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Thinking Outside the Pandora's Box: Why the DMCA is Unconsitutional Under Article I, § 8 of the U.S. Constitution

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ESSAY

THINKING OUTSIDE THE PANDORA'S BOX: WHY THE DMCA IS UNCONSTITUTIONAL UNDER ARTICLE I, § 8 OF THE U.S. CONSTITUTION

Joshua Schwartz*

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I.	INTRODUCTION
	A. The Sky Is Not Falling
	B. Breakdown of DMCA 98
II.	Constitutionality of the DMCA
	A. History of the Constitutional Issues Raised in
	Copyright Cases
	B. Limited Monopoly 103
	C. Other Constitutional Challenges in Intellectual
	<i>Property Law</i>
	D. Ideal Litigants for Challenging the
	Constitutionality of the DMCA
	E. Whom to Target in a Litigation Campaign
III.	Current Status of the Law
	A. The DMCA Threatens to Overturn Well Established Case
	<i>Law in</i> Sony
	1. First Exception: Congressional Intent did not Favor
	Banning Copying
	2. The Key Sony Exception: Substantial
	Non-Infringing Use
	3. Timeshifting
	B. Universal City Studios v. Corley
	C. 321 Studios v. Metro Goldwyn Mayer Studios, Inc 109
	D. Eldred v. Ashcroft

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	1. Justice Stevens's Dissent1122. Justice Breyer's Dissent112E. Dastar Corp. v. Twentieth Century Fox Film113F. RIAA v. Diamond Multimedia Systems Inc.113G. Lexmark v. Static Control114H. Relevant Legislative History1161. The Senate Report1162. The House Report119
IV.	THE DMCA IS BEATING DOWN YOUR DOOR
V.	HINDERING OF TECHNOLOGY 121 A. Digital is Here to Stay, So We Need to Guarantee a 121 Way to Work with the New Media, Not Hinder It 121 B. Overbroadness of the Act 122 C. How a Law like the DMCA, If Enacted Previously, Would 120 Have Hindered Development That Has 120
	Benefitted Society 123 D. Photocopying Would Not Have Become as 124 E. Specific Types of Technology Hindered by the DMCA 125 1. High-Capacity Multimedia Content Players 125 2. New Formats and Their Associated Hardware 125 3. There Are Current Mass Storage Devices That 127 4. Prohibiting the Software Also Prevents Fair Use and 128 5. Effects of Banning this Whole Area of 129 6. Other Technology Affected by the DMCA 129 7. The DMCA is Overbroad in That it Prohibits the 129 7. The DMCA is Overbroad in That it Prohibits the 130 a. Macrovision 130 b. High-End Audio/Visual Equipment 130
VI.	HINDERING DEVELOPMENT OF PRIMARY TECHNOLOGY WILL ALSO HINDER THE DEVELOPMENT OF ENHANCEMENT PRODUCTS A. The DMCA Allows Unwanted Goods and Services to be Forced Upon Consumers 134

THINKING OUTSIDE THE PANDORA'S BOX: WHY THE DMCA IS UNCONSTITUTIONAL 95
B. The DMCA Condones "Big Brother"-Type Acts,
Including Practices That Would
Otherwise be Wiretapping 136
C. The Entertainment Industry is Given to Engage in all
Types of Bad Faith Business Practices, All in the
Name of Protecting "Access to" and
"Copying of" Works
Fair Use is Quickly Being
ERADICATED BY THE DMCA 138
A. The DMCA Effectively Eradicates Fair Use
B. Fair Use is a Legal Fiction
C. The DMCA can be Abused by Copyright Holders Who
Use Technology to Prevent Copying Access to Works
Just Before They Enter the Public Domain
D. The DMCA Allows Copyright Holders to Dictate
What the Fair Use of Their Product Will Be
E. The DMCA Makes No Sort of Mr. Rogers Exception 143
F. The Commercially Significant Exception
Rings Hollow 145
BUILDING THE PERFECT LITIGANT OR THE SEARCH FOR THE
HOLY DIGITAL GRAIL
Solutions
A. We Can Build a Better Box 149
B. ROM vs. RAM
C. Clearinghouses and Fees 150
D. Internet Copy Solutions 151
Conclusion

I. INTRODUCTION

A. The Sky Is Not Falling

In 1998 Congress passed the Digital Millennium Copyright Act (DMCA) in response to perceived evils unleashed upon copyright holders by the advent of affordable digital technology allowing consumers to make perfect serial copies of works encoded in digital media with little difficulty

and little cost.¹ A panicked entertainment industry convinced Congress that, unless a new law was passed to prevent this sort of copying,² it would be the end of the entertainment industry as we know it. Industry members claimed that, without broad protection outlawing new copying technologies, illegal copies would be freely traded with little to no control. They painted a picture of a world where digital copying technology was the evil inside Pandora's Box and was starting to get out. They believed it had to be stopped before those evils were fully unleashed and could never be contained.

In response to these concerns, Congress passed the overly comprehensive DMCA to decisively close the lid on that box and keep all digital copying technologies locked up so that new technology would never foster its evil upon the poor and innocent copyright holders.³ In doing so, however, Congress unleashed a far greater evil: the DMCA itself. The DMCA is an unconstitutional law that violates Article I, § 8 of the U.S. Constitution⁴ in that the DMCA: (1) allows copyright holders to prevent the public from ever copying a work, which is in direct contravention of the limited times provision of that article;⁵ and (2) hinders the progress of the sciences and useful arts of copying and storage technology which is also in direct contravention of the same section. The DMCA also has the additional effect of shrinking and practically eliminating fair use which is a hallmark of copyright law, by eliminating many of the innovative technological means by which fair use copies may be made.

This is not to say that the DMCA goal of stopping infringement should not be undertaken. Infringement is wrong and Congress should take reasonable means to prevent it. While this statute has a reasonable stated purpose, its extreme overbroadness is simply a knee-jerk reaction. Rather than target the small subsection of copying that is infringement, it targets all copying.

The DMCA rolls back advancements in fair use that have arisen over the past century.⁶ Congress chose to focus on the problems that come with new technology rather than embrace the fact that new technology also

^{1. 17} U.S.C. § 1201 (2004).

^{2.} Witness testimony, To Amend Title 17, United States Code, To Implement the World Intellectual Property Organization Copyright Treaty and Performances and Phonograms Treaty: Hearing on H.R. 2281 Before the House Comm. On the Judiciary, 105th Cong. 551 (1997).

^{3.} H.R. REP. NO. 105-551, at 10 (1999).

^{4.} U.S. CONST. art. I, § 8, cl. 8 (the Copyright Clause).

^{5.} The Copyright Clause states that Congress shall have the power, "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST. art. I, § 8, cl. 8.

^{6. 17} U.S.C. § 1201.

comes with many advantages, such as giving citizens access to make fair use copies in a way they never could before. The legislation's attitude reads like "out with the new, in with the old." The DMCA illustrates the mistaken notion that by prohibiting all practical digital copying it puts Pandora's evils back into the box. Opponents of this legislation should turn to the courts to repeal this law, since Congress does not appear to be doing so any time soon. When considering legal action, however, opponents of the DMCA should bear in mind that most of the major previous constitutional challenges to the DMCA have been unsuccessful.

In order to attack the DMCA successfully, future lawsuits should frame the issue clearly and convincingly with the proper litigants. Lawyers must persuade courts to think outside the confines of the Pandora's Box mentality. Litigants must remind the courts that, while a less comprehensive statutory system than the DMCA may not be perfect, the alternative of trying to stop all copying is not realistic. At the same time, new innovative copying technologies do have the potential for abuse. If the DMCA is struck down or revised and fair use copying in digital media is restored, some people will find a way to abuse that fair use. This does not mean, however, that encouraging innovation in the new technologies and fair use copying within those technologies are not worthy goals.

There will always be members of society who will engage in infringing uses. There will always be hackers and others who will find a way to get around technological safeguards. Nonetheless, infringers represent a small segment of society. That segment does not justify the sort of panic legislation under which we now live. There is an old adage: "If you build a better mousetrap, they will beat a path to your door." There also is a variation of that adage: "If you build a better mousetrap, they will build a better mouse." In other words, no matter how good the digital protection, someone will circumvent it.

Even with the DMCA and the technological protections that it breathes legal life into, many of those same infringers will continue to get away with this behavior. The DMCA will have no effect on them, but the DMCA has the deleterious effect of hindering the development of innovative copying technologies and digital media storage units (e.g. larger multimedia hard drives, MP3 players, and computer video players to name a few), both of which can be used in a fair use capacity unless these technologies can now meet the new facetious standard of being a "household device."

This Article will address the foregoing issues with respect to the DMCA. With fewer and fewer movies and CDs being released in nondigital format each year, where can consumers get audio visual works that do not fall under the DMCA? Except for the most ardent Luddites, all will be affected by the overreaching powers of this act.

For the purposes of this Article, I have chosen to use the term "entertainment producers" to describe copyright holders, as well as those actors in the market that actually produce the physical copy of the entertainment product. Often, those two groups are one and the same.

B. Breakdown of DMCA

None of the individual sections of the DMCA state that they prohibit the act of copyright infringement.⁷ Nowhere in the list of the DMCA's "violations" or "additional violations," is something akin to "if a person without fair use rights in a particular work circumvents technological protections on *that work*, then in doing so, that person makes an infringing copy of the work." Nowhere is the word infringement used. In fact, the Act does not require that the work whose protection you circumvented is a work that, in and of itself, is entitled to copyright protection.⁸ The Act only prohibits trafficking in technology that can be used to circumvent technology that can protect a copyrighted work.⁹ You need not use the technology for an infringing purpose, the technology must merely have the potential for an infringing use. This overbroadness can create far-reaching problems.

As long as a movie studio protects a public domain work with the same technology that they use to protect copyrighted works, any technology which would allow someone to make a copy of that particular public domain work (from its digital format) would be illegal under the DMCA because that same technology also has the capability to make a copy of "a"¹⁰ work protected by copyright. This creates a huge incentive for entertainment producers to use complex technological safeguards to lock up all of their movies within the public domain. In fact, it behooves a studio to re-press movies and CDs with the latest protection just prior to that work's entrance into the public domain. If entertainment producers play their cards right, they can actually use the provisions within the DMCA to lock up works that are in the public domain regardless of lower federal court rulings and a statement by the register of copyrights that such locking up cannot possibly occur in reality.

^{7.} Id.

^{8.} Id.

^{9.} Id.

^{10.} Id. § 1201(a)(1)(A) (emphasis added) ("No person shall circumvent a technological measure that effectively controls access to *a* work protected under this title.").

At first glance, section 1201 reads as if it only covers copying technologies applied to works that are under a copyright.¹¹ In other words, it seems that you would not be violating the statute if you circumvented the technology used to lock up access to or copying of, a work well within the public domain. This would, however, be incorrect. The statute is actually much more powerful than that and, in practice, is neutral in regard to whether the specific work to which access and copying are locked up is protected by copyright or not. The language in section 1201 actually extends DMCA protection to works unprotected by copyright.¹² Works unprotected by copyright become protect at least one other work that is copyrighted.¹³

The DMCA uses language that allows a broad interpretation as to what constitutes a banned technology and all the means in which it is banned from entering the stream of commerce. All three key sections¹⁴ of the DMCA addressing this point, circumvention technology, echo the same basic language. They state that "No person shall [sell or other related entry in the stream of commerce] . . . any technology that circumvents *a* technological measure that protects *a work* (or controls access to a work) protected under this title."¹⁵ The sections use the phrase "*a* work," not "*the*

. . . .

. . . .

(A)(1)(A) No person shall circumvent a technological measure that effectively controls access to a work protected under this title. The prohibition contained in the preceding sentence shall take effect at the end of the 2-year period beginning on the date of the enactment of this chapter.

(2) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that _____

(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under this title; [or]

(B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title.

(B)(1) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that —

^{11. 17} U.S.C. § 1201(a)(1)(A).

^{12.} Id. §§ 1201(a)(1)(A), (b)(1)(A), (d)(1)(A), (i)(1)(A).

^{13.} *Id*.

^{14.} Id. §§ 1201(a)(1)(A), (a)(2)(A), (b).

^{15.} Section 1201, in relevant part, states:

work," connoting that as long as the technological protection is being used to protect at least one work that is copyrightable, you cannot traffic in circumvention means that attack that protection.

It is in this regard that the DMCA is out of place with the rest of title 17. Before now, violations of a copyright existed in the form of infringement.¹⁶ In other words, you could only violate someone's copyright by infringing upon it. The DMCA adds a completely new class of violation that seems at odds with copyright as a legal principle. You can now have a copyright violation even though there is no infringement. The leading DMCA cases did not turn on issues of actual infringement at all, rather they tended to be actions for declaratory judgment under the trafficking provisions of the Act.

A copyright, by its very nature, invests its owner with some measure of legal right to control the who, what, when, why, and how the copying of their work takes place. The DMCA creates a new type of copyright without calling this right a copyright. The DMCA creates a pseudocopyright for works whose original type of copyright (a true copyright under sections 106, 106A) may not even exist. The DMCA does this by controlling the means to make copies. The DMCA prevents trafficking in the technology, the means by which access and copying is achieved to reach the end, or a copy. While the end may still be legal, without the means to get there, the end becomes meaningless.

By controlling access to the means of copying, the producer of the work in its digital format completely controls whether or not the consumer can actually make a copy. Thus, the producer now has the final say as to whether the consumer can exercise their fair use legal rights. The producer completely controls a consumer's ability to use the copyrighted work. The DMCA creates a practically unlimited de facto copyright for entertainment producers (DF-Copyright). This de facto copyright allows them to control copying of the work even though: (1) there is no legal infringement of the true copyright that applies to the work; or (2) when the work is not even eligible for a true copyright.

⁽A) is primarily designed or produced for the purpose of circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof;

⁽B) has only limited commercially significant purpose or use other than to circumvent portion afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof.

Id. § 1201.

^{16. 17} U.S.C. § 501 (2004).

II. CONSTITUTIONALITY OF THE DMCA

A. History of the Constitutional Issues Raised in Copyright Cases

The U.S. Supreme Court has yet to address a case where the legal question at issue implicates the constitutionality of the DMCA.¹⁷ However the unconstitutionality of the DMCA has been argued unsuccessfully both in the federal district courts and federal appellate courts.¹⁸ The majority of the constitutional arguments focused on the First Amendment and argued that the DMCA unfairly restrains free speech. As of this date, there is no split among the circuits regarding the constitutionality of the Act. The lower courts ruled in favor of the entertainment producers.

The charge to convince a federal court of the DMCA's unconstitutionality on First Amendment grounds has been woefully unsuccessful. A likely reason for the lack of success is that, in the past, federal courts, including the U.S. Supreme Court, have managed to strike a careful balance between copyright and the First Amendment. These courts have ruled, whenever possible, that copyright statutes do not trample on the First Amendment.¹⁹

Constitutional arguments regarding the limited times provision with respect to copyright argument has recently been brought before the U.S. Supreme Court in a non-DMCA case, and also before the lower courts in DMCA cases.²⁰ In all of those cases, the courts favored constitutionality and held for the entertainment producers.²¹ Luckily, for similarly situated future litigants the cases upholding the constitutionality of the DMCA are lower appellate court cases. The U.S. Supreme Court has yet to rule on the constitutional validity of the statute.

Since there does not seem to be a split among the circuits, as to the First Amendment constitutionality of the DMCA, it is unlikely that the U.S. Supreme Court would grant certiorari in any of those types of cases and rule against the lower courts on the First Amendment issues. It is also unlikely that any new attacks along these First Amendment lines would meet with any greater success than they have so far.

2005]

^{17.} The U.S. Supreme Court recently decided to hear a case that involves the safe harbor provisions of the DMCA, and deals primarily with file sharing and piracy. *See* MGM Studios, Inc. v. Grokster Ltd., 380 F.3d 1154 (9th Cir.), *cert. granted*, 125 S. Ct. 686 (2004).

^{18.} Universal City Studios, Inc. v. Corley, 273 F.3d 429, 436 (2d Cir. 2001); United States v. Elcom Ltd., 203 F. Supp. 2d 1111 (N.D. Cal. 2002).

^{19.} Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 576 (1994).

^{20.} Eldred v. Ashcroft, 537 U.S. 186 (2003).

^{21.} Id.

Therefore, a litigant who wants to get the U.S. Supreme Court to take an interest in their case and hopefully hold the DMCA unconstitutional, in whole or part, must give the Court a new constitutional issue to discern. They must frame a constitutional issue the U.S. Supreme Court has not seen or addressed before in the realm of copyright.

For the last 125 years, the U.S. Supreme Court has not declared a federal intellectual property statute unconstitutional. No such ruling has come forth since the time of the *Trademark Cases*.²² However, that is not to say that this cannot change or that the federal intellectual property statutes should be held inviolate above all. The U.S. Supreme Court exists to interpret the laws and, by that very nature, discern the constitutional limits of the law.

A logical place to begin framing this argument is with the patent and copyright clause which sets forth the constitutional mandate for the intellectual property laws. Then, one must contend that the DMCA is unconstitutional because Congress exceeded its authority under that clause when it enacted the DMCA. The clause's mandate requires that any laws passed under it promote the sciences. The DMCA is unconstitutional because it is inconsistent with that very mandate. For that matter, any statute contrary to that purpose would be unconstitutional. The patent and copyright laws share their genesis in that same constitutional clause.²³ That clause makes the same requirements of the laws which stem from it, regardless of whether they are patent or copyright based. In *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,²⁴ Justice Kennedy, writing for a unanimous court interpreting the purpose of the patent laws, stated:

The patent laws "promote the Progress of Science and useful Arts" by rewarding innovation with a temporary monopoly. U.S. Const., Art. I, § 8, cl. 8. The monopoly is a property right; and like any property right, its boundaries should be clear. This clarity is essential to promote progress, because it enables efficient investment in innovation.²⁵

That statement requires that the laws passed by Congress must "promote the progress of science." The DMCA does not further this purpose. It fails to promote the progress of science and the arts by hindering the development and innovation in digital copying technology, as well as digital storage technology, thus slowing down a particular area

^{22.} In re Trade-Mark Cases, 100 U.S. 82, (10 Otto) 82 (1879).

^{23.} U.S. CONST. art. I, § 8, cl. 8.

^{24. 535} U.S. 722, 730-31 (2002).

^{25.} Id. at 731.

of science. Consequently, the DMCA is in direct contravention of the patent and copyright clause's promotion requirement.

The Act further runs afoul of that same constitutional provision by proscribing and eliminating the means of fair use copying preventing the actual copying of works that are in the public domain. This is unconstitutional because material in the public domain is, by its nature, material that is past its "limited times" and cannot be protected. By preventing works from being accessible for fair use once in the public domain, Congress has, in effect, granted an indefinite copyright.

B. Limited Monopoly

The purpose of the limited times provision of Article I, § 8 and the federal intellectual property laws that stem from it, is to strike a perfect balance between the privatization of ideas and their availability to the public.²⁶ The government grants creators a limited monopoly over their idea or invention to encourage them to develop such ideas, with the understanding that the idea will eventually pass into the public domain.²⁷ Any scheme that frustrates such passage runs contrary to the purpose of the intellectual property scheme.²⁸ The DMCA frustrates that purpose. Under the DMCA, the notion of a public domain for works that exist in a protected digital format is a legal fiction. While the work technically may, on paper, become part of that which belongs to the public, the public unfortunately lacks any real means in which to harness the reality of that work being in the public domain. In other words, the work may be in the public domain, but there are no means by which to access and make copies of that work.

A scheme which only permits access to lesser technology that only makes an inexact,²⁹ imperfect, and therefore flawed copy of a digital work can be compared to a scheme affecting photocopiers. It would be like saying that because all photocopiers have the ability to make a clean

28.

The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved. It is intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control has expired.

Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984).

29. 321 Studios v. Metro Goldwyn Mayer Studios, Inc., 307 F. Supp. 2d 1085 (N.D. Cal. 2004).

^{26.} Id.

^{27.} Id.

perfect copy of a copyrighted book, photocopiers can only be manufactured if they make grainy low-grade copies or inserted a prominent watermark saying "this is a copy" on all copies made.

As all media move towards digital formats, the DMCA allows entertainment producers to use technology to turn fair use into a legal fiction by either completely prohibiting copying or, at best, imposing lowgrade copies that may be "fair" to make but no one could or would practically "use." This alone may get the U.S. Supreme Court to take a special interest, because drastically restricting fair use would render all of their opinions in the area of fair use null and void. The U.S. Supreme Court will likely have a strong desire to preserve what is some of their strongest jurisprudence in the area of copyright law.

C. Other Constitutional Challenges in Intellectual Property Law

Outside of the First Amendment challenges to the intellectual property laws, the other main challenges to the constitutionality of intellectual property statutes have primarily been addressed in the context of the Supremacy Clause with respect to state intellectual property rights.³⁰ This is an area that has been well covered by the courts, and this type of constitutional challenge is inapplicable in a DMCA context at the moment.

D. Ideal Litigants for Challenging the Constitutionality of the DMCA

An ideal litigant or group of litigants would be those parties who develop the science of copying technology. Specifically, someone who makes legitimate technology that needs to circumvent digital protections so consumers can use that manufacturer's legitimate product. These litigants would be hardware manufacturers and related components suppliers who specialize in developing high capacity storage units for multimedia that is converted from its original format³¹ (e.g. Compact Discs (CDs) and Digital Versatile Discs (DVDs)).³² It has long been hypothesized that in the end, the major battles regarding the constitutionality of the DMCA would pit the entertainment industry against hardware and software manufacturers. This is because hardware and software manufacturers have the deep pockets to take on the entertainment industry. Additionally, they have an incentive to wage this war because it is their pocketbooks that are being hurt by the DMCA. They must make the case that innovation in their industry is being hurt by the DMCA.

^{30.} Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 168 (1989).

^{31.} Devices such as MP3 players with storage capacities in excess of five gigabytes.

^{32.} Digital Video Discs.

after millions of dollars are invested in that technology, turns the DMCA into the proverbial "Sword of Damocles" just waiting to fall. They need to argue that the Act lowers demand for their products and that they are not willing to invest as much money in research and development (R&D) of multimedia technologies in the post-DMCA world.

The Court needs to hear from a new type of disaffected plaintiff. A past history of recent litigation under the DMCA shows that the major plaintiffs in the litigation to this point have been entertainment producers.

E. Whom to Target in a Litigation Campaign³³

A litigation campaign with deep pockets on both sides is likely to be fought all the way up to the highest court, therefore litigants must tailor their strategy with that end goal in mind. They must develop strategies designed to appeal specifically to the U.S. Supreme Court Justices.

There must be at least one Justice who is champing at the bit for the opportunity to write the definitive case setting forth the modern U.S. Supreme Court stance on the constitutionality of the federal intellectual property scheme. American Jurisprudence teaches us that no right is absolute and that there are constitutional limits to all areas of the law. Striking down the DMCA provides a unique opportunity for a Justice to make his or her mark by defining exactly what those limits are in this area of the law, and to be the first justice in over 125 years to write an opinion placing constitutional limits in this area of the law. A good place to look for that Justice is at recent U.S. Supreme Court copyright decisions. Arguments should be tailored to specific Justices likely to be sympathetic to the notion that the DMCA is unconstitutional in its overbreadth. Dissenting Justices' opinions provide good insight into the types of challenges to laws that were discussed during consideration of the case. A good place to look is at the relevant recent case law, such as the dissents of Justices Stevens and Breyer in Eldred v. Ashcroft.³⁴

III. CURRENT STATUS OF THE LAW

A. The DMCA Threatens to Overturn Well Established Case Law in Sony

If the recent trend of interpreting cases under the DMCA in favor of entertainment producers continues, this may serve to eventually overturn

^{33.} In other words, which Justices to target.

^{34. 537} U.S. 186 (2003).

the landmark ruling in *Sony Corp. v. Universal City Studios, Inc.*³⁵ *Sony* dealt with issues of fair use copying of home television broadcasts onto video tape cassettes.³⁶ *Sony* specifically addressed the technological means to engage in this fair use.³⁷ This technology manifested itself in the form of a video tape recorder (VTR),³⁸ more commonly referred to today as a VCR. The *Sony* opinion states that it is only effective in the absence of legislative intent with respect to copying means. "In a case like this, in which Congress has not plainly marked our course, we must be circumspect in construing the scope of rights created by a legislative enactment which never contemplated such a calculus of interests."³⁹

With the words "in a case like this, in which Congress has not plainly marked our course,"⁴⁰ the *Sony* Court left the door open for Congress to legislatively overrule it. The DMCA is a "plain marking." On its face, the DMCA seems to specifically address *Sony* since it addresses the copying capabilities of "analog videocassette recorders,"⁴¹ mandating that Macrovision®⁴² copy protection be integrated into them to deal with illegal copying issues, including those relating to digital TV broadcasts.

Even without the above exception, the DMCA is a legislative act, and should theoretically trump the ruling in *Sony*. This is especially true since the DMCA was drafted well after the *Sony* ruling, and thus likely contemplated *Sony* while it was being drafted. The *Sony* opinion does not claim that its fair use exceptions are constitutionally protected, therefore it would seem that they can be legislated around.

Sony set up certain fair use exceptions which the entertainment industry likely viewed as inconvenient loopholes. The DMCA closes up those loopholes while paying lip service to the fair use relief that was provided by Sony. Sony carved out certain exceptions, or loopholes, for fair use, and the DMCA came along and seems to have carved out Sony entirely. Sony's specific elaboration of each exception under the fair use doctrine provided a blueprint to Congress to eliminate those exceptions when they drafted the DMCA. As a result, today's courts will be hard pressed to claim Congress has not expressly spoken on this issue.

40. *Id.* at 431.

41. 17 U.S.C. § 1201(k)(1)(A)(i) (2004).

42. Macrovision is a copy guard technology that scrambles a video signal when connected to a recording device.

^{35. 464} U.S. 417 (1984).

^{36.} Id. at 419.

^{37.} Id. at 423, 425.

^{38.} While Sony involved a Betamax machine, Sony referred to both Betamax and VHS machines as VTRs.

^{39.} Sony, 464 U.S. at 432.

1. First Exception: Congressional Intent did not Favor Banning Copying

The Sony Court discerned when Congress addressed the issue of new technology in existence at the time the Sound Recording Act of 1971,⁴³ Congress still did not choose to outlaw home copying. Congress had addressed the issue of piracy with the then-existing technology, and did not proscribe home audio or videotaping of broadcasts.

The DMCA can be read to close this loophole in that the DMCA was specifically passed to prevent digital piracy and Congress explicitly chose to proscribe entire types of technology. Congress had a chance to speak on the issue of piracy by new technology, and unlike the previous Act addressed in *Sony*, Congress was not silent on this point.⁴⁴

The Court noted in *Sony*: "The judiciary's reluctance to expand the protections afforded by the copyright without explicit legislative intent is a *recurring* theme."⁴⁵ With the DMCA there is no murky issue of trying to discern congressional intent. Congressional intent is quite clear in the DMCA. However, even the U.S. Supreme Court in *Sony* could not legally grant Congress license to pass an unconstitutional statute.

2. The Key Sony Exception: Substantial Non-Infringing Use

The *Sony* Court then went on to establish the key part of its ruling, which was as long as a piece of technology had a "substantial non-infringing use,"⁴⁶ the technology would not be considered a technology that made the manufacturer a contributory infringer.⁴⁷ Allowing this loophole for types of technology protected the ability of manufacturers to scientifically develop new technology that could increase fair use.

The DMCA closes that loophole by eliminating any trafficking and copying technology that is primarily designed to circumvent a copy protection control for "a" protected work. The DMCA seems to imply that, in theory, since the technological protection's only true purpose is to stop infringement, technology designed to circumvent that infringement protection could not have a substantial non-infringing purpose. The DMCA makes no exception with respect to whether the technology would be put to substantially, or even exclusively, non-infringing uses. This particular loophole closing seems at odds with the rest of the copyright scheme. Even if someone were to traffic in a technology that was careful

^{43.} Sound Recording Act of 1971, Pub. L. No. 92, 85 Stat. 391, 3140 (amended 1971).

^{44.} H.R. REP. NO. 105-551, at 10 (1998).

^{45.} Sony, 464 U.S. at 431 (emphasis added).

^{46.} Id. at 440.

^{47.} Id.

not to infringe a copyright it would still be illegal under the copyright laws.

Therefore you can be found not liable of infringement under *Sony* because there is no copyright infringement by your product, but trafficking it is still illegal. The *Sony* Court stated that they need not look at "all of an article's [technology's]"⁴⁸ uses. With the DMCA, they need not even look at a single one.

The *Sony* Court decidedly points out that the Copyright Act itself (pre-DMCA) still gives the copyright owner an "arsenal of remedies" against infringers, such as injunctive relief and destruction of infringing copies.⁴⁹ The DMCA is a knee jerk reaction that looks right past the available arsenal.

3. Timeshifting

Sony carves out an exception for the timeshifting of TV broadcasts.⁵⁰ The DMCA even seems to eliminate this. The DMCA addresses copy controls for broadcast TV and only proscribes two types of copy control. However, the entertainment industry can still use other types of controls which can eliminate any timeshifting at all. While the DMCA does not prohibit timeshifting itself, it does proscribe circumventing all but two copy controls that would prevent timeshifting of a protected broadcast.

There are some dangers in relying on *Sony's* basic principles to fight the DMCA. Not only did *Sony* leave the door open for later legislative direction in this area, but *Sony*, in dicta, also states "[r]epeatedly as new developments have occurred in this country, it has been the Congress that has fashioned the new rules that new technology made necessary."⁵¹ This unequivocally implies that the Court was willing to defer to Congress with regards to restricting new technologies. How the current Justices would address that point is uncertain.

B. Universal City Studios v. Corley

In Universal City Studios v. Corley,⁵² a suit brought by eight motion picture studios (and not even one private citizen copyright holder), plaintiffs sued a consumer who cracked the Content Scrambling System for DVDs and reverse engineered a program that would allow users to play

52. 273 F.3d 429 (2d Cir. 2001).

^{48.} Id. at 442.

^{49.} Id. at 433.

^{50.} Sony, 464 U.S. at 456.

^{51.} Id. at 430-31.

DVDs on systems using the Linux operating system. The Defendant argued that he was specifically exempted by the DMCA exception that allows reverse engineering for computer system interoperability. However the Second Circuit held that this defense was not good enough because the same technology could be used by a non-Linux user to circumvent technological copyright protections. The technology had the possibility of being misused with respect to a protected work, so the circuit court held that the technology was proscribed.⁵³

The *Corley* court's bottom line was, if technology falls under a DMCA exception and has the added effect of circumventing a technological measure, then two provisions of the DMCA are in conflict, and preventing the violation under § 1201(a) takes priority.⁵⁴ If the possibility of a violation always trumps an exception, then in reality this nullifies the purpose of the exception existing in the first place. Exceptions in statutes only exist for what would otherwise be a violation of the statute. There should not be any balancing test engaged in by the courts as to whether the exception is justified. Clearly, exceptions are presumptively justified in statutes, or Congress would not insert them in the first place.

The Second Circuit construed the DMCA in a manner consistent with the "Pandora's Box thinking" that led to the DMCA in the first place. The Court seemed to want to close the box so quickly they even prevented Corley from telling other people how to circumvent, as if knowledge is the word that cannot be spoken, like Rumplestiltskin's name.

Judicial interpretation of this type creates a minimum burden of proof on the part of the entertainment industry when bringing an action under the DMCA. All substantial uses of the technology, even non-infringing, no matter how beneficial to society, can be defeated if there is but one copyrighted work being protected by the measure being circumvented.

C. 321 Studios v. Metro Goldwyn Mayer Studios, Inc.

In 321 Studios v. Metro Goldwyn Mayer Studios, Inc.,⁵⁵ a software manufacturer of a product called DVD X-Copy sued for a declaratory judgment stating that its product did not violate the DMCA.⁵⁶ The district court in this case held that the product violated the DMCA.⁵⁷ Judge Illston quoted the DMCA, specifically 17 U.S.C. § 1201(a)(2), and emphasized the word "part." In the district court's estimation, this expansive reading

^{53.} Id.

^{54.} Id.

^{55. 307} F. Supp. 2d 1085 (N.D. Cal. 2004).

^{56.} Id. at 1089.

^{57.} Id. at 1105.

meant, if a much larger piece of technology contains any aspect that may be designed for copy protection circumvention then the entire piece of technology is proscribed.⁵⁸

The district court then went on to agree with the extreme reasoning from *Corley*, that somehow the right to copy does not guarantee the right to make a good quality copy.⁵⁹ The district court quoted that there was no right to make an "optimum copy."⁶⁰ This reasoning, in and of itself, is flawed because nowhere in title 17 does it restrict fair use to lesser quality copies, nor logically would a consumer want to make an imperfect copy of their legitimately owned work.

The district court also stated that fair use was not hindered by the DMCA because non-digital copying means were available.⁶¹ Here it seemed that the district court misunderstood the reality of non-digital copies. Not only are non-digital copies of DVDs not "optimum," they are of extremely poor quality. The only non-digital methods available are either:

- 1. Making a copy which is automatically altered by the automatic gain copy control on a DVDs which causes a constant brightness fluctuation in the picture, much like someone sitting in front of an older television, and moving the brightness knob from one extreme to the other non-stop: or
- 2. Place a video camera in front of the TV and tape what is being broadcast. That creates a copy with a great deal of glare and distortion in the final product.

Another hypothetical option for fair use, according to the district court, was for consumers to acquire non-CSS encrypted DVD versions of a movie or non-digital versions of the work, such as videotapes.⁶² However, the reality is that most new movies are not being released on VHS because DVD players enjoy a great deal of market penetration and DVD sales are in far higher demand. DVDs made up almost half of the eight hundred million units of entertainment recordings shipped last year alone.⁶³ The comment about consumers acquiring access to non-CSS encrypted DVDs of movies conjures up memories of the movie "My Cousin Vinny," when

^{58.} Id.

^{59.} Id. at 1101.

^{60. 321} Studios, 307 F. Supp. 2d at 1102.

^{61.} Id.

^{62.} Id.

^{63.} The Recording Industry Association of America's 2003 Yearend Statistics, available at http://www.riaa.com/news/newsletter/pdf/2003yearEnd.pdf (last visited Mar. 9, 2005).

Joe Pesci (Vinny) is questioning Maury Chaykin about his grits, which based on his testimony, must have cooked at an alarming rate.⁶⁴

With all due respect to the 321 court, such unencrypted copies of DVDs are not available to the average consumer, nor should a consumer be required to pay for another copy of the work. How does that solution allow you to make a fair use copy of the work you have already bought? Fair use means that you have a right to make a copy of what you have already paid for, not the right to copy something else for a fee. In theory, there exists non-CSS encrypted versions, such as master recording copies, but they are held by the entertainment producers, and it is unlikely that they will provide a copy on request to everyone who wants to make a fair use copy.

Judge Illston, much like Judge Whyte in *Remeirdes*, and the Second Circuit reviewing Judge Whyte in *Corley*, seems to cling to the legal fiction that somehow the DMCA struck a balance with the public by protecting fair use.⁶⁵

D. Eldred v. Ashcroft

On January 15, 2003, the U.S. Supreme Court decided the case of *Eldred v. Ashcroft*,⁶⁶ which addressed the Bono Amendment to title 17, also known as the 1998 Copyright Term Extension Act (CTEA), which extended by twenty years copyright terms for existing copyrights. Opponents attacked the amendment on the grounds it was unconstitutional because it exceeded Congress's authority under the limited times provision of Article I, § 8 of the U.S. Constitution. This case, the first major copyright case heard by the U.S. Supreme Court since the enactment of the DMCA, shed light on how the high court might interpret the fair use issue in the post DMCA world. In *Eldred*, the high court deferred to recent legislative changes to the scheme of copyright law specifically designed to address the changing technologies at play. Justice Ginsburg writing for a 7-2 majority stated:

In addition to international concerns, Congress passed the CTEA in light of demographic, economic, and technological changes, Brief for Respondent 25–26, 33, and nn. 23 and 24,14 and rationally credited projections that longer terms would encourage copyright holders to invest in the restoration and public distribution of their

^{64.} MY COUSIN VINNY (Twentieth Century Fox 1992) ("[Would I] get this [Non-CSS encrypted DVD] from the same guy who sold Jack his Magic Beans?").

^{65. 321} Studios, 307 F. Supp. 2d at 1102.

^{66.} Eldred v. Ashcroft, 537 U.S. 186 (2003).

works, *id.*, at 34–37; see H. R. Rep. No. 105–452, p. 4 (1998) (term extension "provide[s] copyright owners generally with the incentive to restore older works and further disseminate them to the public"). In sum, we find that the CTEA is a rational enactment; we are not at liberty to second-guess Congressional determinations and policy judgments of this order, however debatable or arguably unwise they may be. Accordingly, we cannot conclude that the CTEA which continues the unbroken Congressional practice of treating future and existing copyrights in parity for term extension purposes is an impermissible exercise of Congress' power under the Copyright Clause.⁶⁷

1. Justice Stevens's Dissent

Justices Stevens and Breyer dissented.⁶⁸ Justice Stevens dissented on the grounds that Congress could not create a statute giving creators a greater right without giving something back to the public in exchange.⁶⁹ He further stated that copyright fair use has always been a balancing between competing private and public interests.⁷⁰ Stevens believed, in the case of the CTEA (and the DMCA), more weight was given to the private side without giving something of equal value to the public in return to maintain the balance. Justice Stevens's dissent quoted *Graham v. John Deere*⁷¹ for the principle stating Congress may not grant patents which would take away creative material properly in the public domain. As patents and copyrights share their genesis in the same constitutional clause, this reasoning should apply to copyright as well, and thus, the DMCA would be unconstitutional under this reasoning, as it restricts copy of public domain works.

Justice Stevens's reasoning should be considered for any litigation campaign because the majority does not disagree with his general statements about intellectual property law, so much as they simply do not believe that the situation Stevens decries occurred in *Eldred*. The majority, inter quoted from *Graham v. John Deere*.

2. Justice Breyer's Dissent

Justice Breyer set forth a blueprint for what he would consider a proper litigation campaign to challenge the constitutionality of a copyright statute:

^{67.} Id. at 207 (emphasis added).

^{68.} Id. at 191.

^{69.} Id. at 230-31.

^{70.} Id. at 240.

^{71.} Eldred, 537 U.S. at 240; Graham v. John Deere Co., 383 U.S. 1 (1966).

Thus, I would find that the statute lacks the constitutionally necessary rational support (1) if the significant benefits that it bestows are private, not public; (2) if it threatens seriously to undermine the expressive values that the Copyright Clause embodies; and (3) if it cannot find justification in any significant Clause-related objective. Where, after examination of the statute, it becomes difficult, if not impossible, even to dispute these characterizations, Congress' "choice is clearly wrong." *Helvering* v. Davis, 301 U. S. 619, 640 (1937).⁷²

He felt that in the context of the DMCA, movie studios would seem hard pressed to explain any public benefits of the DMCA, and that the balance is not heavily shifted in favor of private interests.⁷³ Locking up fair use runs afoul of the second prong of his test. Taking away all copying means for a medium does not seem to serve the purposes of the clause.

E. Dastar Corp. v. Twentieth Century Fox Film

Some hope can be found in the U.S. Supreme Court's holding in the recent *Dastar Corp. v. Twentieth Century Fox Film*⁷⁴ decision. In *Dastar*, the Court addressed the issue of what is the legal effect of using one intellectual property statute to prevent copying of a work, which has passed into the public domain pursuant to another statute, and a copy is made?⁷⁵ A unanimous Court stated, "[a] statutory interpretation that renders another statute superfluous is of course to be avoided."⁷⁶ In other words, if copying is allowed under one statute, another statute cannot be used to prevent the logical application of the first statute. This case seems to bolster the idea that the sections of the DMCA that prevent fair use copying and the copying of public domain works are working to render §§ 106 and 107 superfluous.

F. RIAA v. Diamond Multimedia Systems Inc.⁷⁷

In *Diamond*,⁷⁸ the Recording Industry Association of America (RIAA) sued for a preliminary injunction to enjoin sales of the Diamond Rio MP3

^{72.} Eldred, 537 U.S. at 245.

^{73.} Id.

^{74. 539} U.S. 23 (2003).

^{75.} Id. at 33, 34.

^{76.} The vote was 8-0. "Justice Breyer took no part in the consideration or decision of the case." Id. at 38.

^{77. 180} F.3d 1072 (9th Cir. 1999).

^{78.} Id.

player on the grounds that sale of the device was in violation of the Audio Home Recording Act of 1992 (AHRA),⁷⁹ because the player did not use Serial Copyright Management Technology. The trial court found in favor of Diamond on the grounds that the RIAA was unlikely to prove likelihood of success on the merits in the underlying action.⁸⁰ This ruling was upheld on appeal.⁸¹ The Ninth Circuit stated that the player was not a digital recording device within the meaning of the statute.⁸² The devices proscribed by the statute were devices that could copy transmissions to multiple copies in a tangible medium form (e.g., a digital audio cassette).⁸³ The circuit court further held the AHRA did not apply because, as defined under the statute the player did not record from digital music recordings or transmissions.⁸⁴ The circuit court also focused on exceptions to the definitions that expressly named computer hard drives,⁸⁵ which in that case was where the player copied music from.⁸⁶ Since the hard drives were not covered under the AHRA, copies from them were not within the jurisdiction of the statute either. The circuit court also went on to note that the purpose of the AHRA was "to ensure the right of consumers to make analog or digital audio recordings of copyrighted music for their private noncommercial use."87

This case sets precedent for the defense of "Space Shifting"⁸⁸ as a fair use similar to timeshifting from *Sony*. Here, the consumer has a fair right use to make a copy of recordings that did not come from transmissions, but are from works of which the consumer has a non-infringing copy.

G. Lexmark v. Static Control⁸⁹

Lexmark v. Static Control, however, shows that many (bad faith) hardware manufacturers may get more economic benefit out of the abuse of the DMCA than they lose from it. This case seemed closer to the lines

86. Id.

87. Id. at 1079 (quoting S. REP. NO. 102-294, at 86 (1999)).

88. (Corrected) Memorandum of Points and Authorities of Amici Curiae [Law Professors], at 11, United States v. Elcom, Ltd., 203 F. Supp. 2d 1111 (N.D. Cal. 2002) (No. CR-01-20138 RMW, *filed* Feb. 6, 2002).

89. 253 F. Supp. 2d. 943 (E.D. Ky. 2003).

^{79. 17} U.S.C. § 1001 (2004).

^{80.} Diamond, 180 F.3d at 1075.

^{81.} Id. at 1081.

^{82.} The statute was originally meant to apply to Digital Audio Tape Recorders. Id.

^{83.} *Id*.

^{84.} Id. at 1076.

^{85.} Diamond, 180 F.3d at 1076. Most of the current higher-end MP3 players are hard drives themselves, though this does not give any extra specific protection or exemption from jurisdiction under the DMCA.

of the prophesized showdown between the deep pockets of the hardware and software industry versus the entertainment industry, except the entertainment industry was not a party to this action.

In this case, Lexmark,⁹⁰ a manufacturer of computer printers and computer printer cartridges, sued Static Control, an independent reconditioner of printer cartridges, for alleged infringement of Lexmark's copyrights.⁹¹ In addition, Lexmark sued for the DMCA violations of circumvention of Lexmark's access and copying control measures to protect their copyrighted material.⁹²

The copyrighted expression at issue is a very small amount of computer code written on a small computer chip that resides within the Lexmark chip.⁹³ The program at issue was an access control used to facilitate a "handshake"⁹⁴ between the printer cartridge and the printer itself. This program served little to no purpose, other than to let the printer know that it was using a Lexmark branded cartridge and to prevent the consumer from using a competitor's cartridge. The program that performed the handshake between the printer and the cartridge was nothing more than a simple linear equation.⁹⁵ When the cartridge is used up its chip burns itself out to prevent the cartridge from being refilled and reused.

Static Control is in the business of reconditioning printer cartridges and selling them at a lower price than the original equipment manufacturer. They are a direct competitor of Lexmark in cartridge sales. They took apart and reverse engineered Lexmark chips to be able to copy the handshake technology. They then copied the tiny program and placed it on a new chip on the refilled and reconditioned cartridge. They then sold their reconditioned cartridges with a chip that circumvented the unnecessary access control on the chip. Lexmark sued Static Control for a preliminary injunction to stop the sales of those cartridges and prevailed.⁹⁶ The Sixth Circuit vacated the injunction and remanded the case to the district court.⁹⁷

Prior to the Sixth Circuit's ruling, Lexmark succeeded in using the DMCA to engage in what would otherwise be an illegal taking of goods under the antitrust laws, specifically section 3 of the Clayton Act.⁹⁸ This

^{90.} Formerly an IBM company; spun off in the late 1980s.

^{91.} Lexmark, 253 F. Supp. 2d at 945.

^{92.} Id.

^{93.} Id. at 950, 951.

^{94.} Real Networks, Inc. v. Streambox, Inc., 2000 WL 127311 (W.D. Wash. 2000).

^{95.} Format y = mx + b, which itself raised questions about how effective an access control has to be to qualify under the DMCA. The Court also seemed to ignore basic tenets of the function v. expression dichotomy, holding that this simple program was expression. *Id.*

^{96.} Lexmark, 253 F. Supp. 2d at 947.

^{97.} Lexmark, Inc. v. Static Control, 387 F.3d 522 (6th Cir. 2004).

^{98. 15} U.S.C. § 14 (2002).

is copyright misuse and feels like nothing more than the copyright equivalent of *Morton Salt*.⁹⁹

In theory, this line of reasoning could be used to force consumers to buy all sorts of tied branded products. A Gateway® computer system can be designed so that consumers need to buy a Gateway monitor and Gateway printer because they are the only ones who will handshake with the Gateway computer to allow you to see the small portion of your computer (outside of your operating system and other software) that is Gateway's expression in the operation of your computer. Consumers would be forced to buy the whole package. In a non-computer context, it is akin to a consumer buying a Sony TV and, if they want to watch DVDs, having to buy a Sony DVD player because only they will talk to each other.

If the *Static Control* injunction stands on any appeal to the U.S. Supreme Court, it will serve as a blow to competition in many fields. Since competition leads to innovation, this means if the injunction were ultimately upheld on appeal, the DMCA will cut a wide swath across many industries, hindering innovation in them. This case highlights how the DMCA can be used and abused beyond its original intent. The DMCA will not only eviscerate fair use, but antitrust concerns as well.

By allowing the DMCA to be used to establish a trust in what would otherwise be technology that would not be protected from competition under the intellectual property laws, Congress has allowed individuals and companies acting in bad faith to restrain the ability of competitors to sell competing technologies. Competition drives competitors to offer better products at lower prices. This leads to innovation so that one competitor can outshine the other. This is the purpose of the antitrust laws. Without the right to compete, no one will invest money to make a better product than the original. Without competition, the original becomes the only source, and there is no need to innovate because it dominates that market.

The DMCA provides for proscribing the selling of a better, yet similar, product if the bad faith competitor can somehow tie a copyright purpose into the original product, even when such copyright purpose is not needed.

H. Relevant Legislative History

1. The Senate Report

The committee reports on the DMCA in both the House and Senate help provide insight into how the DMCA is overbroad, even in terms of its

^{99.} FTC v. Morton Salt Co., 334 U.S. 37 (1948).

stated purpose. In the Senate Report, the Senate stated that this Act's independent purpose, and other purpose of implementing terms of the WIPO agreement, was to address the serious problem of mass infringement that could be perpetrated by mass distribution of infringing copies across the Internet and other high-speed networks. The Senate stated:

Due to the ease with which digital works can be copied and distributed worldwide virtually instantaneously, copyright owners will hesitate to make their works readily available on the Internet without reasonable assurance that they will be protected against massive *piracy*. Legislation implementing the treaties provides this protection and creates the legal platform for launching the global digital on-line marketplace for copyrighted works. It will facilitate making available quickly and conveniently via the Internet the movies, music, software, and literary works that are the fruit of American creative genius. It will also encourage the continued growth of the existing off-line global marketplace for copyright works in digital format by setting strong international copyright standards.¹⁰⁰

Yet the DMCA, on its face, does not really speak to preventing copying or distribution at the network level. In fact, § 1201 is silent as to copying circumvention or access in any network or Internet context.¹⁰¹ It wholesale bans all copying that circumvents access or copy control technology regardless of whether or not the copies are ever distributed via a highspeed network, let alone copied with that intent to begin with. The Act is clearly broader than its stated purpose. The Act burdens more copying than that which the Senate felt was at issue for serious infringement.

Furthermore, this original "Internet" theme is repeated in the committee report with regard to the act's implementation of the WIPO treaty:

The WIPO treaties contain many important provisions. For example, the Copyright Treaty contains significant provisions such as: (1) explicit recognition that computer programs are covered by the Berne Convention; (2) recognition of a broad right of public distribution; (3) recognition of a broad right of communication to the public that includes the Internet; (4) an official statement that interprets the existing reproduction right of the Berne Convention

^{100.} S. REP. NO. 105-190, at 8 (1998) (emphasis added).

^{101.} Id.

to "fully apply in the digital environment"; (5) an obligation to provide "legal protection and effective legal remedies" against circumventing technological measures, e.g. encryption and password protection, that are used by copyright owners *to protect their works from piracy*; and (6) an obligation to provide "adequate and effective legal remedies" to preserve the integrity of "rights management information." The Performances and Phonograms Treaty recognizes certain rights of performers over their performances and basically gives the copyright owners of sound recordings the same protection for their works as exist in the Berne Convention for other works.¹⁰²

Piracy is, by its very nature, infringement. *Black's Law Dictionary* discusses "piracy"¹⁰³ in the copyright context: "The term is also applied to the illegal reprinting or reproduction of copyrighted matter or to unlawful plagiarism from it; and, similarly, to the unlawful reproduction or distribution of property protected by patent and trademark laws. See also Infringement; Plagiarism."¹⁰⁴ Since anti-circumvention was not illegal in the United States at the time of WIPO, how could it fall under the aegis of "piracy."

This Senate record will allow a reviewing court to ask the following rhetorical questions during a constitutional challenge of the DMCA: Why is the law drafted in a way to prevent more than piracy, if stopping piracy was all that was required by statute? While the DMCA makes circumvention illegal, and therefore after the DMCA, circumventing those copying measures would now qualify as piracy, piracy could not have meant that prior to the DMCA. So, how could the Act have been directed at a definition of piracy that did not exist when the word was negotiated for in the WIPO treaty?

The Act states that it wants to prevent "piracy," both as general principle and to comply with WIPO, but the Act is not crafted in a way directed to piracy as it was understood to be defined at the time the DMCA was enacted.¹⁰⁵ Rather, the Act broadly prevents whole classes of copying. In fact, the word piracy is conspicuously absent from the statute. If the purpose was to curtail Internet piracy, then the law is overbroad.

^{102.} Id. at 10-11 (emphasis added) (citations omitted).

^{103.} BLACK'S LAW DICTIONARY 1148 (6th ed. 1990).

^{104.} Id.

^{105.} S. REP. NO. 105-190, at 8.

2. The House Report

A quoted part of the House report that arises in many of the leading cases on the DMCA is: "The act of neutralizing a technological protection measure by a copyright holder to control access to the work is the electronically equivalent of entering unlawfully inside a locked room with the goal to obtain a copy of the book."¹⁰⁶ While this analogy may be on point for circumvention when it is used to infringe, this analogy falls short of the mark with regard to circumvention to make a fair use copy. Fair use, by its very nature, means that no one is entering unlawfully. To use a more appropriate analogy, the act of circumventing a copy or access control for a fair use is like removing a padlock that a private citizen has arbitrarily or capriciously put on the entrance to a public park.

In mid September 1996, the House Committee on the Judiciary held hearings on what would become the DMCA and heard from twenty-three nongovernmental witnesses,¹⁰⁷ fifteen of whom had interests aligned with the entertainment industry's desire to enact §§ 1201(a) and 1201(b).¹⁰⁸ While the House Committee heard from one witness, Christopher Byrne, Director of Intellectual Property for Silicon Graphics, Inc., as to how the Act would hinder innovation in the industry, both parts of the House report are conspicuously silent as to whether the Act will hinder or foster innovation.

Interestingly, the Senate report speaks briefly to innovation, but only in the context that the DMCA will likely foster innovation in reverse engineering technology and security technology.¹⁰⁹ The report is deafly silent, however, as to the Act's hindrance of other innovation.

IV. THE DMCA IS BEATING DOWN YOUR DOOR

The DMCA's effects will soon be felt in the home, because within a few years time, the DMCA can soon be used to prevent the home recording of television programming. High Definition Television (HDTV), a digital broadcast signal, is a reality in many markets. Gone are the analog television signals addressed in *Sony*. Now we are dealing with digital signals being brought into the home, and digital is expressly covered under the DMCA. The American populace does not even have the option of clinging to the old technology. Congress is forcing HDTV on them. Even

^{106.} H.R. REP. NO. 105-551, at 17 (1998).

^{107.} The government witnesses were Bruce Lehman the Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, and Marybeth Peters, Register of Copyrights.

^{108.} H.R. REP. NO. 105-551, at 17 (1998).

^{109.} S. REP. NO. 105-190, at 13.

broadcast antenna TV will have to switch to HDTV format before the decade's end. We are also seeing the introduction of home digital recorders such as digital VHS, DVD-R, and TiVo, allowing the user to make perfect digital copies of broadcasts. Once HDTV is in a household with a digital recorder, home consumers will be able to make perfect copies of digital broadcasts. This is problematic because people will want to continue to record television shows and will do so with their digital recorders. However, digital broadcasts are covered under the DMCA, and it can be interpreted to expressly prohibit the timeshifted home copying of digital TV, broadcasts, even when entirely for private use. This copying is what the entertainment producers fear, and the DMCA is their best weapon to stop that.

The DMCA allows entertainment producers to stop this copying in a variety of ways. Section 1201(k)(2) of the DMCA only prevents two types of copy control from being applied to broadcast television signals, automatic gain control and colorstripe copy control.¹¹⁰ No other types of copy or access control are prohibited by statute, and under the statutory construction rule of the maxim *expressio unius est exclusio alterius*, the expression of one thing is the exclusion of the other, aids in determining legislative intent.¹¹¹ This means that a court would have to read into the DMCA that, since no other copy controls are proscribed, then the right to use other types of copy control is authorized by Congress for broadcast digital TV.

Other types of controls that could be used would embed the broadcast signal with time expiration, so whatever you copy to a digital recorder expires and erases from the recorder after a certain amount of time. The controls could also embed code that electronically locks out the output jacks on the digital recorder, so the TV broadcast can never be memorialized in another format.

An in-depth discussion of the types of technology (that do not exist yet) that can be used simply requires using one's imagination. I doubt that entertainment producers will have much trouble coming up with a system to protect their programs. Using the DMCA to stop any copying would not even be that difficult. All the networks and studios have to do is place any kind of copying protection on their HDTV broadcasts. The DMCA does not define how good the protection must be, or that it even be effective, just that there be some means to safeguard from copying.

^{110.} The technical explanation of how these controls work is described later in this Article. At this time it is enough to know that these technologies function by allowing the original source or broadcast to be viewed normally, but when copied, emit a distortion signal that severely degrades the picture quality of the copy.

^{111.} BLACK'S LAW DICTIONARY 1148 (6th ed. 1990).

How much of a reality is that scenario? We are currently seeing a surge in DVD sales, including box sets of popular television shows, both in rerun syndication as well as shows that are still currently in first-run production (e.g. The Simpsons, The Sopranos, Friends, and even American Idol).¹¹² If home consumers can make digital copies of these shows when they air, there would be no need to ever buy these box sets after the fact. Therefore, there is a large incentive for the recording industry to take steps to make sure the average consumer cannot make digital copies of the shows at home, thus nullifying the need to ever buy the box set. This scenario could happen, as there is more money involved in the sale of prerecorded media than in the sale of the home recording equipment.

Even if the DMCA does not trump *Sony*, as opponents of the DMCA advocate, it can be argued that *Sony* would still have little effect on the DMCA, as the DMCA encompasses digital technology used for recording purposes. *Sony* would still be good case law, but only with respect to VCRs. That would not matter since the industry is not concerned about non-perfect analog copies. The question of whether or not the DMCA will prevent VCR copying may very well be academic because, in five to ten years, most VHS VCRs will likely become obsolete. Already, VHS VCR sales are dwindling.

While it may seem like a stretch to say that courts would interpret the DMCA to ban all home video recording in the wake of HDTV, it is not unrealistic to presume that the entertainment industry will present that case, or that current law would prevent a court from ruling in their favor. The DMCA is currently being used by parties in ways the DMCA never intended.¹¹³

V. HINDERING OF TECHNOLOGY

A. Digital is Here to Stay, So We Need to Guarantee a Way to Work with the New Media, Not Hinder It

Make no mistake about it, practically all media are going digital. DVDs are currently taking advantage of the fact that they cannot be fair use copied. Similar copy protections are beginning to appear on CDs being

^{112.} In fact, DVD sales of Fox's cancelled show "Family Guy" were so profitable, Fox is returning the show to the airways in new first-run production, slated to begin airing sometime in early 2005.

^{113.} Lexmark, Inc. v. Static Control, 387 F.3d 522 (6th Cir. 2004).

sold in Europe and CDs in the United States are likely not far behind.¹¹⁴ That means most, if not all, copyrighted materials will soon be embodied solely in a digital format,¹¹⁵ and thus could be locked up by technological means. As of March 2002, there were five different types of copy controls available for CDs.¹¹⁶ The DMCA is going to restrict, if not totally eliminate, all copying of popular entertainment, and as a result, restrict and hinder the development of any technologies allowing any sort of copying, including fair use. For example, the DMCA is going to hinder the progress of science in the art of mass storage and copying technology.

This runs afoul of Article I, § 8 of the U.S. Constitution.¹¹⁷ It is important to note that the clause says laws empowered by that section must promote "progress." That means laws that do not promote progress would be unconstitutional under this section. Scientific innovation is clearly progress. Bear in mind that a statute need not stop all innovation; simply hindering innovation hurts progress, and clearly does not promote it. As will be discussed further, the DMCA is unconstitutional if for no other reason than it hinders progress and innovation.

B. Overbroadness of the Act

The Act is overly broad in that it prevents the development of copying technologies that would not infringe copyrights. No exception is made for technology that has guards against infringement or is incapable of any infringement whatsoever. These technologies are not given a chance to develop in the shadow of the DMCA.

If someone were to develop a technology enabling a user to copy only up to forty percent of a digital work, sample the audio from a DVD, or better yet, make a copying program with a database of works that had passed into the public domain, accessed the digital ID of the work you wanted to copy,¹¹⁸ examined the original date of publication of the work, and let one copy the original part of the work itself,¹¹⁹ then it would still be illegal under the DMCA. This is because the Act only looks at

^{114.} Stephen A. Booth, *Access Denied*!, SOUND & VISION MAG., Mar. 2002, *at* http://www.soundandvisionmag.com/article.asp?section_id=1&article_id=225&page_number=1 (last visited Dec. 31, 2004).

^{115.} Id. With the likely exception of print media.

^{116.} Id.

^{117.} U.S. CONST. art. I, § 8, cl. 8.

^{118.} Much in the same way many Windows-based media players access databases, when you load an audio CD, to identify the album you are playing and download the track information.

^{119.} In the context of a DVD movie in the public domain you would only have a right to the movie itself and not the menu features or bonus, as these would be new material subject to their own new copyright.

circumvention of the technology, not whether the technology has a substantial, legitimate purpose for consumers who have a right to copy the underlying work.

This type of databasing technology is possible and is becoming a reality. Currently, RCA is selling a DVD player that can edit out violence and profanity from DVD movies.¹²⁰ The player accesses a database to retrieve the relevant information for a given movie so it knows what to edit. It would not be hard to add basic copyright information about a movie into the other information provided for that movie. The technology could likely be modified to address fair use rights for copyrighted works. This would help to provide a balance of the private versus public rights. Under the DMCA, however, there is no incentive to even develop a fair use copying technology because the ability to copy is a fatal flaw, regardless of the technologies' other uses. The DMCA should be declared unconstitutional because it hinders the development of more technology than is reasonable, without looking to alternative technological measures that would hinder far less innovation.

As fair use is examined as the copyright equivalent of the First Amendment, the U.S. Supreme Court needs to read a requirement of fair use inherent in the Patent and Copyright Clause. The Court should then engage in an analysis similar to that of its First Amendment cases, and strike down, as unconstitutional, any law that burdens fair use more than necessary, or any copyright statute that burdens the public's interest in the copyrighted material more than is necessary.

C. How a Law like the DMCA, If Enacted Previously, Would Have Hindered Development That Has Benefitted Society

While it is not entirely possible to look into the future and discern exactly how it will affect current technology, it is possible to use the 20/20 ability of hindsight to gauge how a law like the DMCA would have affected the development of older copying technologies. Imagine if, at the time of the development of the photocopier, publishing companies had managed to pass a law that still "guaranteed" fair use, but outlawed any photocopying technologies. If that was the case, then photocopying technology would not have developed or become as economical at as fast a rate as it did. In addition, better technologies would have developed more slowly (e.g. zoom enlargement and duplexing).

^{120.} Gary Gentile, The Good Parts, EXPRESS, Apr. 19, 2004, at 20.

D. Photocopying Would Not Have Become as Affordable as it Has to this Point

The cost of an item is determined by simple supply and demand. The cost of photocopying, as well as the cost of the photocopier itself, has dropped in price over time because the ability (i.e., lack of a legal restriction) to make more copiers has guaranteed the ability to make more supply, and ensured that such supply actually existed.

As supply increases, the price per unit drops. As this occurs, it encourages manufacturers to find ways to make better units at a lower cost to increase their profits. This also leads to manufacturers trying to pack in more features to be competitive; or to get consumers to buy the manufacturers technology instead of one of the competition's. This encourages manufacturers to come up with better features and new technologies. Innovation occurs within the industry when trying to find a way to make the staple item cheaper, while making it better at the same time.

Personal copiers have been available at office supply stores for over 16 years. In that time, the price of these units has dropped from upwards of \$500 for a basic one-sheet-at-a-time unit down to \$50-\$100. It becomes even cheaper if a consumer wants to use the photocopying feature of a cheap fax machine. These cheaper units also have features that were not available on the older units, such as zoom, autofeeders, page duplexing, and multiple copies.

It is a reasonable inference that the development of photocopying technology led to the development of related technologies, such as computer scanners and its progeny, optical character recognition technology. The absence of any meaningful legal restriction on the development of photocopying technology allowed the progress of the science of photocopying. The lack of restriction gave an incentive to manufacturers to develop and exploit this technology to its full economic extent and to the benefit of the consumer.

It is safe to say that if such restrictions existed, these technologies, if available at all, would not be available to the public today at their current state of advancement and their low price. The availability of these technologies not only allows greater access of the public to make fair use copies of other works, but also allows easier entry into the self-publication market.

E. Specific Types of Technology Hindered by the DMCA

1. High-Capacity Multimedia Content Players

The types of technology most directly hindered by the DMCA are obviously, the copying technology on its face and, more importantly, technology that allows mass storage and archival of entertainment material of which a consumer already owns a legitimate copy. These High-Capacity (multimedia) Content Players (HCCPs) fall within the realm of MP3 players utilizing a hard drive to increase their capacity, such as the Apple iPod®, which is just one of many such devices available. Devices such as these allow a consumer to convert their entertainment material to a different format and store it in a smaller format.

Shrinking and efficiency have always been logical products of the progress of science in any technical art form. To paraphrase the Six Million Dollar Man: "we can make it faster, stronger, better than it was before."¹²¹ Science always wants to improve itself, and economics dictates that it reduce its cost.

Prior to a device like the iPod, users who wanted to travel and listen to their music had to carry a portable player of some sort, while carrying their compact discs with them. The space taken up by a player and some twenty compact discs was equivalent to that of a small shoe box. There is no doubt that portable entertainment is a huge industry in this country and an integral part of the travel of many consumers. Innovation in HCCPs brought new efficiency in this area. The MP3 computer file led to the development of the basic portable MP3 player, which led to HCCPs.

With the advent of HCCPs, which in one device incorporates both the player and the ability to store music, a user can condense a music collection of some five hundred CDs down to the size of a deck of playing cards. HCCPs are an advancement for a staple article of commerce, the portable music player. Until you have tried one, you cannot truly appreciate what a marvelous innovation this type of technology is. The ability to have your legitimate music on hand at any time is an amazing convenience, much the same way the instant track access feature of a CD was a vast improvement over the cassette tape.

2. New Formats and Their Associated Hardware Drives Innovation

In a sense, this technology drives a new format. LPs gave way to eighttracks, which gave way to tapes, which gave way to CDs, which gave way

^{121.} SciFi.com, Six Million Dollar Man, available at http://www.scifi.com/bionics/sixmill. html (last visited May 9, 2005).

to raw computer files of the entertainment. The mass storage devices to contain those files are the next format. Mass storage devices are clearly a more efficient way to store and travel with one's music.

The fast paced innovation in this area is reflected by the vast diversity of players available. The iPod, one of the most popular players, is on its third generation, less than two years after hitting the market. In that time, it has multiplied tenfold its storage capacity.¹²² In July and August of 2003, this innovative new device was the number one selling MP3 player.¹²³

This sort of fast-paced innovation, a tenfold increase in two years, outstrips the normal innovation posited by Moore's law, which states that data density will double approximately every eighteen months.¹²⁴ Moore's law generally speaks more to the data density of integrated circuits. Granted, the capacity of HCCPs is more a factor of miniaturization of hard drives than chip capacity, yet still on the average hard drive capacity has not progressed at a tenfold rate over the last few years. Today's average hard drives in the \$150 price range are now close to ten times larger than a similarly priced hard drive two years ago.

The advent of MP3 players drove innovation in the area of the miniaturization of hard drives and mass storage devices, an area that had lain fallow for many years, despite the best efforts of industry giants like IOMEGA® to foster sales in that area.¹²⁵ We are also seeing MP3 players in the form of stand-alone stereo components for high-end stereophiles, as the MP3 format gives them a chance to collect their entire catalog of music in one home component. Logically, as the format continues to grow, innovation will likely address some of the MP3 issues, such as retaining more of the sound quality that is lost when audio files are converted to MP3.

HCCPs run into other DMCA problems in that a user who converts their collection to a format for storage on an HCCP, would want to backup their converted media files majority of the time. HCCPs work by having the user take an original source music format, such as a CD, place that original source in the user's CD-ROM drive on their personal computer (PC), and then copy the music to a hard drive. The user then synchronizes the HCCP with their PC to transfer and update files. Current

^{122.} Rob Walker, *The Guts of a New Machine*, N.Y. TIMES, Nov. 30, 2003, sec. 6, at 78. The original iPod held approximately 1,000 songs. The current high capacity unit holds approximately 10,000 songs.

^{123.} Id.

^{124.} Moore's Law, Small Business Computing Channel, *available at* http://www.webopedia. com/TERM/M/Moores_Law.html (last visited Jan. 7, 2005).

^{125.} The IOMEGA Zip Disk, Jaz Drive, and Click Miniature drive never really caught on with consumers to replace floppy drives, or any other drives for that matter.

technology takes about ten minutes to convert a standard seventy-minute CD to MP3 format. For a user with approximately three hundred CDs, it would take approximately fifty straight hours of conversion work. If the DMCA prevents technology to back up that hard drive and anything were to happen to the hard drive where the converted files reside, the user would have to redo those fifty hours of work just to get their music back into a format where it can be put back on to the HCCP to resynchronize it. Any user who had invested that sort of initial setup time would obviously want to take steps to avoid having to repeat their work.

Currently, the DMCA does not prevent a consumer from copying their own CDs to an MP3 player for their own enjoyment. However, once CDs are encoded with protection technology preventing this, circumventing that technology to put them onto an MP3 player will constitute a violation.

It seems like the next logical progression in this scientific art would be to make better higher-capacity MP3 players at cheaper prices, and to develop some sort of technology that allows users to compress and backup those music files for migration to a variety of devices, such as the user's car stereo or home playback units.

3. There Are Current Mass Storage Devices That Exist in Derogation of the DMCA

A company called Archos SA¹²⁶ currently manufactures a video equivalent of an iPod called the AV100, which allows a consumer to record to the unit a video signal from any number of devices,¹²⁷ including a DVD player. The player circumvents the CSS copy protection software used to protect DVDs by essentially ignoring the copy protection code.¹²⁸

The Archos unit can store up to about 320 hours of video, which is about 200 movies.¹²⁹ The unit obviously has the same practical purpose as an iPod in that it can allow a consumer to store their entire catalog of video content in one unit. It can also allow a consumer to travel with some of their movies without having to deal with the cumbersome task of carrying a portable (read expensive) DVD player or a laptop with DVD capability. Six more units of this type from different manufacturers are supposed to

^{126.} ARCHOS Web Site, at http://www.archos.com/products/av300_series.html (last visited Jan. 7, 2005).

^{127.} Id. The unit will also take a feed from a video camera, a TV with an output signal, or a personal computer.

^{128.} Device for DVD Movie Raises Legal Issue, Jan. 7, 2004, at http://news.designtechnica. com/article2320.html (last visited Jan. 7, 2005).

^{129.} Id.

be available by year's end.¹³⁰ If units of this type are found to be proscribed by the DMCA, however, we can expect them to go the way of the eBook reader, one of the first digital dodos.

The unit has plenty of non-infringing uses and tremendous business potential. The possibility of the home user being able to store their entire video collection in one stand-alone unit would save a tremendous amount of storage space. It allows consumers who put on business presentations to make a video grade back-up copy of PowerPoint® presentations in a video format, in case they do not have computer access or there is a computer malfunction at the site where they have to make their presentation.

4. Prohibiting the Software Also Prevents Fair Use and Hinders Innovation

For those looking for a theoretically cheaper route, you can turn to a laptop, if you already own one that has MP3 or DVD capability. Users could copy some of their music library or video library to a laptop before traveling. However, with regard to DVD and the eventual progression of protected CDs, the technology, generally software that would allow copying of the underlying material to the hard drive, would be banned under the DMCA.

That ban would frustrate progress because such laptop-type usage, as it grows, would encourage innovation in the field of computers. DVD and MP3 playback, especially DVD playback, taxes more of the laptop's system resources and battery power than most common applications. Music files and DVD files also take up a fair amount of hard drive storage, which on a laptop, is already generally too small as it is. As the desire for more DVD and MP3 laptop playback grows, there will be greater demand for better batteries, higher capacity miniature laptop drives, and better CPUs and playback software. While there is already demand for these, increasing the availability of the current technology will drive more demand. Accordingly, by simple economic laws, such as Adam Smith's infamous "invisible hand," the industry will direct more of its innovative efforts in terms of making the items that are demanded more, and in theory they will be developed sooner than if the underlying copying technology was banned by the DMCA.¹³¹

^{130.} Paul Sloan & Geoff Keighley, The Offer Hollywood Can't Refuse, BUSINESS 2.0, May 2004, at 94.

^{131.} Library of Economics and Liberty, The Concise Encyclopedia of Economics, Biography of Adam Smith (1723-90), *available at* http://www.econlib.org/library/Enc/bios/Smith.html (last visited May 9, 2005).

5. Effects of Banning this Whole Area of Technology on the Progress of Science

By banning this entire area of technology, there is less incentive for manufacturers to spend money on miniaturization and mass storage devices for the home consumer. There will still be innovation, but at a lower rate. However, the Patent and Copyright clause is offended when progress is not promoted. The slowing of innovation and growth is not progress. For that matter slowing the progress whose direction you can see is not the only hindrance to innovation. Who knows what new technologies will be born out of research and growth in the digital copying technologies, much like scanners were born out of photocopying technology.

6. Other Technology Affected by the DMCA

The advent of the PC has allowed more consumers to run businesses out of their homes and has increased the average consumer's household productivity. There are PCs in sixty percent of American households.¹³²

Obviously, many businesses use PCs. One industry in particular that makes extensive use of PCs to accomplish tasks that used to require more sophisticated equipment is the small recording studio. In effect a decent recording studio can start up business for much less money than used to be required. To be a decent recording studio, you need the ability to copy the work you produce. This would logically include copying your masters, and having technology that would allow you to copy works in which you had already integrated digital copy protection. However, the DMCA makes no sort of exception for the purchase of commercially necessary technology by a professional user. In effect, the DMCA puts the power of getting around access in the hands of entertainment producers that have developed the technological safeguards or the producers who manufacture the protection for them. It keeps the power in the hands of major players, the big recording studios, and gives them an even greater competitive advantage against the little guy.

It is worth noting that the DMCA itself, while providing some exceptions for reverse engineering and computer software interoperability, does not even allow the creators of copy protection software to sell technology circumventing their own measures. This seems nonsensical, as the right to exploit your own technology has to be implied in the statute.

^{132.} Tom Verducci, Welcome to the New Age of Information, SPORTS ILLUSTRATED, Apr. 5, 2004, at 52.

7. The DMCA is Overbroad in That it Prohibits the Rights of Manufacturers to Address Non-Computer Software Based Interoperability Issues

a. Macrovision

One form of DVD scrambling present on all DVD players works by using a system called "Macrovision." Macrovision operates by distorting the video signal from the DVD unit when that signal passes between an intermediate unit between the DVD player and the TV set.¹³³ Such a unit could be a stereo receiver or, as the entertainment industry fears, a recording device.¹³⁴ During playback of the movie, Macrovision alters the video signal going into the intermediate unit so that the picture's brightness is constantly in a state of flux, shifting from light to dark, in such a way that is extremely annoying to the viewer. Macrovision proponents probably believe that no one would want to watch such an annoying copy of the film.¹³⁵ In turn, they think it will prevent consumers from copying DVDs, especially when the copies would possess this annoyance.

Macrovision technology, however, hampers the fair use as well as general non-copying use of both poor and rich alike. It affects the poor in that they have to buy a better TV if they want to use a DVD player. Low cost TVs do not usually have the requisite input connectors to connect a low cost DVD player, and often, the only option to connect such a player inadvertently and inappropriately activates the Macrovision protection.

b. High-End Audio/Visual Equipment

Another fair use technology that is soon going to disappear is the next generation equivalent of the translator VCR. A translator VCR is a device that allows families living abroad to enjoy movies recorded in a different TV format. Different geographic regions use different formats, and they are incompatible with each other. A translator VCR has tuners built in for more than one format. The formats are dependent on vertical lines of resolution, a given format will have a set number of lines. Issues of increasing picture quality, as discussed in the high-end stereo section, is

^{133.} Id. and author's personal knowledge.

^{134.} Commonly, yet mistakenly, referred to as an amplifier. An amplifier in actuality is only a part of the receiver that powers the speakers.

^{135.} Id.

a function of horizontal lines of resolution. The United States and Canada use a format called NTSC, Europe uses a system called PAL, and Asia uses a system called SECAM. A family that moves abroad often buys a translator unit because one unit will work both formats with one television. They can watch their old movies and their new movies on the same machine.

In theory, a DVD connoisseur, or someone who immigrates to the United States, may want to buy a translator DVD player. DVDs in different regions use different access controls. A DVD from the United States will not play in a DVD player in Europe using different region encoding. There is an industry standard as to what the access is for each region. In theory, region 2 discs are encoded that way so that they cannot be played on DVD players in the United States, which is region 1. The original intent was to prevent consumers from buying overseas black market and pirated copies of domestic movies, which are encoded for the region in which they are pirated, and then bringing them back to the home country. This is yet another system born out of Pandora paranoia. Most consumers are not that sophisticated. They are not generally exposed to the black market for movies. They buy their DVDs at major stores who buy their DVDs from the entertainment producers.

There does not seem to be any good reason under the law why one is not entitled to a fair use to watch a legitimate copy of a movie purchased from a different region. Yet, in theory, because a translator DVD player would circumvent an access control for a work (albeit one that the user owns a legitimate copy of) that the entertainment producer does not want accessed in the United States, that entertainment producer could likely get an injunction on the grounds that the unit would be illegal under the DMCA.

A company called Yamakawa currently markets a translator DVD player.¹³⁶ However, considering how vigorously the entertainment producers recently attacked legitimate DVD players that could bypass protection, Yamakawa should be concerned.

Four years ago, a company called APEX sold a DVD player that had a design "flaw," allowing users to bypass various digital protections built into DVDs.¹³⁷ The device was not designed to circumvent protections, it simply had a design "flaw" that allowed users to bypass various digital protections built into DVDs.¹³⁸ The "flaw" was that the menus were not

^{136.} Webthink International Web Site, at http://www.yamakawadvd.com (last visited Jan. 7, 2005).

^{137.} Andy Patrizio, Apex Player Banned by Ebay, WIRED NEWS, June 20, 2000, available at http://www.wired.com/news/business/0,1367,37072,00.html (last visited Jan. 7, 2005).

^{138.} Id.

accessed with special equipment at the time of manufacture, but were instead programmable directly from the built in controls on the unit. This information was not supposed to leave the manufacturer.

Nevertheless, information circulated via the Internet explained how to press a combination of buttons that would allow the consumer to access the higher menu functions of the DVD player and disable the copying and access controls. While there was no technology primarily designed to circumvent a technological measure, there was know-how. Apparently, even know-how could not be tolerated. Macrovision complained to eBay that the device infringed their rights under the DMCA and eBay banned all sales of the device.¹³⁹ APEX recalled its units, even though the device was not "designed" to circumvent digital protections.¹⁴⁰

With a variety of connector jacks, and new standards of proprietary jacks coming out each year, some hookups of equipment will get interference from copying control measures, even though all that the user wants is interoperability of their (non-computer based) equipment.

There are four types of standard video signal connectors. The most obviously recognized is the coaxial cable connector. This is the type of connector that is on the backs of all televisions sold in the United States. This is the same connector as the one that is on the cable jack in the walls of residential homes, and commonly uses a threaded on connector. In the case of Coaxial cable, one cable does it all, picture and sound.

The next step up is "RCA" connectors. These cables, and their jacks, look like those of standard stereo cables. Yellow is for video, and red and white are for the right and left channels of stereo, respectively. The next step above substitutes what is known as a super video, or S-Video, jack for the RCA video jack, while still using the red and white for sound. This jack looks similar to a keyboard jack on a computer. This jack provides better resolution than the RCA jack in that it separates the chrominance and luminance in the video signal to provide a better picture. A prime example of this is the herringbone jacket Johnny Carson used to wear on the Tonight Show. On TV, it seemed to shimmer. In real life, the jacket did not actually shimmer. It only did so on TV, because the color and brightness signals were substantially interwoven. On TV sets with a supervideo signal, the jacket appeared normal. Lastly, component video is sharper than S-Video in that it separates out the chrominance signal into the component colors of red, green, and blue, using connectors that look like RCA cables.

^{139.} Id.

^{140.} Id.

In terms of picture quality, the resolution¹⁴¹ of each jack from lowest to highest is: coaxial, RCA jacks, S-Video, and component video. Coaxial cable is about 240 lines of resolution. RCA cables are about 330+, S-Video is about 425, and component video is significantly higher than that. Note, VCRs record at about 200 lines of resolution. That is why videotaped shows always look to be lower quality than when the show is being broadcast. DVDs tend to have a picture quality of approximately 425 lines of horizontal resolution. HDTV is broadcast normally at approximately 720 lines of resolution.¹⁴²

Cheaper TV sets have only coaxial cable jacks. Cheaper DVD players have only RCA jack and S-Video jacks. Market forces tend to dictate that, in fact, most DVD players do not have low coaxial jacks, as there is simply little to no demand for one on a DVD player, which is a high resolution unit. Most owners would not want to take a picture with 425 lines of resolution and cut the picture quality in half by running it through the lower resolution jack. However, VCRs all have RCA jacks, and practically everyone owns a VCR. For those who cannot afford a better TV yet, already own a cheap VCR connected to that TV, and want to use a DVD player on their TV, they can connect the DVD player to the VCR using the RCA jacks on both the DVD player and the VCR. This set up runs the DVD signal through the VCR. However, because the VCR is an intermediate unit, the Macrovision will then distort the picture. Thus, Macrovision prevents low-income families from truly enjoying DVD playback.

At the other end of the spectrum, Macrovision complicates connecting high-end video equipment. Stereophile and videophile enthusiasts tend to own separate components, including some from an Audio/Video receiver, or separate preamplifier and amplifier, collectively referred to as an "A/V component." Better systems have on-screen menus and picture enhancing technology. These systems are designed so that all of your components connect to the receiver or preamplifier, and then go straight into the television. The A/V component, in addition to providing better audio and video processing, also acts as a switch box. With the advent of Macrovision, however, the switching feature of a \$3,000 A/V component just became worthless.

^{141.} When video signals are described in terms of resolution this refers to the lines of horizontal resolution in the signal. A line of resolution is a column of RGB (Red Green Blue) pixels.

^{142.} Interestingly the government has been trying to mandate HDTV for years, and had to push back the effective mandatory date of stations switching to HDTV. It now seems odd that other legislation will interfere with providing the public all the benefits of a better quality signal.

Computer code is speech. Computer code is used by the A/V component to help render a better picture. The output of that picture signal is one of expression on the part of the A/V component manufacturer. Macrovision distorts that expression. One protection is being used to stifle someone else's expression and copyrighted material. In theory, sometimes the copy control used by an entertainment producer will interfere with the hardware manufacturer's expression.¹⁴³ The copy protection interferes with the integrity rights of the hardware manufacturer's expression. This creates a conflict as to whose copyright needs take precedence. More importantly, does one party's copyright trump another party's? While gut instinct might incline one to say that the consumer wants the underlying entertainment product, the law makes no such distinction that one type of copyrightable subject matter is better than another.

What if the A/V component manufacturer wanted to make a device that eliminated the copy control's interference with their system and simply restored their original picture quality, yet in doing so, they are obviously circumventing the measure itself, even though no copying purpose is intended? It is possible that someone would want to design a box that would simply allow a consumer to connect all of their equipment in such a way that they can enjoy the equipment that they already own.

VI. HINDERING DEVELOPMENT OF PRIMARY TECHNOLOGY WILL ALSO HINDER THE DEVELOPMENT OF ENHANCEMENT PRODUCTS

A. The DMCA Allows Unwanted Goods and Services to be Forced Upon Consumers

Static Control shows us that the DMCA can be used to force consumers to buy products ancillary to other hardware they already own, simply in the name of copyright. Recalling the concerns about digital TV recorders, it is possible the DMCA could be used to make users pay for services ancillary to hardware in perpetuity.

In the context of a Digital Video Recorder (DVR) such as a TiVo®, a DMCA-violating device could be as simple as a mechanism that lets you bypass the clock feature on a TiVo. A TiVo is designed to store some information, some recorded programs, and TV Guide time information

^{143.} For example, Sony televisions are known for their Trinitron® technology, which enhances the green and black hues on a television screen giving Sony televisions a distinctive and crisp feel. Mitsubishi has their "DiamondVision" picture technology. Panasonic Televisions burn Blue and Green hues brighter. High-end components have their own distinct feel for how they express content that they process.

only for a finite time. The TiVo updates itself on a regular basis by connecting to TiVo servers via a standard RJ-11 phone jack late at night. At this time information is exchanged between the units. This service is contracted for near the beginning of the TiVo "experience." When you buy your TiVo and take it home you call TiVo or go on-line to set up an account. You pay a monthly service fee or a lifetime fee for programming information. Some DVRs will not function if they have not connected to the servers after a given period of time.

Unfortunately, the DVR will not work without receiving the TV Guide information from which you select which shows to record. Many DVRs cannot be programmed like a traditional VCR where you enter the start and stop time for a given channel. Instead you have to use the on-screen TV Guide and then click on the show you want. Enter now, the hypothetical home consumer who no longer wants to pay for the subscription service,¹⁴⁴ does not plan on using any proprietary program guides, but still want to use the unit as a stand-alone TV signal recorder, just like a VCR, except that DVR uses a hard drive.

Fortunately for that hypothetical consumer there is a hypothetical company that will sell a small box that will plug into the consumer's DVR via the RJ-11 jack and allow them to trick their DVR into still working. Any such device would have to be able to set the clock on the DVR unit. However, any such device could theoretically use the machine to alter the clock so that the consumer could bypass any time expiration embedded in a program. Now the machine would not recognize a copy protection, and thus, the technological fix the consumer bought, for a fair use purpose, was trafficked in violation of the DMCA. The consumer is stuck having to pay for the programming service ad infinitem if they want their DVR to work. As a result, the DMCA allows manufacturers to tie up needless service fees in perpetuity if you want to be able to still use a machine you already own.

What about the fact that competition for other TV guide programming is hindered? TiVo has competitors, such as ReplayTV. What if one company offers better TV guide programming software for their units, and designs it to interface with the other machines? In order to work with the TiVo hardware, that software needs to handshake with the dialing-in process in the TiVo machine. In the end, the fair use at issue is home recording of TV broadcasts. The quality of the TV guide is ancillary to the

^{144.} The TiVo unit also relays back to TiVo information about what you watch. TiVo makes this information available (presumably for a fee) in ways similar to Nielsen data. Two days after Janet Jackson's infamous Superbowl stunt, TiVo stated it was the most replayed moment ever on TiVo devices. *TiVo: Jackson Stunt most Replayed Moment ever*, Feb. 3, 2004, *at* http://www.cnn. com/2004/TECH/ptech/02/03/television.tivo.reut/ (last visited Jan. 7, 2005).

final issue, but the DMCA allows those ancillary services to be tied. Keeping services tied to hardware will hinder the development of competing technologies. While the competitors will still innovate to make their software product better, they will not spend as much on R&D of the software. This is because the demand for their product will be constrained by the fact that owners of other hardware will not be in a position to demand their product because of the DMCA.

Entertainment producers do not just target technology primarily designed to circumvent copying controls. They also threaten to sue manufacturers of any technology that can be used to circumvent, and to sue anyone who just provides information about how to circumvent.

B. The DMCA Condones "Big Brother"-Type Acts, Including Practices That Would Otherwise be Wiretapping

Under § 1201(h), the entertainment producer can require as part of its protection technology, that the consumer provide any personal information or maintain constant broadband connection to the producer in order to view the work.¹⁴⁵ Problems arise if the producer requires, as part of its protection technology, that you leave the "cookies" in your Internet browser turned on. If you then wish to protect your privacy by buying some sort of filtering software that blocks the personal information stored in those cookies, you would be prevented because the software would violate the DMCA.¹⁴⁶

In theory, every time a consumer uses a Google-type toolbar that automatically enters a fake e-mail address for the consumer when registering for a web site (in order to cut down on the junk e-mail that comes from such a registration), the consumer may be using a technology in derogation of the DMCA.¹⁴⁷ Will the entertainment producers take on Google?

This means that the DMCA could legally hinder the development of pop-up blockers and firewall technology. The DMCA gives entertainment producers the ability to tell the public how and when they will view works for which they have already paid. Theoretically, a producer could even develop a protection technology under § 1201(a) that would require consumers to initially register themselves to use the work. Then, every time the user tried to access the work, this technology would verify the identity of the consumer and charge the user a small fee to maintain that

^{145.} Section 1201(h) only requires that if such information is collected, that "conspicuous notice" be given to the consumer. 17 U.S.C. § 1201 (2004).

^{146.} DAVID NIMMER, SACRED TEXT, TECHNOLOGY AND THE DMCA 334 (2002).

^{147. 17} U.S.C. § 1201(h).

system. Such a system would seem to run afoul of the first sale doctrine by making users pay to see a work they have already paid for. It would seem to be the province of a savvy user to develop and share with others a way to get around this,¹⁴⁸ but such circumvention technology would be a DMCA violation.

C. The Entertainment Industry is Given to Engage in all Types of Bad Faith Business Practices, All in the Name of Protecting "Access to" and "Copying of" Works

In a day and age where corporate America seems to advertise on everything it can, do we want to hand over so much power to the corporations? It has been hypothesized that the next generation of cellular phones will inundate the user with advertising directed to the cellular phone owner, with the cellular service provider reaping a fee from the advertiser.¹⁴⁹ Many users will obviously find this annoying, and will likely seek a way to avoid this.

On the other hand, the ads themselves will be entitled to copyright protection. The software that runs the phone and provides the ads is entitled to copyright protection. Cellular phone providers currently use technological measures to control access to the higher functions of the cellular phones. Currently Verizon® customers who own "Third Generation Phones" have no choice but to accept the Verizon splash screen when their phone starts up. That splash screen is eligible for copyright protection. Verizon uses technology to make sure that consumers cannot access the splash screen and change it. It is likely that the same type of technology will be used to control access to advertising on cellular phones in the future.

What about the consumer who does not want to accept the advertising¹⁵⁰ and buys third party software to customize their phone, disabling any incoming advertisements? The technology that allows the consumer to access and customize their own phone would technically violate the DMCA because that technology controls access to copyrighted material. This, in spite of the belief that consumers should have some say so on restricting content on their phone.

^{148.} Such "hacks" are frequently available via the world wide web.

^{149.} Press Release, SK Telecom, SK Telecom Carries Out Test of Mobile Advertisement Using Cellular Phone (Sept. 3, 2001), *available at* http://www.sktelecom.com/eng/cyberpr/press/1183224 3735.html (last visited May 9, 2005).

^{150.} However, it is likely that cellular phone contracts of the future will require the user to accept advertising, and thus contract around any fair use issues.

Do we want to take away so much freedom from the public? Do we doubt that such a misuse of the DMCA could come about? It is already here.

VII. FAIR USE IS QUICKLY BEING ERADICATED BY THE DMCA

A. The DMCA Effectively Eradicates Fair Use

There are two types of public domain at issue. There is the period at which a work fully passes into the public domain, and the more esoteric, less quantifiable public domain that is composed of fair use.

The legal questions surrounding fair use pit the copyright holder against individual consumers. This is only made more evident by recent legislation contemporaneous with the DMCA, such as the Bono Amendment, shifting the balance of power back to the copyright holder.¹⁵¹ There is no doubt there is a general legislative intent of moving fair use away from the consumer.

Fair use revolves around the notion that some protection must be afforded to the public for acts of copying before the work finally enters the public domain.¹⁵² It is an extension of the basic intellectual property law precept that, in order to encourage creativity, we grant creators a limited monopoly on their intellectual property in exchange for disclosing that creative work to the public¹⁵³ with the understanding that, after an appropriate time, the intellectual property will go into the public domain permanently.

While fair use is a concept that is enumerated in § 107 of title 17, its numbered provisions do little to clearly specify examples of exactly what constitutes fair use.¹⁵⁴ Rather, § 107 offers a four-prong test for determining what uses are fair use, placing the determination in the hands of the courts.¹⁵⁵ Interpretation of what is fair use has developed almost entirely under the common law on a case-by-case basis. While case law prior to the enactment of the DMCA seemed to strike an equitable balance between rights holders and individual consumer on the issue of fair use, recent case law seems to indicate a shift away from the individual consumer.

^{151. 17} U.S.C. § 302(a) (1978).

^{152.} Harper & Row Publishers, Inc. v. Nat'l Enters., 471 U.S. 539, 561 (1985).

^{153.} Sony, Eldred, Dastar, and Festo, among many others.

^{154. 17} U.S.C. § 107 (1992).

^{155.} Id.

While judges in cases ruling on the DMCA tend to justify the locking up of a work in the public domain, this does not address the fact that the technology that would allow copying of the work is still illegal to traffic. Moreover, it does not even address whether the technological locking-up of a public domain item is improper. What individual consumer is going to take on a wealthy movie studio to argue that specific works are in the public domain and should be unlocked when the DMCA does not provide monetary relief for that scenario? There is no provision in the DMCA where the consumer could get attorney's fees for such a legal challenge. The only relief the courts would have jurisdiction to grant, would be to make the specific entertainment producer turn over an unlocked copy of the work. What litigant would fund expensive litigation for such a monetarily insignificant award?

This would not help any issues of fair use. For the most part, fair use is asserted as a defense to infringement. Even if one could sue for the right to a fair use copy, do we want litigants going to court to justify each and every time they need to make a fair use copy? How would the court force a studio to grant them limited copying access if a fair use need was found? The better answer is to relax the technological guards in the first place.

B. Fair Use is a Legal Fiction

The DMCA, in effect, has been aimed at cutting back on a type of copying that was previously fair use. The legislation, in effect, has limited previous fair use, even though the act on its face says that it should not be construed to limit or abrogate fair use.¹⁵⁶ However, it is a legal fiction to say that the Act does not affect or impinge upon fair use. While the Act does not proscribe the use of copies, it does proscribe, the means to make the copies. The ends are not proscribed but that is irrelevant since the means are. It is akin to passing an "Entry into the Public Lakes Act," declaring it is legal to use public waterways, but that the entrance into the water itself is illegal.

Since trespass against a copyright only exists in terms of infringement, it is antithetical to say that a device that is non-infringing of the copyright runs afoul of copyright law. You can only infringe a copyright. You can only infringe a patent. Prior to the DMCA, this was the case. The DMCA adds a new type of violation, however, without any actual infringement.

The most obvious type of copyright infringement occurs when a member of the public intends to and copies the work knowingly in violation of the previously established fair use doctrine. These are the users intending to infringe to make a profit.

^{156.} DMCA ch. 12 (2003).

The DMCA has created a second type of violator or pseudo-infringer under title 17. These type of violators tend to be professionals and corporate entities who make a product that could be used to infringe, but is also commercially used for legitimate, non-infringing purposes. A prime example is the DeCSS software and related codecs that allow Linux users to utilize DVD-ROM players on personal computers that can also be used to wholesale copy DVD movies.¹⁵⁷ The rabidly litigious entertainment industry has even gone after the publication of articles that address weaknesses in current copying safeguards, claiming that such publication is a violation of the DMCA in that it would give a savvy reader the ability to access means to circumvent technological safeguards protected by the DMCA. The RIAA even threatened to sue a Princeton student who did not even develop or traffic in a technology primarily designed to circumvent a technology.¹⁵⁸ He simply published the fact that there was a flaw, or loophole in an existing piece of technology, namely that one could hold down the shift key in windows to circumvent access controls. He did not develop the technology and it was pre-existing. There was no credible DMCA violation, but a lawsuit was threatened.¹⁵⁹ As recently as late April of this year, the RIAA filed a new lawsuit against 477 computer users.¹⁶⁰

In theory, the next few sentences may subject the publication of this Article to a DMCA lawsuit. At some point, many of us have visited a web site where we could not right-click on a scanned picture, or other graphic, in order to access the menu to copy the picture or graphic to our hard drive.¹⁶¹ The site owner uses technology to prevent the browser software from copying. Right-clicking on the desired picture prompts a pop-up window warning message along the lines of "sorry you don't have access to that." This gives you a few options. The first is to simply select "view source" from a pull-down menu and find within the HTML code the file location of the picture, text, or sound that you want to copy.

Another example of easily circumventable protection in popular software is the built in protection in Adobe Acrobat Reader. The author of an Adobe Acrobat file can select what sort of access and copying they want to place on their document, including preventing the viewer from

^{157.} Universal City Studios, Inc. v. Reimerdes, 111 F. Supp. 2d 294, 319 (S.D.N.Y. 2000). 158. *Id.*

^{159.} EEF on SunnComm's Threat Against Princeton Student, Oct. 9, 2003, available at http://www.eff.org/news/archives/2003_10.php (last visited Dec. 31, 2004).

^{160.} Ted Bridis, *Music Industry Sues 477 More Computer Users*, ASSOCIATED PRESS, Apr. 29, 2004, *available at* http://www.usatoday.com/tech/news/2004-04-29-riaa-477-more-suits_x.htm (last visited Dec. 31, 2004).

^{161.} In my case, this came up when a friend of mine had just had her fourth child, and wanted to download the picture of her newborn from the hospital's web site, but the web site would not allow you to copy the picture. She called me to ask me how to get the photo.

cutting and pasting text from the document, as well as preventing the reader from being able to print the document. However, the tools for bypassing being locked out of printing the document are available to most consumers. There exists, within more than the past few builds of Microsoft Windows, a way to circumvent the Adobe copyright protections.¹⁶² All you have to do is have the document visible within an active window and press "Control-Alt-Print Screen" to copy the entire active window as a picture, which you can then paste into a graphic program such as Microsoft Paint. You could also simply hit the "Print Screen" button to get a snapshot of the entire contents of the screen as it is visible to you (including the windows bar at the bottom), and paste this into a graphic program as described above. While this technique could be used to copy an entire paper, it would not be worth the time. You are not copying the text like you would be doing in a word processing program. It is more akin to someone using a camera, taking a photo of every page of a book, and then stapling the photos together to avoid buying the book. In theory, you could use the technique to make screen captures of DVD movies you are watching on a computer. If you were fast enough to make copies of each of the thirty frames per second in a movie, you could paste them together into a slide show and watch a really mediocre version of the film.¹⁶³

However, under the theory advanced by the RIAA in the Princeton situation, and *Corley*, the very fact that I have made this knowledge (albeit, unlikely to really affect the market) available, as "part"¹⁶⁴ of my Article, could be problematic. This has a chilling effect on free speech. While there are obviously many primary infringers who cloak themselves in the guise of these unintentional secondary type of violators, they are not a significant part of the landscape at issue in copyright, and are not therefore, among the focus of this Article.

With the way the DMCA stands on its face, the entertainment industry would have to do very little to threaten innocent home users with liability for infringement under the DMCA, as the home entertainment industry continues its progression towards the full integration of digital media.

^{162.} The local freely distributed newspaper, the *Post Express*, a publication of the *Washington Post*, is available online in Adobe format. For some reason, this newspaper, which you can pick up for free on the street, cannot be reprinted from the online version. However you can copy the crossword section every day using the tip in the text.

^{163.} It would only take 162,000 frames for a 90 minute movie.

^{164.} Less than one page in a 70+ page paper. 321 Studios v. Metro Goldwyn Mayer Studios, Inc., 307 F. Supp. 2d 1085 (N.D. Cal. 2004).

C. The DMCA can be Abused by Copyright Holders Who Use Technology to Prevent Copying Access to Works Just Before They Enter the Public Domain

A fair use of any copyrighted work is theoretically always available to the public as a legal right. The DMCA, by eliminating the means to make a copy of a work, takes this right away. If the means to make any copy are proscribed, then there is no way to make a fair use copy. Thus, material that is in the public domain is taken away.

The DMCA makes no attempt to strike a perfect balance to protect what is in the public domain. It indiscriminately takes it out of the public domain and returns all realistic rights and access to the work back to the private copyright owners. This is at odds with traditional notions of copyright. "Copyright owners, however, have never been entitled to control all uses of their works. Instead, Congress has accorded copyright owners some exclusive rights, and reserved other rights to the general public."¹⁶⁵

D. The DMCA Allows Copyright Holders to Dictate What the Fair Use of Their Product Will Be

While this is the reality of the situation, it is antithetical to the notion of fair use. Fair use was born out of the reality that copyright holders did not want their works copied at all. The very nature of a fair use suit is that a copyright holder sues a fair user because the holder does not like the copying of the holder's work. For the most part, if left to the copyright holder, the holder would never allow any fair use copying.

Eradicating fair use, essentially makes parody, satire, and sampling nonexistent. Those who wage litigation campaigns should focus on the fact that the U.S. Supreme Court will likely be displeased that this new unconstitutional law has taken all of the teeth out of their landmark holding in *Campbell v. Acuff Rose Music.*¹⁶⁶ Once all music is locked up in digital format, the entertainment producers can use access and copy controls to prevent any sampling. The controls block all copying. The controls are neutral as to the amount you may want to take.¹⁶⁷ If you cannot copy, you cannot make a quality sampling of the music, and sampling has little to no effect if you have to use a significantly degraded copy of the music.

What is even worse, is that the DMCA allows some copyright holders to prevent other copyright holders from granting access to their works.

^{165.} JESSICA LITMAN, DIGITAL COPYRIGHT 174 (2001).

^{166. 510} U.S. 569 (1994).

^{167.} Amount of the work copied being a key factor in fair use analysis.

Even though § 106 grants copyright holders six distinctive copyrights,¹⁶⁸ the DMCA allows other copyright owners to prevent a copyright owner from allowing others to copy his work. In other words, you may want to grant access to your work, but if the means you provide someone to copy your work could be used to copy someone else's protected work, you cannot grant those means. The *Sony* Court recognized that there were a substantial number of non-greedy, even neighborly, benevolent copyright holders¹⁶⁹ who wanted their works to be available to be copied and that a holding preventing their right to authorize copying would violate their copyright rights.¹⁷⁰ The DMCA has made such benevolence irrelevant.

E. The DMCA Makes No Sort of Mr. Rogers Exception

The DMCA allows some copyright owners to use their rights under § 1201 to stymie the rights of others. They are able to dictate to that copyright owner when they can grant access to copying and when they cannot. For example, if Steven Spielberg were to suddenly decide that he was going to contact the copyright office and let "Saving Private Ryan"¹⁷¹ pass into the public domain, then even the holders of a copyright, who in the end may only own a copy of their movie in a format that the studio recorded it in, would be blocked from the access to make copies of their own work. Spielberg would be precluded from buying technology that would allow him to copy a DVD of his own movie, in which he owns the

168. Section 106 states:

17 U.S.C. § 106 (2004).

Subject to sections 107 through 122, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:

⁽¹⁾ to reproduce the copyrighted work in copies or phonorecords;

⁽²⁾ to prepare derivative works based upon the copyrighted work;

⁽³⁾ to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;

⁽⁴⁾ in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly;

⁽⁵⁾ in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly; and

⁽⁶⁾ in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission.

^{169.} Including, in that case, Mr. Rogers.

^{170.} Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 445 (1984).

^{171.} Assuming, of course, that he holds the copyright on it.

copyright. In theory, this gives a great deal of power to smaller recording studios that smaller bands pay to make a master tape for them.¹⁷² The recording studio can lock up that master with technological protections, forcing the band to work with them indefinitely. The band cannot even take their own master tape somewhere else to get it copied, because they would be violating the DMCA in copying their own work. The DMCA simply eviscerates the rights of copyright holders under § 106.¹⁷³

Currently, David Bowie, who owns the copyrights in his music, is offering software directly to the public that would allow consumers to mix and alter his music.¹⁷⁴ He has done this to foster creativity and development of the arts. Even though Bowie is providing it for a legitimate purpose in accordance with his own copyright, if that software can circumvent protection in someone else's work, there will be a problem under the DMCA.

The DMCA, on its face, stifles fair use. By prohibiting the sale of technology that can safeguard a technological measure, the DMCA explicitly prohibits trafficking in technology that controls access to protected and unprotected works because the DMCA only speaks to the technology itself.¹⁷⁵ If the same type of technology is used to control access to a copyrighted work, as well as control access to a non-copyrighted work (which a member of the public has a right to copy in any way, shape, or form), then technology which allows the public to circumvent the protective measure is in violation of the DMCA.

If a protective measure, such as CSS for DVDs, currently affords protection to a new movie, like "Terminator 3," which is still under copyright, and is the same technology used to protect the DVD content of a movie in the public domain, like Lumiere's "Shot to the Moon,"¹⁷⁶ then the technology which allows a consumer to copy "Shot to the Moon" is illegal under the DMCA, because it allows the copying of protected movies. Even if that practice is questionable at the very least, there is a strong incentive for entertainment producers to be sure to re-record a work just prior to its passing into the public domain and use the latest copy and access controls on it.¹⁷⁷

^{172.} Fortunately, Spielberg owns a large part of the studio (Dreamworks) that produces his work.

^{173. 17} U.S.C. § 106.

^{174.} David Bowie: Please Remix My Songs, INDUSTRY NEWS, Apr. 26, 2004, at http://www. boycott-riaa.com/article/print/11741 (last visited Dec. 31, 2004).

^{175. 17} U.S.C. § 1201 (2004).

^{176.} Or even the TV films at issue in Dastar.

^{177.} LITMAN, supra note 165, at 165 ("... [c]ontrol over reproduction could potentially allow copyright owners control over every use of digital technology in connection with their protected

The primary purpose of the technology that a fair user utilizes need not even be to assist copying, just that the technology circumvents the technology used to protect a work. The DMCA allows the copyright owner to tell you how you are going to watch the work. It is quite the megalomaniacal statute.

F. The Commercially Significant Exception Rings Hollow

Section 1201(a)(2)(B) prohibits the sale or importation of technology that "has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title."¹⁷⁸

Considering that the protection is digital in nature, however, any circumvention will be digital as well. What are the odds that someone will find a piece of technology that performs some other commercially useful function, but for some reason, also has the added benefit of circumventing a technological protective measure? This is not like George Washington Carver tolling around in his lab, finding new uses for peanuts. No such item exists.

The only conceivable type of device that might work would be some sort of mass decryption machine that breaks down any encryption sequence. The only legitimate market for this, though, would seem to be people who enjoy cryptoquotes and such similar word games. The odds of such a piece of technology that could copy an entire DVD existing in another market seem slim.

This closes up the "otherwise substantially non-infringing use" loophole in that the infringement issue falls to the wayside as the issue becomes one of circumvention.¹⁷⁹ Even though the technology may have commercial significance, and the act of copying may be non-infringing from a fair use standpoint, the means of getting there, the circumvention itself, is proscribed. In this context, the DMCA still allows the ends, just not the means. In that sense, fair use starts to become meaningless.

While engineers in labs may have access to specialized equipment that has other uses, and may also circumvent some protection means, these tend to be expensive pieces of equipment that are not going to be trafficked to the average consumer. At this point, the best bet for finding a copying means would be to turn to the arcane arts, as the DMCA only prohibits technological means, not sorcerous ones.

works. This is not what the Congresses in 1790, 1870, 1909, and 1976 meant to accomplish when they awarded copyright owners exclusive reproduction rights.").

^{178. 17} U.S.C. § 1201(a)(2)(B).

^{179.} Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417 (1984).

VIII. BUILDING THE PERFECT LITIGANT OR THE SEARCH FOR THE HOLY DIGITAL GRAIL

A litigation campaign to strike down the DMCA should be waged much in the same way that civil rights activists were finally able to get the U.S. Supreme Court to begin striking down discrimination laws by presenting the Court with a perfect litigant. In the case of *Brown v. Board of Education*,¹⁸⁰ the real parties at issue were a large class that the Court could not say no to, children.¹⁸¹ In that case, the Court could not condone the overwhelming detrimental effects that would come about from denying an equal education to minority children.¹⁸²

While a litigation campaign to strike down the DMCA will be hard pressed to find a plaintiff that can pull at the Court's heart strings the same way that children can, a litigation campaign can learn from *Brown* that the plaintiffs in this case must unite and file a declaratory action together.¹⁸³ Then, they can show the Court how other substantial industries are being affected by the DMCA and its unconstitutionality.

The DMCA implicates many types of technology: HCCPs, hard drive back-up software, interoperability parts for high-end and low-end stereo and video equipment. Manufacturers of all of these types of technologies are potential litigants who could challenge the DMCA. The perfect litigants would be those whose technological innovations are hindered by the DMCA, and hardware manufacturers who want to ensure interoperability of parts, but cannot meet the 1201 (f) exception because their product is not primarily computer software.¹⁸⁴ Such litigants would include the manufacturers of MP3 players, and related video content mass storage device providers, and manufacturers, like Toshiba, who make the subcomponents of their units, namely small hard drives.

Manufacturers of technologies associated with hard drives should also join in as litigants. Data recovery and restoration is a growing industry. Even in the world of lawyers, and the development of electronic discovery, the ability to get a copy of an opposing party's hard drive during document production can be invaluable. There are many software manufacturers who make products that allow the quick mirroring of the entire contents of a hard drive quickly and easily. These products work at a basic level by copying an entire hard drive bit by bit. In theory if a user has protected or

184. 17 U.S.C. § 1201(f) (2004).

^{180. 347} U.S. 483 (1954).

^{181.} Id. at 486.

^{182.} Id. at 493.

^{183.} Id. at 486.

encrypted files, and these copying technologies ignore and bypass those safeguards, the trafficking of that technology would be a DMCA violation. This violation would exist even though there is no intent whatsoever in that situation to copy the underlying source material to avoid paying for it or to infringe a copyright holder's rights.

These hard drive copying technologies have substantial non-infringing uses. When consumers want to upgrade their computers, they often want to migrate their documents and multimedia files from the old unit to the new. However, certain legitimately downloaded files may be protected by digital rights management software that prevents the copying of the computer file. The copying and restoration technology can be used to retrieve files lost in the event of a system or hard drive crash, which is a common occurrence among personal computers. In all of those situations, the consumer is simply trying to make sure that they have continued access to a work that they have paid for and want to enjoy legitimately.

The best litigants whose technology is hindered by the DMCA are the manufacturers of HCCPs and the manufacturers who supply them with the component parts to make the units. HCCPs are simply the latest innovation in what has become a staple article of commerce over the last twenty-five years,¹⁸⁵ the portable personal music player.

In 1979, Sony developed the first Walkman,¹⁸⁶ a radio and tape player in one unit.¹⁸⁷ Since 1979, we have seen the improvement in the tape player, as well as the innovation of new technologies to this staple article. We have seen the introduction of the personal compact disc players in the late 1980s and their rise in the 1990s. MiniDisc technology developed in the mid 1990s, and today, we have HCCPs. Each unit's format was an improvement over the last, in that it allowed the consumer to carry more music than the previous format.

An HCCP litigant should argue that they have invested a great deal of their money in developing technologies for this staple article of commerce. They could argue that any copying technology associated with the HCCP is designed to allow fair use copying by a consumer who simply wants to take the music they paid for and convert it into a portable format.

These same litigants should be able to provide proof that after the DMCA, they spent less money than before on R&D of their technology because of fear that they would spend too much money on a technology and subsequently find out it was proscribed under the DMCA. It would be important to have a device that had sufficient safeguards built into its

^{185.} Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 426 (1984).

^{186.} Steve Schoenherr, *Recording Technology History, at* http://history.acusd.edu/gen/recording/notes.html (last visited Dec. 31, 2004).

^{187.} Id.

technology to prevent rampant serial copying and distribution. Furthermore, the HCCP litigants should develop a variety of solutions allowing usage of their technology in its intended fair use purpose, while still preventing infringement. The more options they offer a court to prevent rampant infringement, the harder it will be for a court to rule against them. A variety of solutions are discussed in Part IX of this Article.

The adoption of standards for their software would allow copying to a PC and the HCCPs, but would do so in a format that prevented Internet distribution of the file. In the alternative, the format could use a basic encryption that locked the file so that it could only play on the consumer's HCCPs. Another workable system would be some sort of plug-in component similar to a credit card, or USB thumb drive, that would identify and associate a particular user with his or her hardware. Consumers would have to use their access card, key, or code to sync up all of their devices. They would also pay a fee every time they added another device to the code.

The genius of current technology is that it is possible to use unique digital serial numbers that are encoded on the computer chips of all devices. This is how your cellular phone provider knows it is your phone accessing the network when you make a call. They maintain a database that says a specific serial number on a chip in your phone is assigned to you. Manufacturers can take advantage of that type or serial number system to develop a system that utilizes those unique numbers to make sure that a specific copy is limited to the unique consumer who owns the device, and cannot be unfairly distributed to anyone else.

The system they pick does not have to be perfect. Any of the foregoing systems should work. What is important is that the hardware manufacturer must step into court with copying technology that is well thought out in a technological way that balances fair use against rampant distribution. The manufacturer must show that there is no way to make their staple items work in a fair use manner. In other words, there is no way to transfer the entertainment data to a HCCP without circumvention.

That same manufacturer would be well-served to make a home nonportable unit that stored video and music files. The manufacturer would argue that the goal of science, and the development of the staple articles of home entertainment, has been to improve the product. For home entertainment, the progress has always been to make a better fidelity, higher capacity format.

The staple articles have also developed with an eye for allowing the consumer to fix his legitimately owned music in a medium that he prefers, such as mix tapes or CDs. Wholly proscribing any technology that serves that purpose discourages the natural progress of technology, with respect to those staple goods in this particular area of science and thus, is at cross purposes with the U.S. Constitution.

The DMCA unfairly pits copyright against patents, or technological innovation, and the U.S Constitution cannot abide by allowing one aspect of the Constitution to trample on another when there is no such need. However, innovation in science is not like innovation in entertainment. While entertainers may still be driven to create, and will create in the face of no protection for their work, the same cannot be said for technological innovation. While inventors may still have the drive to create, even in the face of the DMCA, it takes millions of dollars to bring most technology to bear. If the company funding the inventor feels that the DMCA increases its risk of having a product it cannot sell, then as risk increases, companies will simply invest less in that specific area of technology. Less investment in R&D means slower development of the technology.

The weaknesses in the entertainment producers' case would pale in comparison to the strengths they enjoy. At best, they could argue that an unchecked system would allow consumers to copy their entertainment files to a computer where they could be used and shared by everyone. However, manufacturers who use a copying technology that relies on some sort of access code or hardware key on the consumer's part, allows the file to go to a device that the consumer, and no one else, owns, and prevents widespread Internet distribution of the underlying content, would be able to argue that they are meeting the goals of the DMCA without eradicating fair use.

IX. SOLUTIONS

A. We Can Build a Better Box

The technology exists to solve the underlying problems and protect fair use. The bigger problem is the entertainment producers do not want the public to have that power. They want to control access to the ability to copy, so that the public always has to buy their copies from the entertainment producers. I will discuss below some possible solutions that can be incorporated into the DMCA, making sure that entertainment producers guarantee some real access to fair use, while at the same time protect their interests.

B. ROM vs. RAM

First off, there should be a switch to a RAM format. CDs and DVDs are currently released in a ROM format. ROM stands for "read only memory," which means that no content can be written to the medium after it is initially recorded. An alternative to this is a "random access memory," or RAM, format, which allows recording to the medium after the original recording is made. Instead of CD-ROMs and DVD-ROMs, the content would be released in CD-RAM and DVD-RAM. In a DVD context, the original movie would still be recorded on the DVD. Elsewhere on the DVD would be an access and copy control system that would allow a set number of copies, as well as a set number of partial copies.¹⁸⁸ Each time a copy is made, the copy control will update a section of the RAM medium to account for that copy. The technology could encode the copy so that only one copy could be made in the case of a partial copy or a mix DVD, so that you would not have to recreate a lot of work. Once the maximum number of copies is reached on the original no more copies could be made.

A system similar to this is in use currently by Apple Computer's iTunes, which allows music to be downloaded on a pay-as-you-go system.¹⁸⁹ Strong copy controls are built into the downloaded file. Downloaded songs can be burned to a CD ten times,¹⁹⁰ and then no more.

RAM capability for CDs and DVDs currently exists in the CD-RW and DVD-RW formats.¹⁹¹ In fact, RW technology has been around for years. This is likely the best solution because the technology exists today to make this happen. It should not be too difficult to implement a software control that would control the number of copies made. Similar DRM technology is being used now for computer files.

C. Clearinghouses and Fees

Another option is to set a statutory rate for making copies, akin to the statutory rate for radio play of music, and set up clearinghouses like ASCAP and BMI. The legitimate copy would still be locked up with access and copy controls. However, the copying technology could charge your account or credit card when you make the copy. Then, that same

^{188.} The exact formula to determine a fair number of copies, a fair amount to be a partial copy, and how many copies a consumer can make is something that can be determined by the legislature.

^{189.} Apple.com, iTunes Web Site, available at http://www.apple.com/itunes/store/ (last visited May 9, 2005).

^{190.} Ten is an arbitrary number, but it does allow a reasonable amount of fair use. It is better than the number zero normally afforded under the DMCA.

^{191.} RW stands for "rewritable."

technology would contact the appropriate clearinghouse entity and, using the digital ID from what you are copying, get a pay-per-use authorized circumvention from the clearinghouse, which then allows you to make the copy. Finally, the recording technology system used pays the fee to the clearinghouse for what you have copied.

Another clearinghouse option is for the clearinghouses to maintain online servers of the works in various digital formats. The consumer would place their legitimate copy into their recorder. The digital ID from the legitimate copy would be verified and the clearinghouse copy would then send the copy to you for download.

Another option is to charge a fee on copying technology at the time of sale. This was done under the AHRA for the sale of DAT recorders.¹⁹² Lastly, the clearinghouse could distribute the money in a manner akin to the way AHRA money is doled out.

D. Internet Copy Solutions

Since the purpose of the DMCA was to prevent mass network dissemination, copy and access controls could be tailored specifically to the Internet problem. Legislation could be put in place to watermark files that have digital rights management (DRM) features built in. The DRM could be designed to prevent the e-mailing, FTPing, peer-to-peering, or any other sharing of the files, without an explicit authorization or the payment of a fee.

Lastly, legislation could simply enforce stricter penalties for actual infringement. In theory, that should still serve as a deterrent. There are a variety of other options. There were options that were available to protect fair use when the DMCA was enacted. Luckily, they are still available. It is likely no coincidence that the entertainment industry pushed for a system like the DMCA, allowing for no copies.

Currently Congress is considering in committee H.R. 107, which in its current form would call the final version of this bill "The Digital Media Consumers' Rights Act." This bill proposes to amend, among other titles of the U.S. Code, title 17 to restore some degree of fair use.¹⁹³ Section 5 of the bill states:

b) FAIR USE RESTORATION — Section 1201(c) of title 17, United States Code, is amended —

(1) in paragraph (1), by inserting before the period at the end the following: "and it is not a violation of this section to circumvent a

^{192. 17} U.S.C. § 1004 (1992).

^{193.} Id.

technological measure in connection with access to, or the use of, a work if such circumvention does not result in an infringement of the copyright in the work;" and

(2) by adding at the end the following new paragraph:

(5) It shall not be a violation of this title to manufacture, distribute, or make noninfringing use of a hardware or software product capable of enabling significant noninfringing use of a copyrighted work.¹⁹⁴

If the bill passes, specifically section 5, it would reestablish some of the protections afforded under *Sony* and would restore much of the incentive for innovation stolen by the DMCA.¹⁹⁵ This measure, by lowering the threshold to "significant," would allow manufacturers to invest in R&D, with less risk in HCCPs, and in technological areas where there is clearly more than significant demand for such innovation.

X. CONCLUSION

Digital is here to stay whether we like it or not. However, we need the courts to realize that digital is a boon, not an evil, and the DMCA was the evil that escaped from the box. We must get courts to think outside of their preconceived notion of what is the actual Pandora's box. Regardless of the entertainment industry's fears, Congress cannot pass a statute that effectively, though not expressly on its face, renders a constitutional clause ineffective in terms of copyright. This would be like Congress attempting to outlaw the sale of bullets, claiming that such a statute does not offend the Second Amendment because one can still buy guns. The DMCA hinders fair use and the progress of legitimate copying and storage technologies, plain and simple. In essence, the DMCA is punishing consumers who want to embrace new technology.

The RIAA and the MPAA, as well as other entertainment producers and their related groups, tend to look past the words "primarily designed" in the DMCA. These words seem to indicate an intent requirement. These groups hone in on the ability to circumvent as being the *sine qua non* of a DMCA violation. Even providing know-how is attacked, as in the APEX situation. Such a heavy handed attack has consequences.

The DMCA is hindering the development of technology in basic staples of commerce. There exists many other better legislative options today. These options existed even at the time the DMCA was enacted, which if

^{194.} Id.

^{195.} See id.; Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417 (1984).

exercised, would have hindered no more innovation of technology than was necessary. However, these options were not part of the statute.

It is important to bear in mind that the judges should not be blamed. When looking at the leading cases, it is important not to blame the judges for what may appear to be a lack of understanding of the underlying technologies at issue. Judges are not expected to be technical masters of all subjects that come before them. We should no more expect a judge to understand the intricacies of binary chip design and machine code, than we should expect them to automatically and completely understand how lasers affect vitreous fluid in a medical malpractice case. It is the responsibility of the parties, and by default, the lawyers handling the cases, to educate the judges as to technical issues via expert testimony and demonstrative evidence.

Lawyers who hope to prevail on a claim of the DMCA's unconstitutionality where others have failed must be prepared to thoroughly train the judge in the technical issues underlying their case. At the very least, the attorneys should introduce evidence including the quality, or lack thereof, of copies made from DVDs and CDs with digital protection, so that the judges can see that these copies are severely substandard. The judges could see such copies would not constitute the type of fair copy use anticipated by section 106.

The perfect litigant to challenge the DMCA should demonstrate how innovation in their field is being unduly restricted by the DMCA, how there is a demand for their product, that it primarily would be used for fair uses, that the fair use can only be accomplished through circumvention, and that they have built in safeguards to minimize as much infringement as possible.

That litigant should also point out that the entertainment producers possess options they could use to guarantee fair use, while still protecting their works. On the other hand, the litigant should show that the statute does not require them to use this less restrictive technology. Hopefully the perfect litigant will be able to convince the Court to put the true evil back into its box.