24. According to the Edelman Complaint, Edelman sent an e-mail to N2H2 in May 2002 requesting access to their block list:
He identified himself as an academic researcher hoping to evaluate N2H2’s list as part of a larger study documenting the efficacy of blocking programs generally. His request was flatly refused because, according to an e-mailed
would need to circumvent whatever protection measures N2H2 had placed around the block list, and doing so, Edelman feared, would violate the anti-circumvention provisions of the DMCA,\textsuperscript{171} and subject Edelman to a lawsuit by N2H2.\textsuperscript{172}

According to the Edelman Complaint,\textsuperscript{173} Edelman’s primary goals in conducting his proposed research would be to:

(1) reverse engineer\textsuperscript{174} a licensed copy\textsuperscript{175} of the blocking program in order to discover what measures prevent access to and copying of the block list; (2) [create] and [use] a software tool (the “circumvention tool”) to circumvent those measures and access the block list; (3) [analyze] the block list to determine its accuracy; (4) [publish] the results of his analysis and the block list; and (5) [distribute] his cir-

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\textsuperscript{171} See McCullagh, On Trial, supra note 169 (“I do not want to go to jail... I want to go to law school.”).

\textsuperscript{172} See Edelman Complaint, supra note 14, at 24-25. The complaint also sought protection from N2H2’s software license, which states in part that users “shall not copy or make any changes or modifications to the Software, and... shall not decrypt, decode, translate, decompile, disassemble, or otherwise reverse engineer the Software.” Id. at 20. When Edelman purchased a copy of N2H2’s blocking program and downloaded it from N2H2’s Web site, the installation process required him to assent to this “clickwrap” license. Id. at 21. A clickwrap license generally displays the license terms in a message on the computer screen during installation, and requires that the user “manifest his or her assent to the terms of the license agreement by clicking on an icon. The product cannot be obtained or used unless and until the icon is clicked.” Specht v. Netscape, 150 F. Supp. 2d 585, 593-94 (S.D.N.Y. 2001). While the validity of these licenses is beyond the scope of this Note, it is important to note that, currently, case law is conflicting on the enforceability of “anti-reverse-engineering clauses in software” licenses. Pamela Samuelson & Suzanne Scotchmer, The Law and Economics of Reverse Engineering, 111 YALE L.J. 1575, 1626 n.230 (2002).

\textsuperscript{173} See Edelman Complaint, supra note 14.

\textsuperscript{174} In other words, Edelman, after purchasing N2H2’s filtering program, would presumably assent to the license terms if the suit was decided in his favor. Mr. Edelman purchased a copy of the N2H2 blocking program on July 20, 2002. . . . When Mr. Edelman began the installation process, he was presented with a copy of the N2H2 license on his computer screen, with the option of accepting the license terms and installing the program, or not accepting the license terms and not installing the program. Mr. Edelman refused to assent to the license terms and did not install the program. Edelman Complaint, supra note 14, at 21.
cumvention tool to facilitate other fair and non-infringing uses of the block list.\textsuperscript{175}

It is important to note that the circumvention tool would not prevent N2H2's program from blocking sites or operating properly.\textsuperscript{176} Moreover, Edelman's circumvention would be limited exclusively to the block list, and would not provide the source code for the actual blocking program.\textsuperscript{177} Thus, the circumvention tool would not allow illegal copying of the blocking program itself.\textsuperscript{178}

Edelman feared that the research that he proposed might expose him to liability for several reasons. First, the research might violate some of the anti-circumvention provisions of the DMCA. Second, he could be found in breach of N2H2's license agreement,\textsuperscript{179} as he would have to assent to an N2H2 license in order to gain access to the software in the first place.\textsuperscript{180} Third, publication of N2H2's block list could constitute copyright infringement.\textsuperscript{181}

As far as the DMCA is concerned, however, if Edelman circumvented the technological measure that controls access to N2H2's block list, he would violate section 1201(a)(1)(A)'s prohibition against circumvention.\textsuperscript{182} Moreover, if Edelman created and distributed a circumvention tool that grants access to the block list, he would violate the "tools provision" of section 1201(a)(2).\textsuperscript{183} It is true that the Library of Congress (LOC) created an exemption\textsuperscript{184} to the anti-circumvention provisions in

\textsuperscript{175} Id. at 15.
\textsuperscript{176} Id. at 19.
\textsuperscript{177} E-mail from Benjamin Edelman to author (Sept. 20, 2002, 17:13 EST) (on file with author).
\textsuperscript{178} Unlike the tool used by Spanky. See supra note 55.
\textsuperscript{179} See Edelman Complaint, supra note 14, at 3. The license states that by installing the software, a user agrees to the terms of the license, which state in part that a user

shall not copy or make any changes or modifications to the Software, and . . .
shall not decrypt, decode, translate, decompile, disassemble, or otherwise reverse engineer the Software. [The user] shall not, and shall not attempt to, circumvent or override any copy protection or access control mechanism or measures in the Software.

\textsuperscript{177} Id. It is interesting to note that the circumvention language of the license mirrors the language of § 1201(a) of the DMCA. 17 U.S.C. § 1201(a)(1)(A) (2000).
\textsuperscript{180} For discussion on software licenses, see supra note 173.
\textsuperscript{181} For discussion on copyright infringement for publication of compilations, see infra Part IX.A.
\textsuperscript{182} See supra notes 53-56 and accompanying text.
\textsuperscript{183} See supra note 57, 60 and accompanying text.
\textsuperscript{184} 17 U.S.C. § 1201 provides that during the first two years after the enactment of the DMCA,
section 1201(a)(1)(A) for "[c]ompilations consisting of lists of Internet locations blocked by commercially marketed filtering software applications that are intended to prevent access to domains, websites, or portions of websites . . . ." However, this exemption only applies to anti-circumvention — it does not apply to the "tools provision" of section 1201(a)(2). As a result, while the exemption might allow Edelman to circumvent the technological measure that controls access to the block list, it probably would not allow him to create a tool to perform the act of circumvention, thus making it an empty exemption.187 Finally, any attempt by Edelman to circumvent access-control measures or reverse engineer the software would violate N2H2's license agreement, which partially parrots the language of the DMCA.188

Thus, rather than go forward with his research and risk a lawsuit from N2H2 or criminal prosecution under the DMCA, Edelman, represented by the ACLU, filed suit against filtering software manufacturer N2H2 Inc., seeking declaratory and injunctive relief that would allow him to freely conduct his

and during each succeeding 3-year period, the Librarian of Congress, upon the recommendation of the Register of Copyrights . . . shall [determine] . . . whether persons who are users of a copyrighted work are, or are likely to be in the succeeding 3-year period, adversely affected by the [anti-circumvention prohibition] in their ability to make noninfringing uses under [the Copyright Act] of a particular class of copyrighted works.


185 37 C.F.R. § 201.40(b)(1).

186 Only three of the DMCA's exemptions to the anti-circumvention rules include express provisions to allow for the creation and use of tools to circumvent technological measures. 17 U.S.C. §§ 1201(f)(2), (g)(4), (j)(4) (2000). The other four exemptions, however, lack such express provisions. Samuelson & Scotchmer, supra note 172, at 1636. This creates an ambiguity, as a user will undoubtedly need to use some sort of tool to circumvent technological measures in most circumstances. Without express provisions within four of the exemptions to allow for the use of tools, it is possible that Congress created "meaningless privileges." Samuelson, supra note 29, at 547.

187 See John R. Therien, Exorcising the Specter of a "Pay-Per-Use" Society: Toward Preserving Fair Use and the Public Domain in the Digital Age, 16 BERKELEY TECH. L.J. 979, 1022-23 (2001). This is akin to surrounding a book by a 15-foot-wall, telling Edelman he may access the book, but prohibiting him from using a ladder to climb over the wall, a shovel to dig under the wall, an axe to hack through the wall, or x-ray vision to see through the wall.

188 See supra note 179 and accompanying text.
research without threat of suit. Unfortunately, as the next section explains, the case never got out of the driveway.

D. The Standing Roadblock: Edelman's Case Is Dismissed

In granting N2H2's motion to dismiss, the court held that Edelman was unable to satisfy the first prong of the constitutional requirement of standing as stated in *Lujan v. Defenders of Wildlife,*190 which requires that "the plaintiff must have suffered an 'injury in fact' — an invasion of a legally protected interest which is (a) concrete and particularized . . . and (b) actual or imminent, not 'conjectural' or 'hypothetical.'"191

While the court acknowledged that N2H2 might file suit against Edelman if he were to "accept[] the licensing agreement and then violate[] its terms by conducting and publishing his research . . . at the moment, the prospect of a lawsuit is supported only by Edelman's conjecture . . . "192

However, a court may find an actual controversy in a copyright case if, in the declaratory judgment suit, the defendant has "evidenced its intent to enforce a copyright, usually by a charge or threatened charge of infringement."193 N2H2 made such a threat. In its 10-Q report for the quarterly period ending June 30, 2002,194 N2H2 stated:

We intend to defend the validity of our license agreement and to enforce the provisions of this agreement to protect our proprietary rights. We also intend to assert all of our legal rights against Mr. Edelman if he engages in future activity that violates [the license agreement] or our proprietary rights.195

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189 See Edelman Complaint, supra note 14. Edelman feared that he would incur liability for breaching N2H2's shrinkwrap license, for violating the DMCA, or for violating trade secrets laws. *Id.* at 20-23.


191 504 U.S. at 560 (internal citations modified).

192 263 F. Supp. 2d at 139.

193 *Diagnostic Unit Inmate Council v. Films Inc.,* 88 F.3d 651, 653 (8th Cir. 1996).


195 *Id.* at 9. Similarly, although N2H2 claims that "it is impossible to know whether Edelman's ill-defined future activities will, or will not, violate N2H2's standard license, the DMCA, or any other law," Defendant N2H2, Inc.'s Memorandum of Law in Support of its Motion to Dismiss the Complaint at 1, Edelman v. N2H2, 263 F. Supp. 2d 137 (D. Mass. filed Sept. 27, 2002) (No. 02-cv-11503) [hereinafter Motion to Dismiss], available at [http://cyber.law.harvard.edu/people/edelman/edelman-v-n2h2/n2h2-093002.pdf](http://cyber.law.harvard.edu/people/edelman/edelman-v-n2h2/n2h2-093002.pdf), N2H2, in the same motion, belied their claim by describing Edelman's complaint as requesting the "right to misappropriate N2H2's valuable trade
N2H2 has traditionally been vigorous when it comes to defending the proprietary nature of its block list.196

The court may also find an actual controversy in a copyright case when "the declaratory judgment plaintiff [has] engaged in present activity which could constitute infringement or concrete steps taken with the intent to conduct such activity."197 The declaratory judgment plaintiff must demonstrate that "it has actually published or is preparing to publish the material that is subject to [the declaratory judgment defendant's] copyright in a manner that places the parties in a legally adverse position." Edelman took concrete steps by downloading N2H2's filtering software onto his computer,199 and publicly expressing his intent to conduct his research.200 Furthermore, he explicitly expressed his intent to publish his research.201

secrets . . . and to circumvent the encryption measures N2H2 uses to protect its copyrighted works." Id. at 1. Likewise, N2H2 states that "Edelman wants to engage in . . . illegal activities . . . ." Id. at 10.

196 See, e.g., ALA, 201 F. Supp. 2d 401, 430 n.6 (E.D. Pa. 2002), rev'd 539 U.S. 194 (2003). In explaining that most filtering software manufacturers consider their block lists proprietary, the court stated, "Indeed, we granted leave for N2H2's counsel to intervene in order to object to testimony that would potentially reveal N2H2's trade secrets, which he did on several occasions." Id. It should also be noted that although N2H2's attorneys succeeded in having the court room closed in ALA for testimony regarding their filtering software, at the hearing's conclusion:

[The] testimony was unsealed because it was determined that [it] did not discuss or reveal any trade secrets. Chief Judge Becker said that he would not close the court for any future testimony and that N2H2 attorneys would have to object in open court[] if they heard anything they wanted to suppress.  

197 Diagnostic Unit Inmate Council, 88 F.3d at 653 (internal citation omitted) (emphasis added).
198 Id. at 653 (internal citation omitted) (emphasis added).
199 See supra note 173.
200 See, e.g., Minnow Mounts Legal Challenge to Digital Millennium Copyright Act, INQUIRER, Nov. 1, 2002, available at http://www.theinquirer.net/?article=6028 ("Edelman says 'N2H2's block site list is protected by technical measures including an encryption system, but I seek to write software that will nonetheless allow me to access, analyze, and report its contents.'"); McCullagh, On Trial, supra note 169 ("Companies that make filtering software typically include an encrypted list of sexually explicit or otherwise banned Web sites. Inventing and distributing a utility that circumvents that copy protection, which Edelman says he would like to do, would run afoul of the DMCA's legal prohibitions.") (emphasis added). See also Edelman Complaint, supra note 14, at 15-19.

201 In a copyright case, for an actual controversy to exist, a "plaintiff must show that it has actually published or is preparing to publish the material that is subject to the defendant's copyright [in a manner that] places the parties in a legally adverse position." Diagnostic Unit Inmate Council, 88 F.3d at 653 (citation omitted) (alteration in original). Besides the fact that his complaint stated he intended to
Nevertheless, the court found Edelman’s arguments concerning standing unpersuasive, going so far as to dismiss out of hand the statements found in N2H2’s quarterly report as “litigation rumblings . . . [that] merely affirm[ed] N2H2’s intention to defend against Edelman’s lawsuit.” However, the relevant language in the quarterly report indicated N2H2’s intent to engage in future litigation against Edelman, thus making the threat of suit more than “conjectural.” As it stands, the court’s reasoning for granting N2H2’s Motion to Dismiss will likely remain unknown.

VI. THE LAST FEW STOPS BEFORE THE CROSSROADS

While Edelman’s suit was unsuccessful, the issues raised by his proposed research still have the potential to prompt the correction of a statutory ambiguity found in the DMCA, as well as to shed light on the quasi-law CIPA imposes on public schools and libraries. These two considerations are discussed in turn below.

A. Teaching the DMCA How to Drive

Due to the current state of filtering technology and “the rapidly changing and expanding nature of the [W]eb,” the district court in ALA found that the shortcomings of filtering software were

“publish[] the results of his analysis and the block list,” Edelman Complaint, supra note 14, at 15, Edelman has been quoted in the media regarding his intent to publish his research. See, e.g., Andrea L. Foster, Law Student Sues Web-Filtering Company in a Challenge to Millennium Copyright Act, CHRON. HIGHER EDUC., July 26, 2002 (“Mr. Edelman says he fears that [the exemption found in 37 C.F.R. § 201.40(b)(1) regarding lists of Web sites] would not apply to him since he wants to publish his research results.”), available at http://chronicle.com/free/2002/07/2002072602t.htm.

202 See supra notes 194-95 and accompanying text.

203 263 F. Supp. 2d at 139 n.1.


205 While I realized in writing an earlier draft of this Note (prior to the Edelman decision) that the case or controversy hurdle was substantial, in order to address the other issues, it was necessary to assume the court would agree that a case or controversy exists. Now that Edelman’s suit has been dismissed, the question becomes: What should Edelman do next? It is unlikely that such a result will deter Edelman from continuing his growing body of filtering software research. For examples of such research, see Edelman’s Web site at http://cyber.law.harvard.edu/edelman.html (last visited Aug. 16, 2004). Rather than risk liability and go forward with the research proposed in his complaint, Edelman may be better off continuing to educate the public of the global dangers of filtering software.

software will not be remedied "through a technical solution in the foreseeable future." It follows, then, that the shortcomings will continue to remain if comprehensive research into filtering software, such as that proposed by Edelman, continues to be prevented by the DMCA, and by companies such as N2H2.

It is therefore unfortunate that the court in Edelman v. N2H2 missed its opportunity to take a bold first step in making effective filtering software a reality, thus bringing a remedy for ineffective filtering software into the "foreseeable future." The court should have ruled on the merits of the case and interpreted the exemption created by the LOC, which applies to "lists of Internet locations blocked by . . . filtering software applications," to allow for the creation and use of circumvention tools in order to access such lists. By interpreting the list exemption to allow for tools, the court would have created a reasonable rule that allows researchers to actually take advantage of the exemption, and would send a clear message in its decision that Congress and the LOC have not created a useless exemption. It is conceivable that, as a result, Congress or the LOC would then correct this statutory ambiguity.

For now, though, one can only hope that another case will eventually surface to pick up where Edelman left off. Perhaps Edelman will appeal, and the circuit court will see the light where the district court did not. However, as the Edelman court refused to take a stand, it remains to be seen whether other courts will be brave enough to do so.

B. Performing a Governmental Function: Filtering Software’s Hidden Roadblocks

The concept of private entities performing governmental functions and participating in the process of legislation is not a novel one, and privatization of governmental functions is arguably essential in today’s world. Moreover, private entities

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207 Id.
208 Id. at 410.
210 See supra note 186.
211 See Jackson, supra note 52, at 644-45.
212 See, e.g. Veeck v. S. Bldg. Code Congress Intl., Inc., 293 F.3d 791, 798 (5th Cir. 2002) (explaining in regards to private companies that draft model statutes that "complexities of modern life and the breadth of problems addressed by government entities necessitate continuous participation by private experts and interest groups in all aspects of regulatory lawmaking").
often do a better job than the government could do alone. However, when the government creates a statute, such as CIPA, that requires public schools and libraries to use filtering software to get federal funds, the government subjects schools and libraries to the whims of the filtering software companies. Since schools and libraries often depend on federal funds, they essentially become ruled by the blocking criteria set up by the filtering software companies. They cannot even know the extent of the restriction placed on them, as the companies refuse to reveal their block lists or give substantial details about their blocking methodology. Thus, the rules of filtering software essentially become an extension of the law – law that schools and libraries have no access to. This is an untenable position, as “citizens must have free access to the laws which govern them.”

In Building Officials & Code Adm. (BOCA) v. Code Technology, Inc., the First Circuit Court of Appeals suggested that when a model building code authored by a private company is incorporated into actual legislation, the code becomes law. Therefore, the court explained, since “[d]ue process requires people to have notice of what the law requires of them so that they may obey it and avoid its sanctions,” the law must be “generally available for the public to examine.” However, if limits are placed on the public’s access to the law, the public might be prevented from learning of the law’s requirements. Thus, as the court suggested, while the private company is a virtual author of the law if their model code is enacted in a statute, the private company may not have a

213 See, e.g., Bldg. Officials & Code Adm. (BOCA) v. Code Tech., Inc., 628 F.2d 730, 736 (1st Cir. 1980) (stating that private companies that draft model statutes “arguably ... do a better job than could the state alone” in making sure statutes are “drafted, kept up to date and made available”). This notion applies to filtering software as well – it makes sense for the government to require that public schools and libraries use commercial Internet filtering software, rather than attempt to create and update its own Internet filtering software.

214 See supra note 170.
215 BOCA, 628 F.2d at 734.
216 628 F.2d 730 (1st Cir. 1980).
217 Id. at 734.
218 Id.
219 Id.
220 Id.
copyright monopoly over the reproduction and public dissemination of the law.\textsuperscript{221}

This Note does not suggest that CIPA, by requiring public schools and libraries to use filtering software, causes the "rules" of the filtering software (i.e., the block list and categorization) to become enacted law. Just because a statute requires public entities to use a copyrighted work does not mean the copyrighted work becomes law.\textsuperscript{222} Similarly, it is not the rules of the software that are binding law, but rather the statute, CIPA, that requires public schools and libraries to use filtering software to receive federal funds.\textsuperscript{223} Nonetheless, the almost forced use of filtering software, and therefore the near forced compliance with its block list and categorization, arguably makes the filtering software "quasi" law that is not too far removed from being actual law.

Now that this Note has laid out each road that came together in \textit{Edelman} it can begin to explore the crossroads more fully. First, however, a more detailed explanation is necessary of how the \textit{Reimerdes} court and the DMCA complicated the journey.

\textbf{VII. \textit{Reimerdes}, the Fair Use Junction and DMCA Potholes}

When the \textit{Reimerdes} decision\textsuperscript{224} was appealed to the Second Circuit,\textsuperscript{225} the appellants made the grand claim that the DMCA "eliminates fair use of copyrighted materials."\textsuperscript{226} While the DMCA's impact on fair use has yet to be fully explored by the courts, fair use has probably not been "eliminated" entirely. The doctrine of fair use has always been an essential part of

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{221} \textit{BOCA}, 628 F.2d at 735 ("We are, therefore, far from persuaded that BOCA's virtual authorship of the Massachusetts building code entitles it to enforce a copyright monopoly over when, where, and how the [code] is to be reproduced and made publicly available.").
\item \textsuperscript{222} Veeck v. S. Bldg. Code Congress Intl., Inc., 293 F.3d 791, 804-05 (5th Cir. 2002).
\item \textsuperscript{223} See John G. Danielson, Inc. v. Winchester-Conant Props., Inc., 186 F. Supp. 2d 1, 18-23 (D. Mass 2002) (holding that architectural plans submitted to and approved by town government pursuant to town law do not become law merely because approved plans must be conformed to).
\item \textsuperscript{224} 111 F. Supp. 2d 294 (S.D.N.Y. 2000).
\item \textsuperscript{225} \textit{Corley}, 273 F.3d 429 (2d Cir. 2001).
\item \textsuperscript{226} \textit{Id.} at 458 (citing Brief for Appellants).
\end{itemize}
\end{footnotesize}
Copyright law,\textsuperscript{227} from its early genesis in the courts to its codification in section 107 of the 1976 Copyright Act.\textsuperscript{228} It would be extreme for Congress to take a doctrine that has existed since "the infancy of copyright protection"\textsuperscript{229} and do away with it in one fell swoop.

However, whether and to what extent the DMCA sustains fair use remains unclear. This is due to a number of factors, which include the Reimerdes court's avoidance of the DMCA's fair use provisions,\textsuperscript{230} as well as inconsistencies found in the DMCA's exemptions.\textsuperscript{231} Moreover, prior to Edelman the courts had yet to be presented with sympathetic case\textsuperscript{232} with which to test the DMCA's affect on fair use. As this section will suggest, Edelman v. N2H2\textsuperscript{233} had the potential to be the much-needed sympathetic case.

A. The Reimerdes Court Misses the Fair Use Junction

If one were to base one's knowledge of the DMCA solely on the Reimerdes decision, one might think that Congress failed or forgot to include fair use in the statute. Although Congress did not make the implications of fair use entirely clear in the wording of the DMCA, Congress did not omit fair use completely. As section 1201(c)(1) states, "Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title."\textsuperscript{234} Nevertheless, even in the face of a fair use defense, the Reimerdes decision made no mention of the DMCA's fair use provision.\textsuperscript{235} However, as discussed below, given the court's lack

\textsuperscript{227} Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 575 (1994) ("From the infancy of copyright protection, some opportunity for fair use of copyrighted materials has been thought necessary to fulfill copyright's very purpose . . . ").
\textsuperscript{228} Id. at 576 (explaining that "fair use remained exclusively judge-made doctrine until the passage of the 1976 Copyright Act").
\textsuperscript{229} Id. at 575.
\textsuperscript{230} See Therien, supra note 187, at 1020 n.220. As Therien points out, the Reimerdes court, in rejecting the defendants' fair use arguments, failed entirely to discuss the fair use provisions found in § 1201(c). \textit{Id. at 1020 n.220.}
\textsuperscript{231} Samuelson, supra note 29, at 557.
\textsuperscript{232} Therien, supra note 187, at 1018 n.206.
\textsuperscript{233} Edelman Complaint, supra note 14.
\textsuperscript{235} Therien, supra note 187, at 1020 n.220.
of sympathy for the defendants' arguments, the *Reimerdes* court's decision is not terribly surprising.

In *Reimerdes*, the defendants argued that DeCSS was created solely to allow a DVD to be played on a computer running the Linux operating system, because, at the time, no Linux-compatible DVD players existed. Defendants further argued that because CSS prevents copying of even one scene of a movie stored on a DVD, absent a means to circumvent CSS, a DVD owner would be unable to make fair use of any portion of the contents of the DVD. Since even a lawfully-purchased DVD requires a CSS-compliant DVD player to view the material contained on the DVD, and since CSS prevents fair-use copying entirely, the defendants argued that posting and distributing DeCSS allowed people to make fair uses of their lawfully-purchased DVDs.

The *Reimerdes* court rejected the defendants' arguments on a number of grounds. First, the court pointed out that the defendants were being sued not for copyright infringement, but for distributing circumvention technology. Therefore, the court implied, because the fair use defense found in section 107 of the Copyright Act applies to allegations of copyright infringement, section 107 does not apply to these defendants. However, the court failed to make any mention of section 1201(c)(1)'s fair use language. Second, the court, citing a few sentences of legislative history, claimed that Congress intended for the fair use defense to apply not to acts of circumvention, but only to

\[\text{235 Id. at 1018 n.206.}\]

\[\text{237 See infra notes 249-54 and accompanying text.}\]

\[\text{238 For a discussion on Linux, see supra note 72.}\]

\[\text{239 Reimerdes, 111 F. Supp. 2d 294 (S.D.N.Y. 2000).}\]

\[\text{240 Id. at 322. The court's example of this type of fair use was that of a film professor copying two scenes from two different DVD movies to use as models for a cinematography lecture. Id.}\]

\[\text{241 For discussion on CSS, see supra note 69.}\]

\[\text{242 Reimerdes, 111 F. Supp. 2d at 322. It is interesting to note that while the Reimerdes court drew a comparison between the DMCA's ban on circumvention tools and "laws prohibiting the possession of burglar tools," id. at 329, a more recent Norwegian court ruling did not buy into this logic. See Oslo Court Deals Movie Industry Setback on DVDs, WALL ST. J., Jan. 8, 2003, at B11, available at 2003 WL-WSJ 3956002. According to the article, in acquitting Johansen of "digital burglary charges" for creating and distributing DeCSS, the Norwegian judge said, "people cannot be convicted of breaking into their own property," and that "prosecutors failed to prove that Mr. Johansen or others had used the program to access illegal pirate copies of films." Id.}\]

\[\text{243 Reimerdes, 111 F. Supp. 2d at 322.}\]

\[\text{244 See supra notes 234-35 and accompanying text.}\]
actions performed after a person gains authorized access to a work. However, the court apparently ignored the next sentence, in which Congress explicitly expressed its intent that fair use apply to acts of circumvention. Contrary to what the Reimerdes court’s selective citation suggests, “[r]ather than ruling out fair use, this section of the legislative history invites it.”

Finally, the Reimerdes court unambiguously expressed an unfavorable opinion of Johansen and his stated intentions regarding the creation of DeCSS. The court found Johansen’s “Linux” arguments to be without merit; the court called Johansen a “hacker” who knew very well what DeCSS would really be used for; and the court even went so far as to imply

245 Reimerdes, 111 F. Supp. 2d at 322-323 (citing H.R. REP. No. 105-551(I) at 18 (1998)). See Tricia J. Sadd, Fair Use as a Defense Under the Digital Millennium Copyright Act’s Anti-Circumvention Provisions, 10 GEO. MASON L. REV. 321, 335 (2001) (discussing the district court’s misreading of legislative history). As a result, the court appears unconcerned that the result of the fair use doctrine’s inapplicability to acts of circumvention and circumvention technology will be to leave potential fair users without the means to engage in fair use. “The fact that Congress elected to leave technologically unsophisticated persons who wish to make fair use of encrypted copyrighted works without the technical means of doing so is a matter for Congress . . . .” Reimerdes, 111 F. Supp. 2d at 324. However, at least one commentator suggests that rather than waiting for Congress to act, the courts should create an implied fair use exception to the DMCA’s anti-trafficking provisions “[just as courts had done for all versions of the copyright act prior to the current Copyright Act of 1976.” Van Den Elzen, supra note 69, at 702. See also supra notes 229-31 and accompanying text.

246 H.R. REP. No. 105-551 at 18 (1998), available at 1998 WL 261605 (“[A]n individual would not be able to circumvent in order to gain unauthorized access to a work, but would be able to do so in order to make fair use of a work which he or she has acquired lawfully.”) (emphasis added). See Sadd, supra note 245, at 335. This language has also been cited in legislation recently introduced by California congresswoman Zoe Lofgren. Lofgren, Boucher Seek to Protect and Codify Fair Use, COMM. DAILY, Oct. 3, 2002, available at 2002 WL 5242249. Lofgren’s bill, the Digital Choice & Freedom Act of 2002, H.R. 5522, 107th Cong. (2002), would amend the DMCA to allow for fair use circumvention, acknowledging that prohibiting lawful users from engaging in fair use circumvention is “[c]ontrary to the intent of Congress.” Id. at § 2(7).

247 Sadd, supra note 245, at 335.

248 See Reimerdes, 111 F. Supp. 2d at 320. Since the defendants based part of their arguments on Johansen’s stated intentions, the court unlikely had any sympathy for those arguments. See supra notes 238-40 and accompanying text.

249 Reimerdes, 111 F. Supp. 2d at 320 (“[T]he Court does not credit Mr. Johansen’s testimony that he created DeCSS solely for the purpose of building a Linux player.”).

250 Id. See also supra note 78. For background on “hackers,” see supra note 78.

251 Reimerdes, 111 F. Supp. 2d at 320.

Mr. Johansen is a very talented young man and a member of a well known hacker group who viewed “cracking” CSS as an end in itself and a means of demonstrating his talent and who fully expected that the use of DeCSS would not be confined to Linux machines.
that "Johansen and the others"\textsuperscript{252} never intended to create a Linux-compatible DVD player in the first place.\textsuperscript{253} The court's lack of sympathy for the defendants' arguments, coupled with its avoidance of the DMCA's fair use language and the crucial language of the DMCA's legislative history, suggests that the court essentially defaulted on the judiciary's first chance at evaluating the DMCA's impact on fair use.

As a result, the stage was set for the district court to use the \textit{Edelman} case, which was arguably a more sympathetic case than \textit{Reimerdes}, to evaluate the DMCA's effect on fair use. Before turning to the differences between \textit{Edelman} and \textit{Reimerdes}, the potholes of the "inconsistencies"\textsuperscript{254} in the DMCA's exemption provisions warrant discussion.

\section*{B. DMCA's Fair Use Potholes: How Hollow Is Your Exemption?}

In drafting the DMCA, Congress was well aware\textsuperscript{255} that it would be necessary to "carv[e] out several specific classes of circumvention activities that it found . . . to be socially useful."\textsuperscript{256} As a result, the DMCA as originally enacted contains a number of exemptions to the anti-circumvention provision of section 1201(a)(1)(a).\textsuperscript{257} The original exemption most important to this Note is the library exemption,\textsuperscript{258} which allows nonprofit libraries and schools to circumvent technological protection measures to "gain access to a commercially exploited copyrighted work solely in order to make a good faith determination of whether to acquire a copy of that work,"\textsuperscript{259} so

\textsuperscript{252} Id.
\textsuperscript{253} Id. ("Hence, the Court finds that Mr. Johansen and the others who actually did develop DeCSS did not do so solely for the purpose of making a Linux DVD player if, indeed, developing a Linux-based DVD player was among their purposes.")(emphasis added).
\textsuperscript{254} Samuelson, supra note 29, at 557.
\textsuperscript{257} 17 U.S.C. § 1201(d)-(j) (2000). See supra note 184 and accompanying text. See also Samuelson \\& Scotchmer, supra note 172, at 1635-36.
\textsuperscript{258} 17 U.S.C. § 1201(d) (2000).
\textsuperscript{259} 17 U.S.C. § 1201(d)(1) (2000). While one could argue that this provision may have been intended to cover materials that a library intends to loan out to patrons, such as a movie on DVD or a book on CD-ROM, a filtering program is certainly a "commercially exploited copyrighted work." See infra notes 289-92 and accompanying text.
long as "an identical copy of that work is not reasonably available in another form." However, not only does this exemption lack explicit language to allow for circumvention tools, the exemption specifically states that it may not be used as a defense to a claim under the anti-trafficking or tools provisions. In other words, in deciding whether to buy a copyrighted work, a library may circumvent a technological measure to examine the work, but cannot create a tool that would allow them to circumvent. Moreover, anyone who provided a library with such a tool would violate the anti-trafficking or tools provisions. These considerations appear to render the exemption quite "hollow."

The LOC may periodically make additional exemptions to the anti-circumvention provision of the DMCA upon the determination that the ability of users to make "noninfringing" uses of particular classes of works has been "adversely affected" by the anti-circumvention provision. The LOC has exercised its authority by issuing a series of exemptions, one of which applies to "compilations consisting of lists of Internet locations blocked by . . . filtering software applications . . . ." The problem with these additional exemptions is that they only apply to the anti-circumvention provision — they do not explicitly apply to the anti-trafficking tools provisions. Consequently, users of the works delineated in these exemptions are allowed to circumvent, but are denied any tools that might be necessary for circumvention. However, as explained in the following section, when all of the roads converged in Edelman, critics of the DMCA, as well as the affected community, hoped the misdirection would eventually be remedied.

261 Samuelson & Scotchmer, supra note 172, at 1636 ("Four of the seven statutory [exemptions] to the act-of-circumvention rule lack express authorization to make tools to accomplish circumventions.").
263 DIGITAL DILEMMA, supra note 256, at 175 ("It is a hollow privilege indeed to be allowed to circumvent in order to make fair use and then to be told that all the tools necessary to effect that circumvention are outlawed.").
264 See supra notes 184-85 and accompanying text.
VIII. AT THE CROSSROADS

As mentioned at the beginning of this Note, Edelman v. N2H2 was the first (and thus far only) case to bring the issues surrounding the anti-circumvention provisions of the DMCA together with those surrounding the use of filtering software in schools and public libraries. In addition, it was the first case potentially sympathetic enough for the court to feel comfortable thoroughly analyzing the DMCA's exemptions and fair use provisions. Consequently, if the court had found that Edelman's proposed research was fair use, the resolution of the case may have afforded researchers like Edelman the chance to improve the effectiveness of filtering software. Equally importantly, schools and libraries might have gotten the opportunity to fully evaluate filtering software prior to purchase by examining filtering programs' block lists. However, since the district court refused to rule on the merits of Edelman's suit, the future of the progress of filtering software is unclear.

As this Note has discussed, one reason the Reimerdes court may not have bothered to fully analyze the DMCA's exemptions and fair use provisions was its lack of sympathy for "Johansen and the others." However, unlike Johansen and the others, Edelman is clearly a legitimate computer software and Internet researcher with a credited track record in the federal courts. Additionally, unlike DeCSS, which allows people to copy DVDs, Edelman's proposed circumvention tool would not allow people to make illegal copies of N2H2's filtering program itself. Furthermore, by granting Edelman the means to access the block lists and work to improve the quality of filtering software, not only would schools and libraries have access to better filtering software, they could make an informed choice when deciding which filtering programs merit the expenditure of taxpayers' money.

270 See Therien, supra note 187, at 1018 n.206.
272 See supra notes 141-50 and accompanying text. For a list of research Edelman has conducted, see Edelman's Web site, at http://cyber.law.harvard.edu/edelman.html (last visited Aug. 16, 2004).
273 See supra note 72 and accompanying text.
274 See supra notes 177-78 and accompanying text.
Moreover, in addition to following the fair use language found in the DMCA’s legislative history,\textsuperscript{275} by allowing the use of circumvention tools in the circumvention of the technological measures that protect block lists in filtering software, the \textit{Edelman} court could have adhered to the LOC’s stated rationale for granting the exemption for lists of blocked Web sites.\textsuperscript{276} In its initial ruling, the LOC explicitly recognized that the reproduction and display of block lists “for the purpose of criticizing them could constitute fair use.”\textsuperscript{277} Furthermore, in language that echoes the original library exemption,\textsuperscript{278} the LOC explained that there was undisputed evidence that the block lists “are not available elsewhere”\textsuperscript{279} apart from an act of circumvention. Finally, in unambiguous terms, the LOC found that for the purposes of criticizing and commenting on block lists, circumvention was the only way to view which Web sites are contained in the block lists.\textsuperscript{280} Therefore, based on this language, it appears that the type of research Edelman wished

\textsuperscript{275} See supra note 246 and accompanying text.


\textsuperscript{277} Id. In October 2003, the LOC renewed the block list exemption and restated the rationale behind it:

While providers of filtering software offer some information about the Web sites their software blocks, it is too limited to permit comprehensive or meaningful analysis. Persons wishing to review, comment on and criticize this software as part of an ongoing debate on a matter of public interest should be permitted to gain access to the complete lists of blocked Web sites. The particular class of works designated in this rulemaking covers the lists of websites blocked by commercially marketed filtering software applications that are intended to prevent access to domains, websites or portions of Web sites.


\textsuperscript{278} See 17 U.S.C. § 1201(d)(2) (2000) (stating that the library exemption “shall only apply with respect to a work when an identical copy is not reasonably available in another form”). Without using a circumvention tool, N2H2’s block list is otherwise unavailable due to its claimed proprietary nature. See supra note 170 and accompanying text.

\textsuperscript{279} 65 Fed. Reg. at 64,564.

\textsuperscript{280} See id. After explaining that a “persuasive case was made” that technological protection measures adversely affected the ability to criticize and comment on block lists, the LOC stated that consequently, the DMCA’s “prohibition on circumvention of technological measures that control access to these lists of blocked sites will cause an adverse affect on noninfringing users since persons who wish to criticize and comment on them cannot ascertain which sites are contained in the lists unless they circumvent.” Id.
to conduct is exactly what the LOC had in mind when it first granted the block list exemption.\textsuperscript{281}

Ultimately, this case gave the court the chance to bring clarity to the confusion the DMCA has wrought, either by interpreting the DMCA's exemptions and fair use provisions to allow for the manufacture and use of circumvention tools, or by concluding that the DMCA's circumvention exemptions are hollow without granting the explicit ability to use tools to circumvent. Nevertheless, the court refused to travel down this road.

IX. ALTERNATE ROUTES AND THEIR POTENTIAL HAZARDS

Even though the district court ruled against Edelman, that doesn't necessarily mean that the type of research he proposed to do will never be conducted.\textsuperscript{282} Thus, in this Part, this Note offers some alternative solutions to Edelman's proposed course of action, along with the potential legal implications and consequences for each course. Either of these alternatives could give Edelman's cause a better chance of future success, but considering how other courts have interpreted the DMCA,\textsuperscript{283} it is impossible to accurately predict if these alternatives would help.

A. Meeting N2H2 Halfway

One alternative is for Edelman to publish the block list without the categories.\textsuperscript{284} As a compilation of facts,\textsuperscript{285} N2H2's block list is protected by copyright,\textsuperscript{286} and this Note does not suggest that N2H2 relinquish its copyright.\textsuperscript{287} However, the

\textsuperscript{281} 37 C.F.R. § 201.40(b)(1) (2003).

\textsuperscript{282} See, e.g., Nowlen, supra note 204, at 431 (proposing the possibility that Edelman may "continue the research until such time as N2H2 files suit against" him).

\textsuperscript{283} See generally Reimerdes, 111 F. Supp. 2d 294 (S.D.N.Y. 2000); Corley, 273 F.3d 429 (2d Cir. 2001). See also Sadd, supra note 245, at 334-40.

\textsuperscript{284} See N2H2 Category Definitions, supra note 158 and accompanying text.

\textsuperscript{285} Each Web site's URL contained in N2H2's block list is a fact that N2H2 collected, just as the names and telephone numbers found in a phone book are facts. See Feist Publ'ns v. Rural Tel. Serv. Co., 499 U.S. 340, 363 (1991) [hereinafter Feist].

\textsuperscript{286} LOC Recommendations, supra note 276, at 64,564 ("The names of blocked websites are compiled into lists which are protected by copyright as compilations.").

\textsuperscript{287} In addition, the argument may be made that the publication of N2H2's block list could be damaging to N2H2. As N2H2 argues in its motion to dismiss, if N2H2's block list is made public, N2H2's "competitors could use [the block list] to drastically improve the effectiveness of their own filtering systems, destroying N2H2's competitive edge." Motion to Dismiss at 5, supra note 195. In their motion, N2H2
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copyright in a compilation does not cover the facts themselves—copyright protection in compilations is limited to the particular selection or arrangement of those facts. As a result, fair use criticism notwithstanding, if the publication of N2H2's block list included N2H2's selection and arrangement of each Web site along with the names of each category, that publication would arguably be the copying of N2H2's protected selection and arrangement. According to this logic, if Edelman published only a "bulk list" of all the Web sites contained in N2H2's block list in no particular order, he would only be publishing unprotectible raw facts and would not violate N2H2's compilation copyright.

Unfortunately, this course of action poses two problems. On one hand, N2H2 apparently exercises some discretion in choosing which Web sites to include in their block list out of the billions of existing Web sites. Thus, since N2H2's selection and arrangement extends to both the categorization of the Web sites and the included Web sites themselves, the bulk list of the Web sites contained in N2H2's block list may also be protected, thus making publication of even the bulk list an infringement on N2H2's copyright. On the other hand, publication of a bulk list that did not contain categories could give an incomplete picture of N2H2's blocking methodology. Since users of N2H2's filtering software initially choose what content to block by selecting from N2H2's categories, it would be impossible to tell what type of content N2H2 considers for "Adults Only." Therefore, since the point of Edelman's

claims that filtering software manufacturers Net Nanny and CyberPatrol went bankrupt or were acquired by another company, respectively, very soon after their block lists were published. Id. However, Edelman, in his response to N2H2's motion, citing documentation, points out that Net Nanny went bankrupt for incurring heavy financial liabilities, and that CyberPatrol was sold for a record sum. Plaintiff's Memorandum of Law In Opposition to Defendant's Motion to Dismiss at 4 n.2, Edelman v. N2H2, 263 F. Supp. 2d 137 (D. Mass. filed Oct. 29, 2002) (No. 02-cv-11503), available at http://cyber.law.harvard.edu/people/edelman/edelman-v-n2h2/edelman-103002.pdf.

See Eckes v. Card Prices Update, 736 F.2d 859, 863 (2d Cir. 1984) (granting copyright protection in list of 5,000 baseball cards chosen from 18,000 existing cards). See also Key Publ'ns, Inc. v. Chinatown Today Pub'g Enters., 945 F.2d 509, 513 (2d Cir. 1991) (granting copyright protection in business directory consisting of selection of certain New York City businesses chosen out of multitude of existing businesses).

See N2H2 Category Definitions, supra note 158. Furthermore, without a complete picture of the block list and its categories, it would be impossible to determine
research is to improve the quality of filtering software, it seems logical that as complete a picture as possible of N2H2's filtering software should be presented.

B. A Map, but No Car

Another alternative is for Edelman to publish N2H2's block list, but to refrain from distributing the circumvention tool he creates. If Edelman kept the circumvention tool to himself, the "disease of circumvention" that the Reimerdes court found so objectionable would not be spread. Thus, Edelman would potentially be liable for the manufacture of a circumvention tool, but not for distribution of the tool.

The drawback here is that limiting Edelman's endeavors to publication of the block list would also foreclose the possibility of effective peer review of Edelman's research and findings. Other researchers would not only be unable to evaluate Edelman's circumvention tool, but would have to take Edelman's publication of the block list on faith - without the tool, other researchers would be unable to determine if the list that Edelman published was full and accurate. Furthermore, other researchers would be unable to build on Edelman's findings and circumvention tool, thus inhibiting progress in improving filtering software. Therefore, despite the potential significance of Edelman's findings, limiting or preventing the ability of others to build on his discoveries would stymie the

if N2H2's selection of Web sites is affected by any bias. See, e.g., Samuelson & Scotchmer, supra note 172, at 1643 (offering "excerpting clips from technically protected movies to demonstrate that a particular word (e.g., "redskins") has been used in a derogatory fashion" as an example of necessary fair use).

Reimerdes, 111 F. Supp. 2d 294, 332 (S.D.N.Y. 2000) ("The spread of means of circumventing access to copyrighted works in digital form . . . is analogous to a propagated outbreak epidemic.").

17 U.S.C. § 1201(2) (2000) ("No person shall manufacture, import, offer to the public, provide, or otherwise traffic in" circumvention technology) (emphasis added).


This is not to imply that Edelman would fraudulently publish a doctored block list, but without a circumvention tool, other researchers would be unable to verify Edelman's findings, absent N2H2 confirming the findings, which is highly unlikely.

See Samuelson & Scotchmer, supra note 172, at 1646 ("The DMCA inhibits research and hence follow-on innovation in technical measures because it limits the ability of researchers to learn from their predecessors").
“Progress of Science and useful Arts,” and prevent others from freely building on the ideas of others – notions that copyright is supposed to assure.

X. CONCLUSION – THE END OF THE JOURNEY . . . ?

*Edelman v. N2H2* gave courts another opportunity to interpret fair use back into the DMCA, which is the only reasonable application of the anti-circumvention and anti-tools provisions of the statute. While it is true that Edelman’s case could not lead to a complete solution to the problems created by the DMCA, it is difficult to imagine a better case for the courts to begin fixing those problems. However, since the district court shied away from its opportunity to stop the DMCA from driving in the wrong direction, it is unclear if the DMCA’s ambiguity will ever be fixed.

For now, however, N2H2, the DMCA, and CIPA have won the race. N2H2 will likely continue to dominate the public education and library market, and its block list will remain a secret. Yet, in closing, this Note humbly offers a suggestion to the American Library Association, who, in the face of the Supreme Court’s ruling against it, defiantly called again for “full disclosure of what sites filtering companies are blocking, who is deciding what is filtered and what criteria are being used.” However it is accomplished, perhaps the ALA could help bring about an independent entity that would evaluate Internet filtering programs for the benefit of public schools and libraries. Filtering software companies, such as N2H2, would provide, under the promise of strict confidentiality, their lists of blocked sites for the entity to evaluate. The entity could then, based on their findings, release a list of ratings to public schools and libraries to aid them in deciding which filtering programs to purchase.

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298 U.S. CONST. art. I, § 8, cl. 8.

The primary objective of copyright is not to reward the labor of authors, but “to promote the Progress of Science and useful Arts.” To this end, copyright assures authors the right to their original expression, but encourages others to freely build upon the ideas and information conveyed by a work.

*Id.* at 349-50 (alteration in original) (internal citations omitted).

This way, N2H2 would have its lists protected from competitors, and public schools and libraries would have solid information on which to base their purchasing decisions. Nonetheless, based on the past behavior of N2H2 in defending the secrecy that surrounds their block list, it is unlikely, regardless of the confidentiality safeguards put into place, that N2H2 would ever release its block list from its proprietary clutches. Therefore, it is incumbent upon the courts to get it right the next time Edelman or a similar researcher comes before them. If that happens, and the DMCA’s ambiguity

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301 In addition to the other examples of N2H2’s conduct in defending their block list, it is interesting to note, as a final aside, the following statements made in a 2003 Copyright Office (CO) panel hearing regarding the LOC’s DMCA exemption for lists of Web sites blocked by filtering software:

There’s no need for researchers to examine a software company’s database, said [public relations manager] David Burt of filtering company N2H2. He said [groups] had done studies using queries – trying various Web site addresses in a filter-protected computer – to determine whether key medical or social sites were blocked. Some CO panelists questioned whether that kind of study would be as effective as accessing a master list, but also said those other groups didn’t feel a need to circumvent copy-protected databases in order to perform their studies...

The threat to filtering software companies is a potential one, Burt said, because their database, developed with tens of millions of dollars in investment, could be pirated and used by a competitor: “We don’t want to give it away.” However, [panelist and attorney David] Band responded that the DMCA was to protect works from misuse by others, not from competitors, “it’s a different paradigm.”

Burt also expressed concern that if someone obtained a full blocking list it would be a “road map” to porn sites. Band said Burt “greatly underestimated the resourcefulness of teenage boys. If they have access to an unrestricted computer, they don’t need a road map.” Burt replied that regardless of a teenager’s ingenuity, “that’s not the business we want to be in. We don’t want to be known as the biggest provider of pornography to children in the world.” [Panelist and computer programmer Seth] Finkelstein seemed unconcerned by that line of debate, drawing laughter in the room when he said N2H2’s list of porn sites was “really bad” and that better porn could be found elsewhere.

Circumventing copy protection on filtering databases also undermines the software, Burt said, and hurts a company’s credibility with schools and other customers. However, [CO attorney Robert] Kasunic said that argument was “apples and oranges” because the circumvention didn’t permit “disabling the entire program.” Burt responded that “the database is part of the program.”

is corrected, public schools and libraries will finally be able to buy filtering software after looking under the hood.

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