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ANTI-CIRCUMVENTION AND COPYRIGHT MANAGEMENT INFORMATION: ANALYSIS OF NEW CHAPTER 12 OF THE COPYRIGHT ACT

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TABLE OF CONTENTS

I. INTRODUCTION

Over the past decade, the amount of information that is readily available has increased exponentially. The Internet has enabled instant access to millions of pages of information. Many forms of documents, art and music have been placed on the Internet in digital format, thus enabling people to retrieve perfect reproductions of copyrighted material instantly. The information on compact discs, DATs and DVDs can be copied virtually without effort or cost and are easily transmitted over the Internet and other such electronic communications networks. People can use the Internet to post an entire copy of a computer program or recorded music on an Internet "bulletin board," which is then available for anyone to download. Because of the availability of information and the ease with which it can be copied, the piracy of copyrighted work is more of a threat now than ever before.

To update the Copyright Act of 1976,[1] and in light of the size, scope, and popularity of the Internet and other digital forms of copyright, the Digital Millennium Copyright Act of 1998 (DMCA) was signed into law on October 28, 1998.[2] The DMCA complies with the World Intellectual Property Organization

[1] 17 U.S.C. §§ 101 – 1101 (2000).
[2] *See Digital Millennium Copyright Act of 1998*, Pub. L. No. 105-304, 112 Stat. 2860 (Oct. 28, 1998) [hereinafter *Digital Millennium Copyright Act*].

Copyright Treaty (WCT)[3] and the World Intellectual Property Organization Performances and Phonograms Treaty (WPPT)[4] adopted at the World Intellectual Property Organization (WIPO) Diplomatic Conference in December 1996. Two major provisions of the WIPO treaties require contracting parties to provide legal remedies against the circumvention of technological protection measures and the tampering with copyright management information (CMI).[5] The DMCA implements the anti-circumvention and CMI provisions in the new chapter 12 of the Copyright Act.[6] The anti-circumvention provision is drafted narrowly, but it will help to provide protection against unauthorized circumvention of technological protection measures used to protect copyrighted works, including restrictions on the manufacture and distribution of devices and other technological means that are primarily designed or produced to circumvent such protection measures.[7] The CMI provision prohibits persons from intentionally tampering with CMI, which includes things like information identifying the title, author, and owner of the copyrighted work.[8]

In any copyright legislation, the essential premise of copyright law should be to maximize the creation and distribution of creative works of authorship by rewarding the creators of such

[3] World Intellectual Property Organization: Copyright Treaty, Dec. 20, 1996, arts. 11 & 12, 36 I.L.M. 65, 71-72.
[4] World Intellectual Property Organization: Performances and Phonograms Treaty, Dec. 20, 1996, arts. 18 & 19, 36 I.L.M. 76, 86-87.
[5] World Intellectual Property Organization: Copyright Treaty, arts. 18 & 19, 36 I.L.M. 76, 86-87; World Intellectual Property Organization: Performances and Phonograms Treaty, arts. 18 & 19, 36 I.L.M. 76, 86-87.
[6] Digital Millennium Copyright Act.
[7] *See* 17 U.S.C. § 1201.
[8] *See* 17 U.S.C. § 1202.

works in a manner that also promotes the free distribution of ideas within society.[9] This must be kept in mind because the size, scope, and utility of the new digital domain differ greatly from all previous media. As proponents of the DMCA have successfully argued, analogies to these media provide limited assistance in evaluating the potential impact and constitutionality of legislation intended to cover this area.[10]

The WIPO treaties are intended to assure authors and artists that their rights will be respected as they make their works available on the Internet and in other digital forms. The new DMCA provisions are limited by the fair use doctrine and other copyright limitations,[11] but the extent to which the fair use doctrine is an option if copyright owners decide not to make their works available is questionable. Proponents have persuaded Congress that before copyright owners will make their works available for public benefit, owners' works must be protected from unauthorized access, such as with encryption or other forms of technological protection designed to prevent unauthorized access to a work.[12]

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[9] *See* Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1974).

[10] *See, e.g., WIPO Copyright Treaties Implementation Act; and Online Copyright Liability Limitations Act: Hearings Before the Subcommittee on Courts and Intellectual Property of the Committee on the Judiciary House of Representatives*, 105th Cong. 83, 87 (1997) [hereinafter *House Hearings*] (statement of Roy Neel, President and Chief Executive Officer, U.S. Telephone Association).

[11] *See* 17 U.S.C. § 1201(c); *see generally* 17 U.S.C. § 107.

[12] *See generally House Hearings*, *supra* note 10, at 79 (statement of Jack Valenti, President and CEO, Motion Picture Association of America); *see also id.* at 201 (statement of Hilary B. Rosen, President and CEO, Recording Industry Association of America); *see also id.* at 157 (statement of Allee Willis, songwriter, on behalf of Broadcast Music Inc.).

The new amendments implement the anti-circumvention and CMI provisions required to comply with the WIPO treaties. Chapter 12 includes five sections: (1) section 1201 prohibits the circumvention of technical copyright protection measures; (2) section 1202 protects CMI; (3) section 1203 provides civil remedies for violations of sections 1201 and 1202; (4) section 1204 provides criminal remedies for violations of sections 1201 and 1202; and (5) section 1205 is the savings clause of the chapter.[13] This paper examines the provisions of the amendments and their application. Additionally, this paper focuses on the perceived problems the amendments may cause users and speculates on the effectiveness of the new amendments in accomplishing Constitutional goals.

II. THE ANTI-CIRCUMVENTION PROVISION

The anti-circumvention provision was enacted because of the recognition that: copyrighted works made available in digital form are extremely vulnerable to unauthorized copying and distribution and that authors will increasingly use means, such as encryption, scrambling and passwords, in an effort to prevent misuse of their works. The provision is intentionally general because as technology advances, copyright owners will have to adapt their circumvention protection measures accordingly and the law would be hard-pressed to anticipate such advances. Because the anti-circumvention provision is so general, it may be unnecessarily broad. Such protection is available to copyright owners whether the use regulated is permitted or prohibited by law. Some are concerned that this provision will displace the

[13] *See* 17 U.S.C. §§ 1201 – 1205.

background law as the primary means of regulating access to information they protect.[14]

Basics of Anti-Circumvention

The anti-circumvention provision prohibits persons from gaining unauthorized access to a copyrighted work by circumventing a technological measure put in place by the copyright owner where such protection measure otherwise effectively controls access to a copyrighted work.[15] The circumvention of a technological protection measure put in place by a copyright owner to control access to a copyrighted work is analogous to taking a copy of a copyrighted work, such as a book, from an author who has secured that copy. In the digital domain, rather than physically taking a secured copy of a work, a work is misappropriated by "circumventing a technological measure" put in place by the copyright owner.

New chapter 12 defines "circumvent a technological measure" as "to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure."[16] In order to be in violation: (1) the technological measure must effectively control access to the work by, in the ordinary course of its operation, requiring the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work; (2) the work to which access is controlled by the technological measure must be a work that is under copyright; and (3) the circumvention must be without the authority of the copyright

[14] *See House Hearings*, *supra* note 10, at 242 (statement of Douglas Bennett, President, Earlham College).
[15] *See* 17 U.S.C. § 1201(a).
[16] *See* 17 U.S.C. § 1201(a)(3)(A).

owner.[17] Such technological measures include serial numbers, passwords and encryption, as well as timers that permit access for limited periods. For example, on the Internet, a prohibited act would be the circumvention of a copyright owner's website protection measures in order to gain unauthorized access to his or her copyrighted works.

The provision does not apply to every protection measure taken by a copyright owner, but only to effective protection measures. Effective protection measures are those that render the copy of the work unusable unless the consumer has an authorized means to render the work acceptable and useable such as through an access code or decryption key.[18] Thus, the basic prohibition imposed by the provision is on the unauthorized "circumvention of any measure that effectively controls access to a copyrighted work operates irrespective of whether the access gained, apart from the circumvention needed to effect it, infringes a property right in the work." Many are opposed to such broad protection because the provision would make it a violation even if the work to which it applies is not eligible for protection.[19]

Additionally, section 1201 prohibits persons from manufacturing, importing, offering to the public, or otherwise trafficking in or making technologies, products and services that can be used to circumvent a technological protection measure that effectively controls access to a copyrighted work.[20] Just as lawmakers have outlawed "skeleton" keys, and other lock picking

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[17] 17 U.S.C. § 1201(a).
[18] 17 U.S.C. § 1201(a)(3)(B).
[19] Yochai Benkler, Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain, 74 N.Y.U. L. Rev. 354, 415 (1999).
[20] *See* 17 U.S.C. § 1201(a)(2).

devices, this section outlaws certain devices used to gain access to copyrighted works, such as software, books, movies and music. Section 1201 provides three different tests to distinguish devices and services that have no meaningful purpose or use other than circumvention from those that should not be prohibited.[21] To be in violation, the technology, product, service, device, component or part must: (1) "be primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a" copyrighted work; (2) have "only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a" copyrighted work; or (3) be "marketed by [the person acting in violation] or another acting in concert with that person with that person's knowledge for use in circumventing a technological measure that effectively controls access to a copyrighted work."[22]

Those devices that could conceivably be used to circumvent technological protections are not prohibited because the provision excludes those devices that have the incidental or unintended effect of controlling access. Instead for those devices, Congress is aiming to ban only those devices with no commercially significant use other than to infringe copyrighted works. A manufacturer can be liable under this standard only if the manufacturer itself, or someone "acting in concert" with it, is marketing the device for use in circumventing.[23] If the device has only a limited commercially significant purpose or use other than to circumvent, this strongly suggests that the intended purpose of the manufacturer is to produce a device to circumvent. The

[21] *See id*.
[22] *See id*.
[23] *See id*.

manufacturer or distributor of a computer, home entertainment, or other equipment will have no trouble avoiding liability because these devices have significant uses other than circumvention.

Manufacturers of consumer electronics, telecommunications, and computing products are not required to design their products, or design and select a component, to respond to any particular protection measure.[24] This provision is important because it means that industries will not be adversely affected by the anti-circumvention provision if they would otherwise have to specially design their products to avoid a violation. This is a type of good faith check because it only applies if the device "does not otherwise fall within prohibitions of subsection (a)(2) or (b)(1)."[25] The primary significance of the device must not be to circumvent a technological measure. As discussed below, however, manufacturers of certain analog devices will be required to incorporate two known analog copy protection technologies.[26]

The anti-device provision was developed with U.S. Supreme Court's Sony case kept in mind.[27] In developing such a provision, this case was important because the Court held that devices which have substantial non-infringing uses are not copyright infringing devices and are therefore not illegal.[28] Rather than the "primarily designed" or "limited commercially significant purpose" standards that finally came to be, the computer industry

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[24] *See* 17 U.S.C. § 1201(c)(3).
[25] *See id*.
[26] *See* 17 U.S.C. § 1201(k).
[27] Arnold P. Lutzker, *Primer on the Digital Millennium: What the Digital Millennium Copyright Act and the Copyright Term Extension Act Mean for the Library Community* (last modified Mar. 8, 1999) <http://arl.cni.org/info/frn/copy/primer.html>.
[28] *See* Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 442 (1983).

lobbied for Congress to adopt *Sony's* "substantial non-infringing uses" standard.[29] If the anti-device standard is challenged in court, it is likely that the Court's finding in *Sony* will be important to the case.

In lobbying for the more strict anti-device standards, some have argued that the *Sony* ruling does not provide sufficient protection to fulfill the treaty obligation to provide "adequate and effective legal remedies" against circumvention.[30] They argue that most devices, even those designed or entirely used for infringing purposes, will be capable of substantial noninfringing uses since they could potentially be employed in the course of a fair use, or in the use of a public domain work.[31] They point out that the *Sony* standard has been ineffective in addressing the circumvention problem.[32] This is an argument that is contrary to the goals of copyright laws. That is, the ultimate goal of copyright law is to assure that the public can make fair use of copyrighted work and use of works in the public domain.[33] If the only substantial noninfringing use of any device is fair use, or in the use of a public domain work, then the goals of copyright will have been achieved.

The prohibition on certain circumvention devices is not required by the WIPO Treaties. Article 11 of the WCT merely

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[29] *See House Hearings*, *supra* note 10, at 250 (statement of Christopher Byrne, Director of Intellectual Property, Silicon Graphics).

[30] *See House Hearings*, *supra* note 10, at 33 (statement of Marybeth Peters, Register of Copyrights, Copyright Office of the United States).

[31] *See id*.

[32] *See id*. (citing Vault Corp v. Quaid Software Ltd., 847 F.2d 255 (1988)).

[33] *See* Iowa State Univ. Research Found. v. American Broadcasting Cos., 621 F.2d 57, 60 (2d Cir. 1980) (holding that the fair use doctrine "permits courts to avoid rigid application of the copyright statute when, on occasion, it would stifle the very creativity which that law is designed to foster"); *see also* Meeropol v. Nizer, 560 F.2d 1061 (2d Cir. 1977), *cert. denied*, 434 U.S. 1013 (1978).

requires that the United States provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures."[34] Article 18 of the WPPT contains nearly identical language.[35] Because of the general requirements of the treaties, new section 1201's prohibition on the act of circumvention would seem to provide sufficient legal protection and remedies to satisfy the treaties. However, Congress went beyond the requirements of the treaties, and included prohibitions on certain circumvention devices.

New section 1201's prohibition on certain circumvention devices has already taken effect, whereas the ban on acts of circumvention does not take effect until October 28, 2000.[36] Until that time, the Librarian of Congress is to determine whether persons who are users of a copyrighted work are, or are likely to be, adversely affected by this prohibition in their ability to make noninfringing uses under the copyright act of a particular class of copyrighted works.[37] Afterwards, the Librarian shall publish a list of any class of works, whose use there is a concern, and the prohibition on circumvention is waived as to that class of works for the next three years.[38]

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[34] World Intellectual Property Organization: Copyright Treaty, art. 11, 36 I.L.M. 65, 71-72.
[35] World Intellectual Property Organization: Performances and Phonograms Treaty, art. 18, 36 I.L.M. 76, 86-87.
[36] *See* 17 U.S.C. § 1201(a)(1)(A).
[37] *See* 17 U.S.C. § 1201(a)(1)(C).
[38] *See* 17 U.S.C. § 1201(a)(1)(D).

Exemptions from Liability

As the provision developed, the various academic and affected groups alerted Congress to their deep concerns with the prohibition on circumvention.[39] In an effort to allay these concerns, Congress has provided a number of exemptions to the prohibition on acts of circumvention and circumvention devices in response to concern that there are legitimate reasons for engaging in circumvention. These exemptions serve to maintain the balance of assuring authors sufficient rights to adequate compensation for their creative efforts and that of authorizing consumers the right to make copies of works that they have lawfully acquired. There are various exemptions in the Copyright Act permitting such acts as recording a movie on a videocassette recorder[40] and giving a book to a friend.[41] The anti-circumvention provision also expressly provides exemptions which include the rights, remedies,

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[39] *See, e.g.*, Julie E. Cohen, A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace, 28 Conn. L. Rev. 981 (1996); Letter from Keith Aoki, Professor of Law, University of Oregon, et al., to Representative Howard Coble, Chairman, Subcommittee on Courts and Intellectual Property (Sept. 16, 1997) <http://www.dfc.org/issues/graphic/2281/profltr/profltr.html>; *see also* Letter from Keith Aoki, Professor of Law, University of Oregon, et al., to Senator Tom Bliley, Chairman, Commerce Committee (June 4, 1998) <http:// www.dfc.org/issues/graphic/2281/proflt3/proflt3.html>; *see also* The WIPO Copyright Treaties Implementation Act: Hearing on H.R. 2281 Before the Subcomm. on Telecommunications, Trade, & Consumer Protection of the House Comm. on Commerce, 105th Cong. 58 (1998) [hereinafter Copyright Hearings] (statement of Seth Greenstein, Digital Media Association); *id*. at 30 (statement of Chris Byrne on behalf of Information Technology Industry Council).

[40] *See, e.g.*, Sony, 464 U.S. at 442.

[41] *See* 17 U.S.C. § 109(a) (providing that the owner of a particular copy of a copyrighted work may, without the consent of the copyright owner, dispose of the possession of that copy).

limitations, or defenses to infringement under the Copyright Act.[42] These exemptions have been provided so that the public can make reasonable uses of the works or devices that they have lawfully acquired.

1. Fair Use Defense

New section 1201 specifically provides that consumers may use the fair use defense for avoiding liability for any activity that would otherwise be prohibited by the anti-circumvention provision.[43] The Copyright Act codifies the factors that a court must use in determining whether the use made of a work is fair use. Those fair use factors are: "(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit-educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work."[44]

Although the provision states that nothing will affect fair use rights, there remains a question of how a user is to be able to exercise those rights in the first place. If a user must first gain access to a copyrighted work in order to apply the fair use doctrine, then it is not too difficult to imagine a scenario in which the provision will prevent the user from exercising those rights in the

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[42] *See* 17 U.S.C. § 1201(c).
[43] *Id*.
[44] *See* 17 U.S.C. § 107; *see generally*, New Era Publications International, ApS v. Carol Publishing Group, 904 F.2d 152 (2d Cir. 1990); *see generally*, Pamela Samuelson, *Fair Use for Computer Programs and Other Copyrightable Works in Digital Form: The Implications of "Sony," "Galoob" and "Sega,"* 1 J. Intell. Prop. L. 49 (1993).

first place. For example, the copyright owner may provide a technological protection measure that can only be accessed by devices that are specifically made to circumvent and have no other practical commercial use other than to circumvent. In that instance, the user will not be able to purchase a device to circumvent because it would be illegal for a company to manufacture such a device. In order to gain access, the only alternative for the user would be to build a circumvention device in which to circumvent the technological protection measure. The technological protection measure could be designed that this would be prohibitively expensive for the user or all but impossible except for the most savvy technology experts. In this example, Congress's efforts at retaining the fair use doctrine is empty. Although access and other types of use would be allowable under the fair use doctrine, in practicality, the user cannot gain access to the copyrighted work. Although it could be argued that the user could be granted access to the work upon stating her intended use to the copyright owner, fair use is to be applied without regard to the possibility of the copyright owner's consent.

What about the copyrighted work that is protected by an anti-circumvention provision in which there is no possible use of the fair use doctrine? If a user does illegally circumvent a technological protection measure expecting to be able to make fair use of the work the user may be liable despite his or her good intentions. It will only be after accessing the work that the user realizes that fair use doctrine is inapplicable. At this point, however, the illegal access has been made and the user is liable. This is so even without infringing any other right of the owner in the copyrighted work except for the illegal act of accessing the work. Fear of this type of violation will prevent many users from

attempting access if she is not certain what type of work is being accessed.

Perhaps, Congress intends for there to be two stages to the fair use determination: (1) fair use applied to the act of accessing a protected work; and (2) fair use as applied to the actual use of a protected work. If that is the case, section 107 of the Copyright Act and case law have already well established how the fair use doctrine is applied to the actual use of a copyrighted work, but the question remains: how should fair use be applied to the act of accessing a work? As one commentator pointed out, a technological protection system will not be able to distinguish between those users that should be allowed to copy based on fair use and those that should not be allowed to copy.[45] Certainly, this is not yet possible with current technology. If fair use were to be applied separately to merely accessing a work, then it would presumably be a lower standard than fair use as applied, for example, to the copying of a work. As in the scenario discussed above, it would not be fair to hold a user with good intentions liable for accessing a work if he or she learns only after access is gained that fair use is impossible.

How might fair use to be applied in regard to accessing a copyrighted work? The Copyright Act's provision for fair use is contained in Section 107.[46] Fair use of a copyrighted work shall be allowed for such purposes as "criticism, comment, news reporting, teaching, scholarship, or research."[47] It could reasonably be

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[45] *See The Proposal Denies Consumers Any Practical Means of Fair Use* (last visited June 26, 1999) <http://www.hrrc.org/fairuse1.html> (opinions of the Clinton Administration's Working Group on Intellectual Property proposed legislation to adapt copyright law to a digital networked environment).
[46] *See* 17 U.S.C. § 107.
[47] *See id*.

surmised that access for any of these purposes will not be a violation of the anti-circumvention provision. In all fairness, it could be that a user would not be held liable for accessing a copyrighted work, even if no valid fair use defense were possible, if the user had in good faith intended such use. This is a more liberal fair use standard, but is probably necessary to allay fears of users that are not certain what it is they are accessing. The purpose of such a use would be a facts and circumstances determination. If the user could not reasonably determine the nature of a work protected by a technological measure then the purpose of the act of circumvention would be much easier to justify. If it is the case that a user knew the nature of a protected work then the full gambit of factors as listed in section 107 and case law could be used to determine whether such access is justified under fair use.

2. Reverse Engineering

In certain circumstances, circumvention is allowable for reverse engineering purposes.[48] This is of practical importance in order to ensure the interoperability of software products, telecommunications equipment, and other such digitally based products. Those circumstances include access for the purpose of identifying and analyzing the elements of a computer program that are necessary to achieve interoperability of an independently created computer program with other programs.[49] However, reverse engineering is not an exception when such information is

[48] 17 U.S.C. § 1201(f).
[49] *See* 17 U.S.C. § 1201(f)(1).

readily available to the person engaging in the circumvention and to the extent such action constitutes other copyright infringement.[50]

Just as an engineer is allowed to lawfully obtain a product, deconstruct it, and study how it works, a computer scientist will be allowed to decompile, the translation of a program's "machine-readable" object code into "human-readable" source code, a program and study how the program works. This exception for reverse engineering closely parallels the Ninth Circuit's decision that certain reverse engineering of computer programs is allowed if there is a legitimate reason for such access.[51] Specifically, the court stated that where disassembly is the only way to gain access to the ideas and functional elements embodied in a copyrighted computer program and where there is a legitimate reason for seeking such access, disassembly is a fair use of the copyrighted work.[52] It is likely that the Sega case will be used in interpreting the reverse engineering exemption of the anti-circumvention provision.

The problem remains that startup companies will be unable to gain access if copyright owners design their products so they will only respond to the devices that have only limited commercially significant purpose or use other than to circumvent a technological measure. In that instance, small or startup companies would be unable to purchase devices that would allow them to lawfully circumvent the protection measure. Of course, the company can design a device to circumvent if for legitimate reasons, but this will not be economically feasible for many

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[50] *See id*.
[51] *See* Sega Enters., Ltd. v. Accolade, Inc., 977 F.2d 1510, 1527-28 (9th Cir. 1992).
[52] *See id*. at 1527-28.

companies. Thus, practically, such companies would be prevented access even for a legitimate purpose.

3. Encryption Research

Encryption technology is "the scrambling and descrambling of information using mathematical formulas or algorithms."[53] For example, this technology is often used to ensure that nosy people cannot read or modify works on computer networks.[54] Recognizing the need to improve the ability of copyright owners to protect their works, Congress provided a narrow encryption research exemption with the intent to advance the state of knowledge in the encryption technology field and to assist in the development of encryption products.[55] The DMCA defines encryption research as "activities necessary to identify and analyze flaws and vulnerabilities of encryption technologies applied to copyrighted works, if these activities are conducted to advance the state of knowledge in the field of encryption technology or to assist in the development of encryption products."[56] For example, the information in a computer program may be encrypted to prevent unauthorized persons from seeing the actual code of the program in a recognizable form. Unless a person has a conversion program, to "unencrypt" the code, that person will not be able to understand the computer program.

Congress listed the following conditions to be met in order to make encryption research legitimate: (1) the person lawfully obtained the copyrighted work; (2) circumvention is necessary for

[53] 17 U.S.C. § 1201(g)(1)(B).
[54] Andrew S. Tanenbaum, Computer Networks 578 (3d ed. 1996).
[55] *See* 17 U.S.C. § 1201(g)(1)(A).
[56] *See* 17 U.S.C. § 1201(g)(1)(A).

the encryption research; (3) the person made a good faith effort to obtain authorization from the copyright owner before the circumvention; and (4) circumvention is otherwise permissible under the applicable laws.[57] The court must use the following factors in determining whether an exemption applies: (1) whether the information derived from the research was disseminated to advance the knowledge or development of encryption technology or to facilitate infringement; (2) "whether the researcher is engaged in a legitimate course of study, is employed, or is appropriately trained or experienced in the field of encryption technology;" and (3) whether the researcher timely notifies the copyright owner with the findings and documentation of the research.[58]

This exception will allow computer scientists and engineers to test lawfully acquired encryption programs for weaknesses and to develop stronger forms of encryption. Encryption is essential to the growth of electronic commerce and personal privacy on the Internet. Without such an exemption, the development of encryption systems would be hampered.

4. Information Security Activities

Currently, millions of people now use computer networks, such as the Internet, for banking, shopping, and filing their tax returns.[59] It is important for businesses to ensure that such networks are secure.[60] Similar to the encryption research exemption, the DMCA provides an exemption for information

[57] *See* 17 U.S.C. § 1201(g)(2).
[58] *See* 17 U.S.C. § 1201(g)(3).
[59] Tanenbaum, *supra* note 54, at 577.
[60] *See id*. at 578 (listing examples of persons who cause security problems and why).

security activities.[61] The security testing exemption permits circumvention conducted in the course of security testing if it is with the authorization of the owner of the computer or computer system.[62] This is a logical exemption since it is typical for companies to hire computer experts to test their computer systems and identify vulnerabilities. This would not seem to be much of a legal problem anyway since it would rare for someone so hired to be prosecuted for their authorized activity aimed at improving, not destroying, computer security.

Security testing is defined as obtaining access, with proper authorization, to a computer or computer system only for testing, investigation or correcting a potential or actual security flaw, or vulnerability or processing problem.[63] In determining whether this exemption is applicable, the court to consider whether the information derived from the security testing was used solely to improve the security measures or whether it was used or maintained so as not to facilitate infringement.[64] This section also permits the development, production or distribution of means for the sole purpose of performing permitted acts of security testing.[65] Again, this is a narrow exemption for computer or computer systems owners to authorize others to conduct security tests on their computers or computer systems. This provision also allows persons others than the copyright owner, or authorized persons, to produce technology that is used in such testing.[66]

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[61] *See* 17 U.S.C. § 1201(j).
[62] *See* 17 U.S.C. § 1201(j)(1).
[63] *Id*.
[64] *See* 17 U.S.C. § 1201(j)(3).
[65] *See* 17 U.S.C. § 1201(j)(4).
[66] *See id*.

5. Exceptions Regarding Minors

There has been concern that the anti-circumvention would make it unlawful for parents to protect their children from pornography and other harmful material available on the Internet.[67] To alleviate such concerns, the DMCA permits technology circumvention component whose sole purpose is to aid in preventing access of minors to objectionable material on the Internet.[68] The technology must not otherwise violate the provisions of the Copyright Act.[69]

6. Protection of Personally Identifying Information

The DMCA addresses personal privacy concerns by permitting circumvention for the limited purpose of identifying and disabling technological means that collects or disseminates personally identifying information reflecting the online activities of the user.[70] Frequently, when a computer user visits a website, files are placed on the computer user's hard drive by website operators with the intent to collect information about the computer user's viewing habits and interests.[71] This exemption makes it legal for computer users to buy and use software to disable, modify, or remove these files, known as "cookie" files. These files

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[67] *See* Jonathan Band, *The Digital Millennium Copyright Act* (visited June 26, 1999) <http://www.hrrc.org/JB-Memo.html - Circumvention>.
[68] *See* 17 U.S.C. § 1201(h).
[69] *See id*.
[70] *See* 17 U.S.C. § 1201(i).
[71] *See* Band, *supra* note 67.

are controversial because the collection of user behavior and data is viewed as an invasion of privacy.

This exemption is only applicable if the user is not provided with adequate notice and the capability to prevent or restrict such collection or dissemination, and if the circumvention has no other effect on the ability of any person to gain access to any work.[72] Often there is no notice. As opposed to other exemptions, this provision permits acts of circumvention to protect privacy, but does not specifically permit the development and distribution of the means of effectuating that circumvention. Therefore, companies may be prevented from providing the technology to consumers. Without the availability of such technology to the market, it is unlikely that the typical computer user will have the technical skills to circumvent such information gathering technology.

7. Exemption for Nonprofit Libraries, Archives, and Educational Institutions

The library community has a limited exemption for reviewing works for potential acquisition by nonprofit libraries, archives or educational institutions[73] and a potentially broader exemption that will be based on a review and subsequent rules by the Librarian of Congress.[74] Nonprofit libraries, archives, and educational institutions are exempted in order to gain access to a commercially exploited copyrighted work solely to make a good faith determination of whether to acquire such work.[75] Access is

[72] *See* 17 U.S.C. § 1201(i)(1)(B).
[73] *See* 17 U.S.C. § 1201(d).
[74] *See* 17 U.S.C. § 1201(a)(1).
[75] *See* 17 U.S.C. § 1201(d)(1).

allowable only when an identical work cannot be obtained by other means and access may not last longer than necessary.[76] A qualifying entity must have a collection that is open to the public or available to certain researchers and this exemption is not permissible for commercial advantage or financial gain.[77] Again, this provision does not specifically permit the development and distribution of the devices necessary to effectuate the permitted circumvention.

In actuality, this exemption is without much practical value. Virtually all publishers will be willing to permit libraries to inspect the goods.[78] This is in the publisher's best interest because without such consent libraries will be unwilling to purchase those goods.

This exemption may actually nullify some of the effective exemptions that the Copyright Act provides for nonprofit libraries, archives, and educational institutions. A library is allowed to copy a single article, if it gives the copy to an individual user and the library or archives has no notice that the copy would be used for any purpose other than "private study, scholarship, or research."[79] Using this exemption, a library could circumvent the protection measures of an online journal to which it subscribes in order to make a copy such a copy. However, the expressio unius est exclusio alterius doctrine may be applied to preclude such a defense. This doctrine, for the purpose of statutory interpretation, states that the mention of one thing implies the exclusion of another.[80] Because the exemption provided in the anti-

[76] *See* 17 U.S.C. § 1201(d)(1)(A); 17 U.S.C. § 1201(d)(2).
[77] *See* 17 U.S.C. § 1201(d)(5); 17 U.S.C. § 1201(d)(3).
[78] *See* Benkler, *supra* note 19, at 418.
[79] *See* 17 U.S.C. § 108(d)(1).
[80] *See* Burgin v. Forbes, 293 Ky. 456, 169 S.W.2d 321, 325; *see also* Newblock v. Bowles, 170 Okl. 487, 40 P.2d 1097, 1100.

circumvention provision does not also include the exemption provided in section 108, then that exclusion may be interpreted as meaning no such exemption exists for the purposes of circumvention. This may also apply to the other exemptions that are provided to libraries and archives.[81] In such an interpretation, libraries will be restricted in their efforts to provide wide access to works protected by technological protection measures.

8. Certain Other Analog Devices and Technological Measures

The anti-circumvention provision specifically addresses the protection of analog television programming and prerecorded movies in relation to recording capabilities of ordinary consumer analog videocassette recorders.[82] The provision requires analog videocassette recorders to conform to the two forms of copy control technology widely used today – the automatic gain control technology and the colorstripe copy control technology.[83] These technologies are designed to detect a certain signal that indicates that this should not be recorded. When sensing certain signals, these devices will either cause the videocassette recorder to fail to record the signal or record the signal and play it back meaningfully distorted or degraded. The provision prohibits tampering with these analog copy control technologies to render them ineffective by redesigning of video recorders or by intervention of "black box" devices.

[81] *See* 17 U.S.C. § 108.
[82] *See* 17 U.S.C. § 1201(k).
[83] *See id*.

The provision includes specific encoding rules to preserve long-standing consumer home taping practices.[84] For example, copyright owners may use these technologies to prevent the making of a viewable copy of a pay-per-view program or a prerecorded tape.[85] However, they cannot limit the copying of over-the-air broadcasts or basic and extended tiers of programming services, whether provided through cable or other wireline, satellite, or future over-the-air terrestrial systems.

Public Interest Concerns

Increasingly, people have the expectation that information should be owned and controlled by the owner. This is a shift in ideas from Justice Brandeis's dissent in *International News*: "The general rule of law," he stated, is that once information is communicated to others it becomes "free as the air to common use."[86] This was the conceptual baseline prevailing at that time, approximately 70 years ago.[87] Since then, society has increasingly come to expect all forms of intellectual property to be owned just as property in physical things.[88]

In particular, one California case illustrates the cost that copyright laws are placing on free speech.[89] In *Religious Tech.*, Dennis Erlich began criticizing the Church of Scientology through

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[84] *See* 17 U.S.C. § 1201(k)(2); *see also* Sony, 464 U.S. at 456 (holding that a consumer may use videocassette recorders to copy film and television programs for later viewing).
[85] *See* 17 U.S.C. § 1201(k).
[86] Benkler, *supra* note 19, at 355 (quoting International News Serv. v. Associated Press, 248 U.S. 215, 250 (1918)).
[87] *See* Benkler, *supra* note 19, at 355.
[88] Id.
[89] *See* Religious Tech. Ctr. v. Netcom On-Line Communication Servs., Inc., 923 F. Supp. 1231 (N.D. Ca. 1995).

humorous and critical writings.[90] On the Internet, Erlich posted documents from the Church of Scientology containing the religious teachings of Scientology, along with criticism of those teachings.[91] The court eventually issued a temporary restraining order and seizure order after the Church of Scientology sued for copyright infringement.[92] In execution of the writ of seizure, local police officers entered Erlich's home to conduct the seizure. The officers were accompanied by several [Scientology] representatives, who aided in the search and seizure of documents related to Erlich's alleged copyright infringement and misappropriation of trade secrets.[93] The court ordered the plaintiffs to return some of the materials they had seized, but it rejected the First Amendment argument that following the temporary restraining order with a preliminary injunction would be an unconstitutional prior restraint.[94] After the court became satisfied that the church likely would prevail on copyright law principles, it presumed irreparable harm[95] and dismissed the First Amendment claims.[96]

Consider the Religious Tech. case if the anti-circumvention provision had been enacted at that time and the Church of Scientology had encrypted their works to prevent copying and distributing. Although Erlich would have been privileged under

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[90] *See id*. at 1239.
[91] *See id*. at 1239.
[92] *See id*. at 1240.
[93] *See id*. at 1240.
[94] *See id*. at 1266.
[95] *See id*. at 1257.
[96] *See* Benkler, *supra* note 19, at 356. Benkler points out that this common feature of copyright infringement cases has recently been the subject of extensive criticism, see, e.g., Mark A. Lemley & Eugene Volokh, Freedom of Speech and Injunctions in Intellectual Property Cases, 48 Duke L.J. (forthcoming 1999).

copyright law to use them to criticize Scientology, he would have remained under a court order prohibiting him from distributing or even reading those works. In order to post those works on the Internet, Erlich would have had to remove the code that protected them, which would have exposed him to civil sanctions.[97]

As another example, the Washington Post and the Los Angeles Times brought a copyright action against the maintainers of a website, Free Republic, for cutting out certain portions of the newspapers' on-line news articles and commenting on those articles on their on-line forum.[98] The Free Republic website contained a forum section in which users who read certain news articles can cut and paste these articles onto the forum and comment on them.[99] Ultimately, in the interest of the newspapers' rights in the articles, the forum in which people shared ideas on news stories was closed down because of the interest in the newspapers' rights in the articles.

While it is true that providers, such as the Washington Post and the Los Angeles Times, should receive some protection, the ultimate goal of copyright is to provide the public with the result of author's labors.[100] Because this is expressly stated in the Constitution,[101] we must first assume that information will be "free as the air to common use" in that the government will not prevent anyone from reading or using this part or that of the information

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[97] 17 U.S.C. § 1203.
[98] *See* Pam Mendels, *Newspaper Suit Raises Fair Use Issues, CyberTimes--The New York Times on the Web* (Oct. 2,1998) <http://www.nytimes.com/library/tech/98/10/cyber/articles/02papers.html>.
[99] *Free Republic Forum* (visited June 26, 1999) <http:// www.freerepublic.com/forum/latest.htm>.
[100] *See* Twentieth Century, 422 U.S. at 156.
[101] *See* U.S. Const. art. I, § 8, cl. 8.

that is available.[102] The anti-circumvention provision is supported by the idea that it is worthwhile to make many users lose some privileged uses in order to assure that the owners of copyrighted materials, such as the Los Angeles Times and the Washington Post, can more completely capture the value of their products and, in turn, provide more information to the public.[103] It is doubtful such newspapers will provide enough information to outweigh the costs of denying persons the use of their First Amendment.

Benkler urges the notion that when the government prevents the accessibility of such information then it can only be "where government has the kind of good reasons that would justify any other regulation of information production and exchange: necessity, reason, and a scope that is no broader than necessary."[104] Does the legislation new anti-circumvention satisfy these criteria? Despite the availability of the fair use doctrine and other exemptions to the provision, such a broad provision prohibiting certain circumvention devices may not be in the public's best interest.

The Librarian of Congress has been order to determine, in a rulemaking proceeding on the record, whether the provision's prohibitions on the acts of circumvention are in the public's best interest.[105] Specifically, the Librarian is to 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 this prohibition in their ability to make noninfringing uses under the copyright act of a particular class of copyrighted works.[106]

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[102] *See* Benkler, *supra* note 19, at 357.
[103] *See id*. at 421.
[104] *See id*. at 257.
[105] *See* 17 U.S.C. § 1201(a)(1)(C).
[106] *See id*.

Afterwards, the Librarian shall publish a list of any class of works, whose use there is a concern, and the prohibition on circumvention is waived as to that class of works for the next three years.[107] Curiously, the rulemaking proceeding does not apply to the prohibition on the sale, manufacture, or importation of circumvention devices.

Congress fails to explain what is meant by "class" of works that the Librarian is to examine. The Copyright Act does list categories of works, but it is possible that classes of works are to be more specific than the eight categories listed in section 102 of the Act.[108] The definition of classes of works is important in how specific the Librarian can make it. For example, if it is limited to the categories listed in section 102 of the Copyright Act[109] then this rulemaking proceeding is not very useful. However, if the Librarian can define the classes as specifically as is desired then the proceeding takes on a great deal of importance. Using an example from above, the Librarian may determine that a user accessing a newspaper's website to solely for purpose of clipping portions of certain articles and then pasting the clipping with comments on a public forum to be a certain class of copyrighted work to be allowed. Such a finding may be justified on the First Amendment ground of free speech. On the other hand, the Librarian could justifiably determine that music and movies on the Internet are not a class of work to be exempted. The difference being that music and movies do not raise the First Amendment concerns as does restricting access to newspaper articles.

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[107] *See* 17 U.S.C. § 1201(a)(1)(D).
[108] *See* 17 U.S.C. § 102(a).
[109] *See id*.

Congress admits the possibility of the adverse impact the provision will have on the free flow of information because it explicitly lists certain criteria that the Librarian should examine in the rulemaking proceeding.[110] In conducting the rulemaking proceeding, the Librarian of Congress must consider "the availability for use of copyrighted works; the availability for use of works for nonprofit archival, preservation, and educational purposes; the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research; and the effect of circumvention of technological measures on the market for or value of copyrighted works."[111] Additionally, such other factors that the Librarian deems appropriate may be examined.[112] Because Congress explicitly acknowledges the risk that the provision poses to privileged uses, then special attention must be given to the rulemaking process.[113] The Librarian's determination of whether the provision adversely affects the free flow of information, and whether such protection is worth the First Amendment risks created, is within the Court's heightened First Amendment scrutiny.[114]

Although the Librarian can determine which users are adversely affected by the prohibitions on acts of circumvention, this is not the case with regard to the prohibition on the manufacture, importation, or sale of certain circumvention devices (anti-device provision). In certain circumstances, it may be the case that the anti-device provision adversely affects a class person

[110] *See* 17 U.S.C. § 1201(a)(1)(C).
[111] *See id*.
[112] *See id*.
[113] *See* Benkler, *supra* note 19, at 427.
[114] *See id*.

in their ability to make a noninfringing use just as the Librarian has determined that such prohibitions on the act of circumvention has affected that class.

For example, the Librarian of Congress may determine that if users lose the ability to electronically cut and paste newspaper stories and editorials, they will to a great degree be adversely affected in their ability to offer their own criticism and comment, a First Amendment right.[115] The Librarian may also find that the adverse affect on the newspapers' revenue because of the user's cutting and pasting is minimal. In such a determination, the Librarian would allow these stories to be cut and paste on the user's website because of the adverse affects if disallowed on the user and the minimal affects on the newspaper if allowed.

Although that class of users would be free to access the works, the Librarian's determination does not prevent newspapers from restricting access to their stories by encryption. The Librarian's decision does not affect newspapers' ability to use technological protection measures. Under the Act, the Librarian's determination only affects the prohibition on acts of circumvention by users, and it has no effect on the anti-device provision.[116] Such users would be free to access the works, by the Librarian's determination; however, unless they have the skills in technology to circumvent, they will be forced to use equipment to circumvent. The newspapers will be able to design anti-circumvention equipment that can only be overcome by devices that are prohibited manufacture by the anti-device provision. Thus, the users will be out of luck because no manufacturer will be able to provide such devices.

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[115] *See* U.S. Const. amend. I.
[116] *See* 17 U.S.C. § 1201(a)(1)(E).

Congress seems to have been ignorant to the fact that the anti-device provision could have the same practical effect as the prohibition on acts of circumvention. This is evident by the fact that the prohibition on acts of circumvention is to undergo a rulemaking proceeding, but the anti-device provision does not although, as in the example above, it can have the same practical effect. Therefore, it is important to examine how rigidly the anti-device provisions can be applied in determining how adversely they can affect a certain classes of persons as determined by the Librarian of Congress.

The prohibition on the manufacture or distribution of certain devices is much like the copyright provision for contributory liability. The anti-device provision limits persons from manufacturing those devices that are either: (1) designed to circumvent; (2) of limited commercial use other than to circumvent; or (3) of no other significant use other than to circumvent.[117] By doing so, Congress intends to "net" those manufacturers that have some practical knowledge that consumers will purchase the device for circumvention and intend to provide means for such circumvention. In the case of contributory liability, courts have held that a plaintiff must prove two elements: (1) the underlying copyright violation by a third party; and (2) the defendant knowingly caused, induced or materially contributed to that violation.[118] Although the anti-device provision and contributory liability for copyright both require knowledge or some type of intent, new section 12's prohibition is broader because it does not require the underlying copyright violation. Since public

[117] *See* 17 U.S.C. § 1201(a)(2).
[118] *See* A & M Records, Inc. v. Abdallah, 948 F.Supp. 1449, 1455-56 (C.D.Cal. 1996) *applying* Gershwin Publishing Corp. v. Columbia Artists Management, 443 F.2d 1159, 1162 (2d Cir. 1971).

access to copyrighted works is the ultimate goal, the better route for Congress may be to examine each new technology specifically and determine whether there is a way to prevent the manufacture and distribution of the devices with no substantial non-infringing uses. Congress will then be able to better determine whether the device maintains the balance between the public's fair use rights and the ability of legitimate users of the device on the one hand with that of the rights of the copyright owner on the other.

In the past, Congress has successfully implemented legislation prohibiting specific devices with respect to emerging technologies. The Audio Home Recording Act prohibits circumvention of certain technological safeguards applied to digital audio recordings, and trafficking in devices whose primary purpose is to circumvent those protection measures.[119] Protection against the unauthorized signal descrambling is provided under the Electronic Communications Privacy Act.[120] There is no valid reason why Congress should not be able to identify specific problem areas as they have done in the past rather than passing a such a broad anti-device provision.

On the other hand, Congress' intent in enacting the provision seems clear; thus, it is unlikely that the courts will apply the law contrary to that intent. The problem arises with events that do not rise to the level for a court determination. As a technical matter, new section 1201 will not prevent consumers from relying on the fair use doctrine and the other limitations and exceptions to copyright law, but it will likely prevent the manufacture and distribution of technologies necessary for those consumers to gain such access. Because Congress has been able to enact prohibitions

[119] *See* 17 U.S.C. § 1002.
[120] 18 U.S.C. § 2511.

as each specific problem arose, the new provision may be too broad and excessive, particularly considering that compliance with the WIPO Treaties do not require it.

Additionally, some have expressed concern that section 1201 does not contain prohibitions against using technological protection measures to protect works in the public domain or works that are not copyrightable.[121] Therefore, if such prohibitions are not included, anything can be encoded against copying and, in practicality, be protected by copyright law. Copyright protection is not intended to extend to "any idea, procedure, process, system, method of operation, concept, principle, or discovery."[122] Neither does copyright protection extend to a work to which the copyright has expired.[123] These works have then entered the public domain. There is concern that the anti-circumvention provision could be used by copyright owners to protect unprotectable facts and ideas in their works.

Congress weighed in on the side of copyright owners by saying that if they are to be expected to make their works available, owners must be assured protection against unauthorized access. The Internet is such an expansive public forum that many providers may require the assurance that their works will be protected before they will make it available on-line. In *International News Service* (*INS*), the plaintiff, the Associated Press, was in the business of gathering news information and providing it to newspapers for publication.[124] The Associated

[121] *See* Pamela Samuelson, Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised, 14 Berkeley Tech. L.J. (forthcoming 1999).
[122] *See* 17 U.S.C. § 102(b).
[123] 17 U.S.C. §§ 301 – 305.
[124] *See* International News, 248 U.S. at 229.

Press's incentive for its efforts was the profit it made on from being the only source.[125] The INS Court declared that the news matter is not copyrighted nor is it necessary in affording the Associated Press protection.[126] The INS case did not turn on the property nature of the information, but instead on the question of unfair competition.[127] The Court found that the defendant could not appropriate the plaintiff's material and sell it as its own because the defendant "is endeavoring to reap where it has not sown, and … is appropriating to itself the harvest of those who have sown."[128] Although, the anti-circumvention provision provides protection to compilations of facts and ideas as in INS, the provision may be unnecessarily broad by restricting the rights of the public to gain access in certain scenarios.

The anti-circumvention provision may be neatly distinguished from INS because the new provision prevents access to the copyrighted work totally at the owner's discretion regardless of fair use. For example, those copyright owners using technological protection measures can simply make their works unreadable except when viewed from their website. The provision does not just prohibit circumvention for the purpose of infringement, but it also gives the copyright owner the ability to control users' privileged uses. A copyright owner may do this by protecting their works with such protection measures that can only be overcome by devices with no other purpose but to circumvent. The user can always produce such devices, but this is a hurdle that most users will not be able to overcome. This dilemma could be the basis of future litigation.

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[125] *Id*. at 230-31.
[126] *Id*. at 234.
[127] *Id*. at 234-35.
[128] *Id*. at 239-40.

The battle in Congress over the anti-circumvention provisions of the DMCA was a battle between Hollywood and Silicon Valley.[129] The anti-circumvention act seems to have been primarily influenced by the publishing, motion picture and music industries.[130] These industries are likely driven by the fear that digital reproduction produces copies that are excellent quality and at a very low price, and distribution is too cheap and too efficient.[131] These elements threaten to severely reduce the profits these industries have traditionally made at movie theaters, video stores and music stores. On the other hand, the digital domain can provide a new and great source of revenue for these industries. These works can now be digitized and downloaded quickly and cheaply by a consumer from the Internet. The music, publishing, and movie industries want the anti-circumvention provision so that they can again charge consumers for each and every access to one of their works. DVDs or a movie downloaded from the Internet can be encrypted and only accessible through a consumer's password. It is possible for all copyrighted works, by digitization, to be accessible only through the owner's consent. This is unlike books and current analog video tapes, which can be repeatedly viewed with such consent.

One argument that the music, motion picture and publishing industries have made in support of their position is that,

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[129] *E.g.*, *House Hearings*, *supra* note 10, at 204-12 (statement of Allan Adler, vice president for legal and governmental affairs, Assoc. of American Publishers); *e.g.*, *id*. at 271-77 (statement of Mark S. Belinsky, vice president, Copy Protection Group, Macrovision Corporation); e.g., id. at 162-67 (Memorandum of Broadcast Music, Inc.).

[130] Benkler, *supra* note 19, at 422.

[131] *See House Hearings*, *supra* note 264, at 70 (statement of Robert W. Holleyman, II, President and CEO, Business Software Alliance).

without the protection of the anti-circumvention provision, they will not make their works available on the Internet and this would be a great drawback for the public.[132] Because of the large number of works available on the Internet already without the protection of the anti-circumvention provision, it is doubtful that these industries will not continue to make their works available as well as provide more and more works as the Internet grows. Movies are not currently available on the Internet because of the constraints of the technology presently available. Moreover, companies such as DirectTV and Primestar already provide movies digitally via satellite communications without the protection of the anti-circumvention provision. Just as networks have provided movies on television, they will make them available through the Internet in time regardless of the protection of the anti-circumvention provision. Consumers are able to copy movies with videocassette recorders as easily as downloadable movies would be copied.

There will always be the sharing of books, video and music between people. Although some of this is prohibited, much of it is allowed under copyright law. The question is whether the anti-circumvention provision should be available to copyright owners so they can maximize the economic benefit. If so, many of the fair uses under copyright law which are allowed will be eliminated. The sacrifice is that information will not be "free as the air to common use."[133] As with the anti-circumvention provisions, such use will be available only with the consent of the motion picture,

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[132] *See generally House Hearings*, *supra* note 10, at 79 (statement of Jack Valenti, President and CEO, Motion Picture Association of America); *see also id.* at 201 (statement of Hilary B. Rosen, President and CEO, Recording Industry Association of America); *see also id.* at 157 (statement of Allee Willis, songwriter, on behalf of Broadcast Music Inc.).

[133] *See* International News, 248 U.S. at 250.

music and publishing industries. Congress seems to be saying that this sacrifice is worthwhile to assure that the motion picture, music and publishing industries retain as much revenue as possible.

III. COPYRIGHT MANAGEMENT INFORMATION PROVISION

A. Basics of the Copyright Management Information Provision

New section 1202 of the Copyright Act prohibits tampering with copyright management information (CMI). The CMI must be conveyed in connection with copies or phonorecords of a copyrighted work.[134] CMI may constitute any of the following: (1) information that identifies the copyrighted work, including the title of a work, the author, and the copyright owner; (2) information that identifies a performer whose performance is fixed in a work, with certain exceptions; (3) in case of an audiovisual work, information that identifies the writer, performer, or director, with certain exceptions; (4) terms and conditions for use of the work; (5) identifying numbers or symbols that accompany the above information or links to such information, for example, embedded pointers and hypertext links; or (6) other information as the Register of Copyrights may prescribe by regulation, with an exception to protect the privacy of users.[135] Although not stated in the statute, notice of copyright is likely to constitute CMI. It should be noted that the definition of CMI does not include tracking or usage information relating to the identity of users of the

[134] *See* 17 U.S.C. § 1202(c).
[135] *See id*.

works; it only includes that information which is normally associated with a work, such as the author's name and the title of the work. This provision is limited to information conveyed in connection with copies, performances or displays of a work.[136] For example, the provision would not apply to information that may happen to be contained on a piece of paper in a file.

The first paragraph of the CMI provision establishes a general prohibition against knowingly and with the intent to induce, enable, facilitate, or conceal infringement, provide CMI that is false, or distribute or import for distribution CMI that is false.[137] The use of CMI is not mandated, but its use is protected if a person chooses to use it in connection with a copyrighted work. The second paragraph establishes a general prohibition against a person who, without the authority of the copyright owner or the law: (1) intentionally removes or alters any CMI; (2) distributes or imports for distribution CMI knowing that the CMI has been removed or altered without authority of the copyright owner or the law; or (3) distributes, imports for distribution, or publicly performs works, copies of works, or phonorecords, knowing that CMI has been removed or altered without authority of the copyright owner or the law.[138]

B. CMI Used for a Functional Purpose?

The Sega court has disallowed the use of information such as that of CMI for a functional purpose; however, with the new CMI provision copyright owners may be able to use the CMI

[136] *See id*.
[137] 17 U.S.C. § 1202(a).
[138] 17 U.S.C. § 1202(b).

provisions as a security key for such a functional purpose.[139] Sega, the plaintiff, manufactured plug-in game cards for game consoles, which it also manufactured.[140] In order for the game card to operate with the console unit, a certain security code had to be included in the computer program contained on the game card.[141] When the game card is used with the console unit, Sega trademark information is displayed.[142] The security code had to be available in order for the game card to operate, thus it served a functional purpose. In *Sega*, the defendant was not guilty of a copyright violation for copying that part of the code.[143] However, with the CMI provision, the defendant would have been guilty for its violation. A copyright owner could very easily use such technology in a like manner to require CMI to be displayed for the units to function. Persons, such as the defendant, would be unable to copy the key, containing the CMI, without violating section 1202. The danger is that the CMI provision could be used in this manner to obtain a patent-like monopoly under similar circumstances. In light of this, a fair use exception should be specifically provided in section 1202, as in section 1201, in order to protect fair uses as the court found in *Sega*.[144]

C. Privacy Concerns

There is concern that the CMI provision may affect the privacy interests of the consumer. As mentioned previously, cookie

[139] *See* Sega, 977 F.2d at 1531.
[140] *See id*. at 1514.
[141] *See id*. at 1515.
[142] *See id*. at 1515.
[143] *See id*. at 1527.
[144] *See id*. at 1527-28.

files can be used by website managers to accumulate information about a user's habits and personal preferences with regard to Internet use. Currently, without regard to the anti-circumvention provision, nothing prevents an Internet user from erasing this personal information. However, early drafts of the CMI provision contained a very broad definition of CMI, and it was possible that under this definition this was CMI.[145] Therefore, any alteration or removal of such information would have been a violation of the CMI provision. Conscious of this, Congress did provide for an exception to the definition of CMI for "any personally identifying information about a user of a work or of a copy, phonorecord, performance, or display of a work."[146] This exception should allay any privacy concerns with the CMI provision.

D. Limitations on Liability

The DMCA now provides protection and remedies with regard to CMI for all copyrighted works.[147] Moreover, the remedies provided by section 1203 are not limited to copyright owners, but are available to "any person injured by a violation," which arguably includes manufacturers of technological protections that have been circumvented.[148] Now, entities such as radio broadcasters, television broadcasters, cable systems, or someone who provides programming to a broadcaster or system, will not be liable if: (1) avoiding the broadcasting activity that would constitute the violation is not technically feasible or would create an undue financial hardship; and (2) the entity did not intend

[145] *See House Hearings*, *supra* note 10, at 2.
[146] *See* 17 U.S.C. § 1202(c).
[147] *See* 17 U.S.C. § 1203.
[148] *See* 17 U.S.C. § 1203.

to induce, enable, facilitate, or conceal infringement of a copyright.[149]

Additionally, the CMI provision provides for digital transmissions. The provision contemplates voluntary digital transmission standards for the placement of CMI.[150] If a digital transmission standard is established by a voluntary, consensus standard-setting process by a representative cross-section of broadcast or cable system entities, a transmitting entity will not be liable with respect to a third party's placement of CMI that deviates from the standard, provided that the entity does not intend to induce, enable, facilitate, or conceal infringement.[151] This presupposes that a standard will eventually be established. Meanwhile, a transmitting entity will not be liable for violation if the transmission of the CMI would: (1) cause a perceptible visual or aural degradation of the digital signal; or (2) conflict with an applicable government regulation or a certain, applicable industry-wide standard for the digital transmission.[152]

IV. CIVIL REMEDIES AND CRIMINAL PENALTIES

Both civil remedies and criminal penalties can be imposed for violations of Sections 1201 and 1202.[153] Courts have broad powers to grant injunctions and award damages, costs and attorney's fees.[154] Courts may order the impounding, the remedial modification or the destruction of the devices involved in the

[149] *See* 17 U.S.C. § 1202(e)(1).
[150] *See* 17 U.S.C. § 1201(e)(2)(A).
[151] *See id*.
[152] *See* 17 U.S.C. § 1202(e)(2)(B).
[153] *See* 17 U.S.C. §§ 1203 - 1204.
[154] *See* 17 U.S.C. § 1203.

violation.[155] Courts have discretion to decide whether to reduce or remit damage awards against innocent violators.[156] In the case of a nonprofit library, archives or educational institutions, a court shall remit damages if it finds that the entity had no reason to know of the violation.[157] Persons violating section 1201 or 1202 willfully and for commercial advantage or private financial gain may be fined up to $500,000 or imprisoned up to five years, or both, for a first offense.[158] Criminal penalties are inapplicable to nonprofit libraries, archives, and educational institutions.[159] There is a five year statute of limitations for criminal offenses.[160]

V. CONCLUSION

The anti-circumvention and CMI provisions, a part of the DMCA, have been enacted to comply with the treaties signed at the WIPO Diplomatic Conference in December 1996. Additionally, those provisions must comply with the Constitution's requirement that copyright law maximize the creation and distribution of creative works of authorship by rewarding the creators of such works in a manner that also promotes the free distribution of ideas within society.[161] Importantly, the anti-circumvention and CMI provisions must not be used to prevent use of copyright work that would otherwise be fair use.

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[155] *See* 17 U.S.C. § 1203(b).
[156] *See id*.
[157] *See* 17 U.S.C. § 1204(a).
[158] *See id*.
[159] *See* 17 U.S.C. § 1204(b).
[160] *See* 17 U.S.C. § 1204(c).
[161] *See* Twentieth Century, 422 U.S. at 156.

The anti-circumvention provision may be drafted too broadly because of Congress's quest to draft a statute that would be able to anticipate advances in technology. The various exemptions in the provision help to provide better protection for fair use purposes, but in some instances they are drafted too narrowly and have practically no effect at all. Additionally, the fair use exemption may not keep copyright owners from preventing certain fair uses. Fortunately, the Librarian of Congress has been given two years to determine whether persons who are users of copyrighted work are, or are likely to be, adversely affected by this prohibition in their ability to make noninfringing uses. This determination does not include the anti-device provision.

The anti-device provision is questionable because in a practical sense it will prevent the use of copyrighted works that would otherwise be fair use. If a person had a legitimate fair use reason for accessing a work, then nothing in the provision would prevent him or her from doing so. However, the problem is which particular anti-circumvention device the copyright owner employs to prevent circumvention. The device could be designed to respond only to such circumvention devices that have no other substantial use except for circumvention. Thus, no manufacturer would be willing to provide such a device because of liability. The person would be without a means to access the work unless he or she has the technical skills to do so. This will be unlikely in most instances. Congress is better advised to enact specific legislation as problems arise rather than such broad anticipatory legislation.

The lobbying efforts of the motion picture, music and publishing industries seem to have persuaded Congress that gains from providing these industries with a better means to capture revenue from their works will outweigh any detriment to the public

in preventing certain fair uses. However, it seems doubtful that the loss in revenue encountered by not protecting them with the anti-circumvention provision would keep them from providing their works on the Internet and in other digital forms. Perhaps a court will someday be able to determine the constitutionality of such a decision without the influence of lobbying efforts.

The CMI provision stands on much better ground. It provides sufficient requirements and exemptions to prevent copyright owners from abusing the protection. No one will be liable for accidentally removing or altering CMI. The provision excludes personal information about the user of such works from the definition of CMI. Although in the narrow situation of the Sega case, a manufacturer may try to use CMI to protect the functional part of the work, it is likely a court will not find such a defendant liable because there will be no protection in facts, ideas, or processes contained in a copyrighted work.