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# BRAVE NEW WORLD, TEN YEARS LATER: REVIEWING THE IMPACT OF POLICY CHOICES IN THE IMPLEMENTATION OF THE WIPO INTERNET TREATIES' TECHNOLOGICAL PROTECTION MEASURE PROVISIONS

*Gwen Hinze*<sup>†</sup>

## ABSTRACT

*The 1996 World Intellectual Property Organization (WIPO) treaties, the WIPO Copyright Treaty (WCT) and WIPO Performances and Phonograms Treaty (WPPT), heralded the start of the Brave New World of legally enforced digital locks on copyrighted works—technological measures that can be used to restrict access to, and use of copyrighted works. Unfortunately, neither these legal innovations, nor the digital locks they were intended to protect, have proven to be effective at containing widespread digital copying, suggesting that the basic policy approach behind the WCT and WPPT may have been overtaken by new technologies. Nevertheless, because many countries have adopted the treaties and many others are being urged to do so in a variety of international trade contexts, it appears that the treaties are a fact of life for many national policymakers. At the same time, the U.S. experience with the Digital Millennium Copyright Act of 1998 has shown that legal protection regimes for technological*

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*protection measures (TPMs) can have adverse consequences on a range of important public policies that reach well beyond the sphere of copyright regulation. Based on the experience of the countries that have implemented the WIPO Internet Treaties' TPM obligations, it is clear that policy choices about the scope and structure of the legal protection provided to TPMs have significant implications for both national public policy priorities and access to knowledge on the global level.*

*At the tenth anniversary of the adoption of the WCT and WPPT, this paper considers the range of policy options available to countries contemplating implementation of the WCT and WPPT, and what lessons can be learned from countries that have implemented these obligations about how, and how not, to structure legal protection for TPMs. It provides a comparative review of the TPM legal regimes of the United States, the European Union, Australia, and the WIPO Draft Law on Copyright and Related Rights, and analyzes the policy implications flowing from the differences in scope and structure of those regimes. It concludes that none of the three most widely adopted implementation models provide adequate safeguards to prevent TPM laws from encroaching on non-copyright public policies such as national competition regulation, citizens' access to knowledge, freedom of expression and technology innovation. Since WCT and WPPT compliance does not require countries to adopt the DMCA's TPM regime, nor the European Union or WIPO draft law implementation models, this paper concludes by providing countries with a set of "damage minimization recommendations" for how to structure TPM legal regimes to avoid some of the detrimental consequences experienced under the United States' TPM regime.*

## INTRODUCTION

The 1996 World Intellectual Property Organization (WIPO) treaties, the WIPO Copyright Treaty (WCT) and WIPO Performances and Phonograms Treaty (WPPT), heralded the start of the Brave New World of legally enforced digital locks on copyrighted works—technological measures that can be used to restrict access to, and use of copyrighted works.

Digital locks were not themselves new. Technological copy restrictions had existed for over a decade. They had been widely used on computer software for a period, then largely abandoned by the software industry, when it became clear that they were unpopular with customers and ineffective at preventing infringement. What changed in 1996 with the adoption of the WCT and WPPT was that

rightsholders' technological measures were—for the first time—required to be enforced by legal sanctions as a matter of international law. While certain national legal systems, most notably in the U.K., had previously provided limited legal protection to technical copy restrictions, the WCT and WPPT were the first *international* legal instruments, to contemplate legal protection for technical measures that could restrict acts beyond mere reproduction of a copyrighted work. Technological measures no longer needed to be self-protecting—or un-hackable—to protect a copyrighted work. Rightsholders could instead rely on violation of the law forbidding circumvention of the technical measure to control use of and *access* to, their works. It is hard to overstate the importance of this. Anti-circumvention rules controlled by private rightsholders suddenly took precedence over copyright law, and the public policy values embodied in it. This was a radical shift indeed, and it is for this reason that the adoption of the WCT and WPPT marks the key turning point in modern global information policy regulation.

Unfortunately, neither these legal innovations, nor the digital locks they were intended to protect, have proven to be effective at containing widespread digital copying, suggesting that the basic policy approach behind the WCT and WPPT may have been overtaken by new technologies. Nevertheless, because many countries have adopted the treaties and many others are being urged to do so in a variety of international trade contexts, it appears that the treaties are a fact of life for many national policymakers. At the same time, the U.S. experience with its WCT implementation law, the Digital Millennium Copyright Act of 1998, has shown that legal protection regimes for TPMs can have adverse consequences on a range of important public policies that reach well beyond the sphere of copyright regulation. Based on the experience in the United States, and in other countries that have implemented the WIPO Treaties' technological protection measures (TPMs) obligations, it is now clear that policy choices about the scope and structure of the legal protection provided to rightsholders' TPMs have significant implications for both national public policy priorities and access to knowledge on the global level.

At the tenth anniversary of the adoption of the WCT and WPPT, it is appropriate that we consider two questions:

- (1) Have legally enforced technological protection measures been successful at their stated purpose of preventing widespread digital copyright infringement?

(2) What lessons can be learned from those countries that have implemented these obligations about how, and how not, to structure legal protection for TPMs?

The first question has been the subject of various papers.<sup>1</sup> In the United States, the answer is clearly no. After seven years' experience with the Digital Millennium Copyright Act (DMCA), it is clear that these provisions have not been successful at preventing—or even slowing—widespread copyright infringement. There is mounting evidence that content-based digital rights management technologies will never be successful at doing so, since in a networked world, it only takes one technologically-savvy person to break the DRM and the work will be available in an unprotected format for all users, for all time.<sup>2</sup>

At the same time, the overbroad U.S. legal protection regime has caused serious collateral damage to consumers, scientific researchers, competition and technological innovation. Moreover, from American consumers' perspective, the statutory safeguards that were intended to protect their ability to engage in non-copyright infringing uses have failed to do so. Most classes of users of copyrighted works have lost access to protected digital works, while technologically sophisticated commercial infringers now routinely flout the legal bans imposed by the DMCA.

Given that, this paper focuses on the second question. It starts from the position that particular features of the U.S. TPM legal regime have permitted misuses, which have in turn caused considerable collateral harm to consumers, scientific research, education, freedom of expression, competition and technological innovation. It surveys the range of policy options open to countries obligated to implement TPM obligations, and then considers whether alternative methods of framing legal protection for TPMs—such as those adopted in Australia and the European Community—might do less damage to important non-copyright public policy goals than experienced under the DMCA.

Part One of the paper considers the legal framework established by Article 11 of the WCT and Article 18 of the WPPT and the various policy options open to countries looking to implement their

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<sup>1</sup> See, e.g., Fred von Lohmann, *Measuring The Digital Millennium Copyright Act Against the Darknet: Implications for the Regulation of Technological Protection Measures*, 24 LOY. L.A. ENT. L. REV. 635 (2004).

<sup>2</sup> Peter Biddle, Paul England, Marcus Peinado & Bryan Willman, *The Darknet and the Future of Content Distribution*, ACM WORKSHOP ON DIGITAL RIGHTS MANAGEMENT (2002), available at <http://www.crypto.stanford.edu/DRM2002/darknet5.doc>.

provisions. Part Two reviews the legal regime established by the U.S. Digital Millennium Copyright Act and highlights particular aspects of that law that have resulted in detrimental impacts on non-copyright public policy priorities. Part Three provides a comparative review of the TPM legal regimes of the European Union, Australia, and the WIPO Draft Law on Copyright and Related Rights, and analyzes the policy implications flowing from differences in the scope and structure of those regimes. Based on that review, Part Four sketches out a set of “damage minimization recommendations” for how to structure legal protection for TPMs to avoid some of the detrimental consequences experienced in the United States. It makes five key policy recommendations:

- (1) The scope of legal protection for TPMs should be limited to the boundaries of national copyright law by requiring a nexus between the anti-circumvention ban and copyright infringement;
- (2) Countries that choose to regulate the manufacture and supply of circumvention devices and services should establish a flexible mechanism for permitting access to such technologies for non-copyright infringing purposes;
- (3) Countries should establish a mechanism to regulate potential anti-competitive misuse of TPMs in a timely manner;
- (4) TPM circumvention penalties should be structured carefully to minimize penumbral chill and to incentivize socially beneficial activities such as scientific research, education, cultural preservation by archives, libraries’ provision of access to knowledge resources, and facilitating access to disabled communities.
- (5) TPM regimes should incorporate a regular review of their effectiveness and impact on non-infringing uses of technologically protected works, and a process for granting meaningful exemptions to the full scope of any circumvention ban to make legitimate non-infringing uses of digital works.

But first, a few cautionary notes are in order. By providing these recommendations, I do not mean to suggest that any adverse impacts of TPM legal regimes on non-copyright public policies will be

eliminated. That is not the case. These provisions were controversial at the time they were adopted in 1996, and have only become more so in the intervening years. The recommendations in Part Four are intended only as “damage minimization principles,” not “best practices” in any normative sense. Second, the highly technical nature of TPM regimes has hindered appreciation of their significant role in creating the infrastructure that can restrict access to knowledge across the globe. Discussions about the features and scope of TPM regimes have become almost exclusively the purview of copyright lawyers. Several papers have already comprehensively, but somewhat abstractly, described the different implementation approaches taken by certain countries.<sup>3</sup> But it would be a mistake to regard this as just another exercise in comparative law. How TPM legal regimes are structured is at the very heart of countries’ ability to obtain access to knowledge needed for development and the improvement of the social conditions of their citizens. The stakes here are very high indeed. It is for this reason that we need to take a clear-headed look at the policy justifications given for the WCT and WPPT TPM provisions, and what those provisions actually require of countries.

#### I. INTERNATIONAL LEGAL FRAMEWORK—SCOPE OF WCT AND WPPT OBLIGATIONS

The international obligation to provide legal protection for rightsholders’ technological protection measures used on copyrighted works is set out in Article 11 of the WIPO Copyright Treaty. Article 11 of the WCT provides:

Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.<sup>4</sup>

Article 18 of the 1996 WIPO Performances and Phonograms Treaty contains a similar obligation for phonograms (sound recordings) and

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<sup>3</sup> See, e.g., JEFFREY P. CUNARD, ET AL., CURRENT DEVELOPMENTS IN THE FIELD OF DIGITAL RIGHTS MANAGEMENT, WIPO document SCCR/10/2 (Aug. 1, 2003), available at [http://www.wipo.int/documents/en/meetings/2003/sccr/doc/sccr\\_10\\_2\\_rev.doc](http://www.wipo.int/documents/en/meetings/2003/sccr/doc/sccr_10_2_rev.doc); June M. Besek, *Anti-Circumvention Laws and Copyright: A Report from the Kernochan Center for Law, Media and the Arts*, 27 COLUM. J.L. & ARTS 385 (2004).

<sup>4</sup> WIPO Copyright Treaty, Dec. 20, 1996, S. Treaty Doc. No. 105-17 (1997), 36 I.L.M.65 (1997) [hereinafter WCT].

performances (related rights).<sup>5</sup> References in this paper to Article 11 of the WCT include Article 18 of the WPPT unless otherwise stated.

The scope of legal protection required by Article 11 of the WCT has been a matter of ongoing debate for the last ten years. Countries implementing the WCT and WPPT face a number of choices, each with different policy implications.

First, they must decide whether new anti-circumvention legislation is required at all, or whether the WCT obligations could be met by existing national secondary copyright liability doctrines. At the Diplomatic Conference leading up to adoption of the Internet Treaties and in the subsequent discussions about U.S. implementation legislation, there was discussion about whether Article 11's obligations were satisfied by existing U.S. secondary copyright liability doctrines, eliminating any need for new anti-circumvention implementation legislation for this part of the treaty.<sup>6</sup>

Countries that decide to implement the WCT with specific anti-circumvention legislation then face at least five further policy decisions about how to structure legal protection for TPMs, reflecting different dimensions of what might be considered "adequate legal protection and effective legal remedies."

### A. Circumvention Acts Versus Device Regulations

First, countries can choose to ban *acts* of circumvention (direct violation of TPMs), or the creation and supply of circumvention tools, technologies and devices, or the offering of circumvention services utilizing such devices (indirect or secondary TPM violations, or what was termed "preparatory acts" in the Diplomatic Conference discussions), or a combination of all three.

Article 11 of the WCT is silent on this issue. However, the drafting history of the WCT indicates that Member States did not intend to require a ban on tools that can be used to circumvent TPMs. The original document that formed the basis of discussion at the

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<sup>5</sup> See WIPO Performances and Phonograms Treaty, Dec. 20, 1996, S. Treaty Doc. No. 105-17 (1997), 36 I.L.M. 76 (1997).

<sup>6</sup> Pamela Samuelson, *Big Media Beaten Back*, WIRED, Mar. 1997, at 64. The USPTO did not accept that view, and chose to reintroduce specific legislation regulating digital rights management technologies, similar in form to that unsuccessfully introduced in to the U.S. Congress in 1994–1995 prior to the WIPO Diplomatic Conference. See H.R. 2441, 104th Cong. (1995) and S. 1284, 104th Congress (1995) (both implementing the U.S. National Information Infrastructure Taskforce White Paper, *Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights*, Sept. 1995, available at <http://www.uspto.gov/web/offices/com/doc/ipnii/ipnii.pdf>); see also JESSICA LITMAN, DIGITAL COPYRIGHT 122–45 (2001); Pamela Samuelson, *The U.S. Digital Agenda at WIPO*, 37 VA. J. INT'L L. 369 (1997).



Diplomatic Conference leading up to the treaty, the Basic Proposal for a Treaty, contained a provision prohibiting the manufacture and distribution of circumvention devices.<sup>7</sup> However, that provision was expressly rejected by the majority of WIPO Member States at the Diplomatic Conference, and the more open-ended language of Article 11 was ultimately adopted in its place. Although some legal commentators argue that a ban on circumvention devices or “preparatory acts” creates a more efficient regulation because it precludes circumvention tools from entering the hard-to-police area of individual consumers’ homes,<sup>8</sup> there does not appear to be any *legal* necessity for interpreting Article 11 to require this conclusion, and both the history of the treaty negotiations and the range of interpretations given to this provision in Contracting Parties’ implementation legislation demonstrate that there was no consensus on this issue at the 1996 Diplomatic Conference.

Creating each type of regulation or ban has different policy implications. A prohibition on the act of circumvention of a TPM targets individual would-be circumventers, including scientific researchers and consumers customarily doing acts within their home. By comparison, a device and/or services ban can be directed at

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<sup>7</sup> Article 13(1) of the BASIC PROPOSAL FOR THE SUBSTANTIVE PROVISIONS OF THE TREATY ON CERTAIN QUESTIONS CONCERNING THE PROTECTION OF LITERARY AND ARTISTIC WORKS, WIPO Doc. CRNR/DC/4 (Aug. 30, 1996) [hereinafter BASIC PROPOSAL], provided that:

Contracting Parties shall make unlawful the importation, manufacture or distribution of protection-defeating devices, or the offer of performance of any service having the same effect, by any person knowing or having reasonable grounds to know that the device or service will be used for, or in the course of, the exercise of rights provided under this Treaty that is not authorized by the rightholder or the law.

The U.S. proposal to WIPO included the following provision:

Contracting Parties shall make it unlawful to import, manufacture or distribute any device, product, or component incorporated into a device or product, or offer or perform any service, the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent, without authority, any process, treatment, mechanism or system which prevents or inhibits the unauthorized exercise of any of the rights under the Berne Convention or this Protocol.

PROPOSALS SUBMITTED BY THE UNITED STATES OF AMERICA TO THE COMMITTEE OF EXPERTS ON A POSSIBLE PROTOCOL TO THE BERNE CONVENTION 1–9, Sixth Session, Geneva (February 1996), WIPO Doc. BP/CE/VI/12, *cited in* MIHÁLY FICSOR, *THE LAW OF COPYRIGHT AND THE INTERNET: THE 1996 WIPO TREATIES, THEIR INTERPRETATION AND IMPLEMENTATION*, 391–2 (2002).

<sup>8</sup> FICSOR, *supra* note 7, at 549–550; Jane C. Ginsburg, *Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience*. Columbia Public Law Research Paper No. 05-938 (August 2005), at 8, *available at* <http://ssrn.com/abstract=785945>; SAM RICKETSON & JANE GINSBURG, *INTERNATIONAL COPYRIGHT AND NEIGHBOURING RIGHTS: THE BERNE CONVENTION AND BEYOND* 976–977, (2nd ed., 2006).

manufacturers and commercial vendors of tools. While enforcement of a device ban poses less privacy challenges for enforcement, it makes it more difficult to preserve lawful non-infringing uses of technologically protected works because unless the ban is structured carefully, it will remove from the marketplace the tools necessary to make those uses.

Regulation of circumvention devices and services can be achieved in various ways. For instance, a regulation could restrict the accessibility and use of devices and services by making them available after an administrative agency review or through a regulatory process, as in the former Australian TPM law.<sup>9</sup> Alternatively, a TPM law could be framed as a direct prohibition on the manufacture and supply of devices, as in the U.S. DMCA.<sup>10</sup> This type of ban will remove circumvention tools from the national commercial marketplace (experience, of course, has shown that such tools will almost certainly remain available from a variety of noncommercial online sources, as illustrated by the continued availability of various DVD ripping software). A device ban that is not limited to devices that are designed for, and have no purpose other than, circumvention of a TPM, is likely to harm the market for investment and innovation in dual and multiple purpose technologies, such as personal computers. It also raises significant concerns for competition policy if the regulation leaves open the possibility of it being misused to create monopolies in adjacent markets for interoperable non-copyrightable technologies.

### *B. Access Control and Copy Control TPMs*

The second dimension relates to the nature of the TPMs granted legal protection. Does Article 11 require protection for access control TPMs—namely TPMs that control all *access* to copyrighted works, or only for copy control TPMs that prevent copying or other utilizations of copyrighted works in line with copyright? Since access control TPMs control all access to a copyrighted work, including access for lawful, non-copyright infringing purposes, a legal ban on circumventing access control TPMs would give rightsholders a new right of controlling access to copyrighted works, separate from and potentially unconnected to, the enumerated copyright rights granted to authors under the Berne Convention, the WCT and the WPPT. Thus, a legal prohibition on circumventing access control TPMs would effectively override the traditional boundaries of copyright law.

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<sup>9</sup> Copyright Act, 1968 (Austl.), former § 116A(2)

<sup>10</sup> 17 U.S.C. § 1201(a)(2) and (b).

Article 11 is silent on this issue also. It requires protection of only certain TPMs—those that are “effective” and that are “used by authors in connection with the exercise of their rights under this treaty or the Berne Convention.”<sup>11</sup> The term “effective” is not defined and has been interpreted in various ways by commentators. The terms “access control” and “copy control” do not appear in the WCT and WPPT.

Countries’ national implementation laws diverge on this issue. The United States’ DMCA is based on a distinction between “access” controls, and “copy” or use controls, and provides a higher level of legal support to access control TPMs.<sup>12</sup> The United States has required all its trading partners to adopt laws that protect both access and copy control TPMs with the same level of differential protection as the U.S. law.<sup>13</sup> The European Community’s Information Society Directive also requires Member States to protect both access and copy control TPMs. By comparison, the Australian Parliament expressly decided against providing legal protection to “pure” access control TPMs in its original TPM law.<sup>14</sup>

There is also considerable disagreement amongst academic legal commentators on this point. Those that consider that the WIPO Treaties do not require legal protection against circumvention of access control TPMs note that neither the Berne Convention nor the Treaties recognize a right of “access” in the comprehensive

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<sup>11</sup> WCT, *supra* note 4, art. 11.

<sup>12</sup> The DMCA bans both the act of circumventing a TPM that controls access to a copyrighted work (17 U.S.C. §1201(a)(1)) and the manufacture, importation, distribution and trafficking in tools that can circumvent both TPMs that control access to a copyrighted work (17 U.S.C. §1201(a)(2)) and TPMs that effectively protect copyright rights in a work (17 U.S.C. §1201(b)). Although the DMCA does not ban the act of circumventing a copy control TPM, that distinction has no relevance where a TPM is both an access control and a copy control, as in the case of the Content Scramble System technology that encrypts movies released on DVD.

<sup>13</sup> The last nine bilateral free trade agreements entered into by the U.S. since 2002 have required America’s trading partners to accede to the WCT and to adopt TPM legal regimes modeled on the DMCA: Singapore (Article 16.4(7)), Chile (Article 17.7(5)), Morocco (Article 15.5(8)), Australia (Article 17.4(7)), CAFTA (Article 15.5(7)), Bahrain (Article 14.4(7)), Oman (Article 15.4(7)), Peru (Article 16.7(4)(c)) and Colombia (Article 16.7(4)(c)). See USTR—Bilateral Trade Agreements, available at [http://www.ustr.gov/Trade\\_Agreements/Bilateral/Section\\_Index.html](http://www.ustr.gov/Trade_Agreements/Bilateral/Section_Index.html); see also Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society, art. 6(3), 2001 O.J. (L 167) 10 [hereinafter Information Society Directive].

<sup>14</sup> Copyright Act, 1968, § 116A (Austl.) (amended 2005), and definition of “effective technological protection measure” in section 10, inserted by Copyright Amendment (Digital Agenda) Act, 2000 (Austl.) [hereinafter Digital Agenda]. The definition was intended to be a hybrid between access control TPMs and copy control TPMs, but it was not intended that legal protection would be provided to “pure” access control TPMs. See AUSTRALIAN PARLIAMENT’S HOUSE OF REPRESENTATIVES’ STANDING COMMITTEE ON LEGAL AND CONSTITUTIONAL AFFAIRS, REPORT ON THE COPYRIGHT AMENDMENT (DIGITAL AGENDA) BILL 1999, ch. 4, ¶¶ 4.16–4.19 (1999).

enumerated list of rights.<sup>15</sup> Thus, interpreting Article 11 as creating a new and potentially very broad exclusive right, with full economic status, in the absence of any reference to the notion of “access” in the treaties is inappropriate. Other commentators simply state that signatory countries are required to protect “pure” access control TPMs.<sup>16</sup>

Professors Ginsburg and Ricketson claim that Article 11 requires protection of access control TPMs for two reasons. First, to provide adequate protection for authors’ rights of reproduction, as granted by the Berne Convention.<sup>17</sup> They claim that accessing a work expressed in digital form implicates the reproduction right under the Berne Convention.<sup>18</sup> This analysis turns on a particular interpretation of the scope of the right of reproduction granted by the Berne Convention—namely, that it extends to controlling temporary and transient reproductions of digital copyrighted works, including those in computers’ Random Access Memory. The difficulty with this analysis as a basis for justification is that there appears to be no international agreement on the status of temporary reproductions in the digital environment. This was a contentious issue at the Diplomatic Conference leading up to the WCT. Member States expressly rejected a provision that would have made it clear that transitory and temporary reproductions were within the right granted to authors. Thus it does not seem appropriate to base a legal obligation to protect access controls on a temporary reproduction analysis.<sup>19</sup> Professor Ginsburg claims that access controls must be protected for a second reason—because access control TPMs underpin the reproduction, communication and distribution rights granted under the WCT.<sup>20</sup> To

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<sup>15</sup> See Jacques de Werra, *The Legal System of Technological Protection Measures Under the WIPO Treaties, the Digital Millennium Copyright Act, the European Union Directives and Other National Laws (Japan, Australia)* 11 (June 13, 2001) (paper presented at ALAI 2001 Congress: Adjuncts and Alternatives to Copyright, available at [http://www.alai-usa.org/2001\\_conference/Reports/dewerra.doc](http://www.alai-usa.org/2001_conference/Reports/dewerra.doc)), citing Kamiel Koelman & Natali Helberger, *Protection of Technological Measures*, in *COPYRIGHT AND ELECTRONIC COMMERCE: LEGAL ASPECTS OF ELECTRONIC COPYRIGHT MANAGEMENT* 9–10 (2000); see also Dr. Ian Kerr, Alana Maurushat & Christian S. Tacit, *Technological Protection Measures: Trends in Technological Protection Measures and Circumvention Technologies, Part 1* (June 2003), available at [http://www.pch.gc.ca/progs/ac-ca/progs/pda-cpb/pubs/protection/protection\\_e.pdf](http://www.pch.gc.ca/progs/ac-ca/progs/pda-cpb/pubs/protection/protection_e.pdf).

<sup>16</sup> FICSOR, *supra* note 7, § C11.9, C11.12.

<sup>17</sup> Ginsburg, *supra* note 8, at 6–8; RICKETSON & GINSBURG, *supra* note 8, § 15.13–15.14.

<sup>18</sup> RICKETSON & GINSBURG, *supra* note 8, § 15.15.

<sup>19</sup> BASIC PROPOSAL, *supra* note 7; see also LITMAN, *supra* note 6, at 129; Agreed Statements Concerning Article 1(4), WIPO Copyright Treaty, December 20, 1996; Jonathan Band & Jeny Marcinko, *A New Perspective on Temporary Copies: The Fourth Circuit’s Opinion in Costar v. Loopnet*, 2005 STAN. TECH. L. REV. P1, available at <http://sclr.stanford.edu/STLR/Events>.

<sup>20</sup> RICKETSON & GINSBURG, *supra* note 8, at § 15.16 (“[A]n access-controlled copy, even if reproduced or communicated without authorization, will yield its copyist or recipient no

the extent that this view relies on the same understanding of the status of temporary reproductions it is also questionable. Invoking the rights of distribution and communication also fail to demonstrate that Article 11 requires legal protection for access control TPMs. Both of these require a physical transfer, which could be protected by a “use” control TPM. As the Basic Proposal made clear, the right of communication to the public granted in the WCT involves a transmission to the public that are not present in the same location.<sup>21</sup> An anti-distribution control TPM would restrict the transfer of a fixation or reproduction. An anti-communication control TPM would restrict transmission of material, but not its perception or viewability. In other words, it would require a “use” control TPM, but not an access control TPM.

Accordingly, as a matter of copyright policy, Article 11 of the WCT does not require legal protection of access control TPMs.

### *C. Nexus Between TPM Protection and Copyright Infringement*

The third, and most important, dimension is the scope of legal protection provided to TPMs. Does a TPM only get legal protection if its circumvention is done for the purpose of copyright infringement, or would lead to copyright infringement of the TPM-protected work? Or, alternatively, does Article 11 require WCT Contracting Parties to grant absolute protection against circumvention of TPMs even if a TPM restricts acts that would not be copyright infringement or is used on material not subject to copyright?

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benefits . . .”).

<sup>21</sup> See BASIC PROPOSAL, *supra* note 7, ¶ 10.14:

The expression “communication to the public” of a work means making a work available to the public by any means or process other than by distributing copies. This includes communication by wire or wireless means. The technology used may be analog or digital, and it may be based on electromagnetic waves or guided optical beams. The use of the non-restrictive term “any” in front of the word “communication” in Article 10, and in certain provisions of the Berne Convention, emphasizes the breadth of the act of communication. “Communication” implies transmission to a public not present in the place where the communication originates.

Communication of a work can involve a series of acts of transmission and temporary storage, such incidental storage being a necessary feature of the communication process. If, at any point, the stored work is made available to the public, such making available constitutes a further act of communication which requires authorization. It should be noted that storage falls within the scope of the right of reproduction (see Notes on Article 7).

How countries choose to frame legal protection for TPMs on this dimension has a direct bearing on the viability of existing copyright exceptions and limitations and national competition policy.

The wording of WCT Article 11 clearly contemplates a nexus between legal protection for TPMs and copyright law. It requires WCT Contracting Parties to provide legal protection for TPMs that are used by authors “in connection with the exercise of their rights under this treaty or the Berne Convention” and “that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.”<sup>22</sup>

There is considerable disagreement amongst legal scholars on this issue also.<sup>23</sup> Paralleling this divergence, there has also been significant variation in the way that WCT and WPPT Contracting Parties have chosen to implement these obligations. The U.S. DMCA does not explicitly require a nexus between legal protection for TPMs and copyright infringement. However, appellate court decisions have interpreted the DMCA to require some “nexus” between the circumvention ban and the possibility of copyright infringement.<sup>24</sup> The European Union’s Information Society Directive also does not appear to require such a nexus, although a recent major review recommends that the EU regime should be modified to require such a nexus.<sup>25</sup> By comparison, as discussed in further detail below, both the original Australian and proposed Canadian TPM laws provided legal protection only to TPMs that had such a nexus with copyright infringement.<sup>26</sup>

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<sup>22</sup> WCT, *supra* note 4, art. 11.

<sup>23</sup> FICSOR, *supra* note 7, § C11.09–10.

<sup>24</sup> *Storage Technology Corporation v. Custom Hardware Engineering*, No. Civ.A. 02-12102RWZ, 2004 WL 1497688 (D. Mass July 2, 2004), *vacated*, 421 F.3d 1307 (Fed. Cir. 2005); *The Chamberlain Group, Inc. v. Skylink Technologies, Inc.*, 381 F.3d 1178 (Fed. Cir. 2004).

<sup>25</sup> INSTITUTE FOR INFORMATION LAW, UNIVERSITY OF AMSTERDAM, STUDY ON THE IMPLEMENTATION AND EFFECT IN MEMBER STATES’ LAWS OF DIRECTIVE 2001/29/EC ON THE HARMONISATION OF CERTAIN ASPECTS OF COPYRIGHT AND RELATED RIGHTS IN THE INFORMATION SOCIETY 97, 102–133 (Feb. 2007) *available at* [http://ec.europa.eu/internal\\_market/copyright/docs/studies/infosoc-study\\_en.pdf](http://ec.europa.eu/internal_market/copyright/docs/studies/infosoc-study_en.pdf) [hereinafter IViR Study].

<sup>26</sup> This was the interpretation of former section 116A of the Australian Copyright Act favored by the Australian High Court in *Stevens v Kabushiki Kaisha Sony Computer Entm’t*, [2005] HCA 58 (Austl.). The original draft Australian legislation was even more explicit on this point. *See* Kimberlee Weatherall, *On Technology Locks and the Proper Scope of Digital Copyright Laws—Sony in the High Court*, 26 SYDNEY L.R. 618–620; 629–636, (2004) (discussing Digital Agenda, *supra* note 14, Exposure Draft, Item 14 (Feb. 1999), focused on technological protection measures which ‘prevent or inhibit the infringement of copyright subsisting in any work or other subject-matter’ and Digital Agenda, *supra* note 14, Exposure Draft, Items 85, 88 (Feb. 1999), which required that a seller of circumvention devices know, or was reckless as to whether, the device would be used for the purpose of infringing copyright); *see also* Canadian Copyright Bill, C-60, § 34.02(1) (proposed June 2005) (prohibiting circumvention “for the purpose of an act that is an infringement of copyright.”).

#### *D. Relationship Between TPM law and Copyright Exceptions and Limitations*

Fourth, WCT Contracting Parties have various policy choices about how to structure legal protection for TPMs in order to accommodate existing exceptions and limitations in national copyright law, and to permit the creation of appropriate new exceptions and limitations as envisaged by Article 10 of the WCT.<sup>27</sup> Overbroad legal protection for TPMs has the ability to override all pre-existing exceptions and limitations in national copyright law, and to preclude the effective creation of new exceptions and limitations to meet identified domestic policy goals. Thus, in the absence of a clear nexus requirement between legal protection against TPM circumvention and copyright infringement, pre-existing copyright law exceptions and limitations will have no force unless they are specifically recited as exceptions to the circumvention ban, or the law imposes an affirmative obligation on rightsholders and TPM purveyors to provide effective means of exercising exceptions and limitations to the beneficiaries of those exceptions and limitations.<sup>28</sup>

#### *E. Penalties and Remedies*

Finally, Article 11 of the WCT gives Contracting Parties much leeway in how they structure penalties and enforcement mechanisms. Countries can choose to impose civil or criminal measures, and to provide lesser penalties or complete exemptions to foster certain activities and protect particular classes of users. For instance, countries can choose to provide exemptions from criminal liability and reduced civil penalties for innocent infringers, where a person was not aware and had no reason to believe that he or she had committed a violation.<sup>29</sup> Limiting criminal and monetary liability can

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<sup>27</sup> Article 10 permits WCT Contracting Parties to create new exceptions and limitations that meet the Three Step Test. The Agreed Statement to Article 10 of the WCT clarifies that Member States would have the ability to create new exceptions and limitations appropriate to the digital networked environment:

It is understood that the provisions of Article 10 permit Contracting Parties to carry forward and appropriately extend into the digital environment limitations and exceptions in their national laws which have been considered acceptable under the Berne Convention. Similarly, these provisions should be understood to permit Contracting Parties to devise new exceptions and limitations that are appropriate in the digital network environment.

<sup>28</sup> See, e.g., EC/2001/29, art. 6(4), *infra* notes 71–72 (providing a limited and conditional obligation for certain types of exceptions, but not for works made available interactively online).

<sup>29</sup> See, e.g., 17 U.S.C. §§ 1201(5), 1203(5), 1204; see also Gwen Hinze, *Seven Lessons from a Comparison of the Technological Protection Measure Provisions of the FTAA, the*

also assist in mitigating some of the chilling effect of circumvention bans on scientific research and provide appropriate incentives for educational purposes.

## II. GLOBAL TPM LAWS

Both Article 11 of the WCT and Article 18 of the WPPT give Contracting Parties considerable flexibility in how they choose to frame legal protection for TPMs.

However, despite the range of policy choices open to countries, broader political considerations, particularly in the international trade context, have led to convergence around three main implementation models over the last ten years:<sup>30</sup>

- (1) The U.S. Digital Millennium Copyright Act of 1998, which has propagated outside the U.S. through bilateral free trade agreements, the last nine of which have required trading partners to adopt TPM laws mirroring the DMCA<sup>31</sup>;

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*DMCA, and Recent Bilateral Free Trade Agreements* (November 2003), available at [http://www.eff.org/IP/FTAA/tpm\\_implementation.pdf](http://www.eff.org/IP/FTAA/tpm_implementation.pdf); Gwen Hinze, *EFF Briefing Paper on U.S.—Chile Free Trade Agreement: Analysis of Implementation of Exceptions and Limitations* (Aug. 2004), available at [http://www.eff.org/IP/FTAA/20040830\\_uschile\\_fta.pdf](http://www.eff.org/IP/FTAA/20040830_uschile_fta.pdf).

<sup>30</sup> Apart from the convergence resulting from recent U.S. bilateral free trade agreements, countries that have released draft legislation that would have implemented the WIPO Treaties' TPM obligations in ways that differed from the approach in the DMCA have been the subject of adverse comment in the United States' Special 301 annual trade report process. For instance, in 2006 Canada was subject to Out-of-Cycle review after it released draft copyright amendment legislation (Canadian Copyright Bill, *supra* note 26) implementing its WCT TPM obligations in a manner that differed in approach from the DMCA by adopting a ban on only the act of circumvention of a TPM. The 2006 Special 301 report issued by the Office of the United States Trade Representative stated that:

The United States will use the Out-of-Cycle review to monitor Canada's progress in providing an adequate and effective IPR protection regime that is consistent with its international obligations and its advanced level of economic development, including improved border enforcement, ratification and implementation of the WIPO Internet Treaties, and strong data protection.

See 2006 Special 301 Report: Canada, available at [http://www.ustr.gov/assets/Document\\_Library/Reports\\_Publications/2006/2006\\_Special\\_301\\_Review/asset\\_upload\\_file473\\_9336.pdf](http://www.ustr.gov/assets/Document_Library/Reports_Publications/2006/2006_Special_301_Review/asset_upload_file473_9336.pdf)

The International Intellectual Property Alliance recommended that Canada stay on the Priority Watch List in its 2007 Submission to the United States Trade Representative for its failure to implement the WCT and WPPT with the particular legal regime used in the DMCA. See 2007 Special 301 Report: Canada, available at <http://www.iipa.com/rbc/2007/2007SPEC301CANADA.pdf>. Similarly, New Zealand was the subject of a Special Mention in the 2007 IIPA Submission to the USTR because the TPM provisions in its draft Copyright (New Technologies and Performers' Rights) Amendment Bill of 2006 differed from the DMCA approach. See 2007 Special 301 Report: Submission, available at [http://www.iipa.com/2007\\_SPEC301\\_TOC.htm](http://www.iipa.com/2007_SPEC301_TOC.htm).

<sup>31</sup> The last nine bilateral free trade agreements entered into by the U.S. since 2002 have



(2) The 2001 EU Directive on Harmonising Copyright in the Information Society, now implemented in the 27 EU Member States; and

(3) The WIPO “Model Copyright Law,” which has recently been adopted in countries in Africa and the Caribbean as a part of the WIPO Technical Assistance program.

Parts Two and Three of this paper review those TPM regimes, and contrast features of the alternative approach taken in the Australian TPM legislation.

### *A. United States of America—Digital Millennium Copyright Act*

#### *1. Type of Ban*

The U.S. Digital Millennium Copyright Act of 1998 (DMCA) takes a maximalist position on all five dimensions of protection described above. In the Congressional debates leading up to enactment of the DMCA, its proponents acknowledged that the DMCA provisions went beyond what was required to comply with the U.S.’s WIPO Treaty obligations.<sup>32</sup> First, the DMCA bans both the act of circumvention of a TPM that controls access to a copyrighted work<sup>33</sup> and also the manufacture, sale, distribution, offering and

required America’s trading partners to accede to the WCT and to adopt TPM legal regimes modeled on the DMCA: Singapore (Article 16.4(7)), Chile (Article 17.7(5)), Morocco (Article 15.5(8)), Australia (Article 17.4(7)), CAFTA (Article 15.5(7)), Bahrain (Article 14.4(7)), Oman (Article 15.4(7)), Peru (Article 16.7(4)(c)) and Colombia (Article 16.7(4)(c)). The FTAs have also required trading partners to treat temporary and transient reproductions of digital copyright works as actionable copyright infringement. Obtaining international adoption of these two sets of provisions is a key part of the intellectual property trade agenda of U.S. rightsholder industry groups. The temporary reproduction provision has been used to justify the adoption of access control TPM circumvention bans in the U.S. legal regime, even though it is arguably inconsistent with recent developments in U.S. domestic law. *See, e.g.,* Band & Marcinko, *supra* note 19.

<sup>32</sup> The U.S.’s chief policy spokesperson and proponent of the DMCA, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, Bruce A. Lehman, admitted during his congressional testimony in the debates leading to the passage of the DMCA that the U.S. anti-circumvention provisions went beyond the requirements of the WCT and WPPT. *See WIPO Copyright Treaties Implementation Act and Online Copyright Liability Limitation Act: Hearing on H.R. 2281 and H.R. 2280 before the H. Subcomm. on Courts and Intellectual Prop.*, 105th Cong., 1st Sess. 62 (1997) (testimony of Asst. Sec. of Commerce and Commissioner of Patents and Trademarks Bruce A. Lehman); *see also* Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to be Revised*, 14 BERKELEY TECH. L.J. 519, 521, 531–32 (1999), available at <http://www.sims.berkeley.edu/~pam/papers.html> (explaining that existing U.S. law satisfied WIPO treaty obligations).

<sup>33</sup> 17 U.S.C. § 1201(a)(1).

trafficking in tools, technologies and devices that can be used to circumvent access control TPMs and copy control TPMs. Second, the DMCA extends legal protection to access control TPMs, as well as TPMs that effectively protect a right of a copyright owner (copy control TPMs).<sup>34</sup>

## 2. *Scope of Ban*

Third, the DMCA provisions have been seen by some as not requiring an explicit link between legal protection of TPMs and copyright infringement, even though the provisions refer to use of TPMs on “works protected under this title,” meaning Title 17 of the United States Code—the U.S. Copyright statute. An early set of DMCA cases described the TPM provisions as “para-copyright” to which normal copyright defenses did not apply.<sup>35</sup> More recently, however, U.S. court decisions have read the anti-circumvention provisions to require a “nexus” between the ban on circumvention or circumvention devices and copyright infringement. On that view, TPMs are not entitled to legal protection against circumvention unless the circumvention of the relevant TPM could lead to copyright infringement.<sup>36</sup> The precise boundaries of the required “nexus,” however, have not been entirely clarified by the courts, leaving some uncertainty about whether circumvention will be permitted in order to enable all legally permitted non-infringing uses, or simply some subset thereof.

The DMCA requires protection of “effective technological measures” but does not define that term. Instead, it defines the phrase “to circumvent a technological measure” and when a TPM can be said to “effectively control access to a work.” Each of those terms is defined by reference to “authority of the copyright owner.” Section 1201(3) provides that:

As used in this subsection—

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<sup>34</sup> It provides greater protection against circumvention of access control TPMs than copy control TPMs. The DMCA bans both the act of circumventing an access control TPM and access control circumvention devices. While the DMCA bans manufacture and distribution of copy control circumvention tools, the DMCA does not include a corresponding ban on the act of circumventing a copy control TPM.

<sup>35</sup> See *Universal City Studios, Inc. v. Reimerdes*, 111 F. Supp. 2d 294 (S.D.N.Y. 2000), *aff'd sub nom Universal City Studios, Inc. v. Corley et al.*, 273 F. 3d 429 (2nd Cir. 2001).

<sup>36</sup> *Storage Technology Corporation v. Custom Hardware Engineering*, 2004 WL 1497688 (D. Mass July 2, 2004), *vacated*, 421 F.3d 1307 (Fed. Cir. 2005); *The Chamberlain Group, Inc. v. Skylink Technologies, Inc.*, 381 F.3d 1178 (Fed. Cir. 2004).

(A) to “circumvent a technological measure” means to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner; and

(B) a technological measure “effectively controls access to a work” if the measure, in the ordinary course of its operation, requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work.<sup>37</sup>

Recent case law has clarified that certain TPMs are not given legal protection. TPMs that provide an alternative means of access to a work do not “effectively control access to a work” and are not protected. In *Lexmark v. Static Control*,<sup>38</sup> the Sixth Circuit denied legal protection to a non-encrypted authentication sequence on a computer program that read the level of printer toner in certain Lexmark laser printers and stated that:

Just as one would not say that a lock on the back door of a house “controls access” to a house whose front door does not contain a lock and just as one would not say that a lock on any door of a house controls access to the home after its purchaser receives the key to the lock, it does not make sense to say that the DMCA’s ban on distributing access controls applies to otherwise readily accessible copyrighted works.<sup>39</sup>

### 3. *Exceptions and Limitations*

The DMCA does not specifically accommodate pre-existing exceptions and limitations to U.S. copyright law. Instead, it enumerates seven specific exceptions to the circumvention act ban for socially beneficial purposes including reverse engineering to create interoperable programs, cryptography research, and computer security research.<sup>40</sup> There are exceptions for access control tools for five of those seven activities, and exceptions for manufacturing and distributing copyright control tools for two of the seven. Apart from

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<sup>37</sup> 17 U.S.C. § 1201(3).

<sup>38</sup> 387 F.3d 522 (6th Cir. 2004).

<sup>39</sup> *Id.* at 547.

<sup>40</sup> 17 U.S.C. §1201(d)–(j).

the seven specified exceptions, U.S. Copyright law also permits circumvention of protected copies of sound recordings for webcasting.<sup>41</sup> The DMCA also contains an important “no mandate” limitation, which makes it clear that technologists do not have to design their technologies to respond to particular TPMs used by rightholders.<sup>42</sup> This is crucial for technological innovation and competition. At the time that the DMCA was debated, the U.S. consumer electronics industry feared that without such a provision, rightholders could use TPMs on content to control the design of technologies that interoperated with their content. Finally, the DMCA includes a process by which the Librarian of Congress, on the recommendation of the Register of Copyrights, can grant limited three year exemptions to the act ban for particular classes of works.

#### 4. Penalties

The DMCA has both civil fines and criminal penalties, including up to five years’ imprisonment for willful circumvention done for commercial advantage or private financial gain. It provides for statutory pre-established, per-violation damages, which can be remitted where a person was not aware and had no reason to believe that he or she had committed a violation.<sup>43</sup> The DMCA allows for exemptions from criminal liability for non-profit libraries, archives, educational institutions and public broadcasting entities,<sup>44</sup> and allows a court to remit damages for those entities if they were not aware and had no reason to believe their acts constituted a violation.<sup>45</sup>

#### B. Impact of the DMCA

Over the last seven years, the DMCA’s legal framework has proven to be overbroad. Its provisions have been used in ways that have nothing to do with stopping copyright infringement, but have caused collateral damage to a wide range of legitimate activities.

In practice, the DMCA regime has resulted in at least four sets of unintended (and in some cases, intended) consequences:

- It has overridden copyright exceptions and limitations in U.S. law;

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<sup>41</sup> 17 U.S.C. § 112(a)(2) allows “exempt” webcasters to circumvent a TPM to make a copy of a protected work for webcasting. Section 113(e)(8) has a similar exception for webcasters subject to the statutory licence regime.

<sup>42</sup> 17 U.S.C. § 1201 (c)(3).

<sup>43</sup> 17 U.S.C. § 1201(5)(A).

<sup>44</sup> 17 U.S.C. § 1204.

<sup>45</sup> 17 U.S.C. § 1203(5)(B).

- It has been misused to block competition and harm consumers;
- It has allowed rightsholders to control the pace and nature of technological innovation; and
- It has chilled scientific research and publication.

The following section examines the features of the DMCA that caused this, and provides a roadmap for how to structure a TPM legal regime to do less harm to the public interest and preserve space for national competition policy.

### *1. Overbroad TPM Laws Can Override Exceptions and Limitations in Copyright Law*

Digital rights management technologies can be used to prevent all uses of copyrighted works, including uses that would be permitted under exceptions and limitations in copyright law. They can also be used to block access to material in which copyright no longer exists, or which is uncopyrightable. In effect, the DMCA has allowed copyright owners to use a TPM backed by legal sanctions to unilaterally redraw the copyright balance.

At the global level, the DMCA regime allows U.S. copyright owners' wishes about use of their work to trump national copyright law exceptions that otherwise would allow access to and use of a work. This is likely to have an adverse impact on countries' sovereignty. The scope of legal protection given to rightholders' TPMs is therefore crucial for maintaining the traditional balance embodied in copyright law.

Unfortunately, a series of early cases interpreted the DMCA provisions as creating a new exclusive right to control access to copyrighted works, beyond the scope of traditional copyright law.<sup>46</sup> On that view, circumvention of a technological protection measure is banned even if the intended use of a technologically-protected work would not be copyright infringement. As a result, the DMCA has overridden existing statutory exceptions in U.S. copyright law for educational and other uses, and effectively eliminated consumers'

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<sup>46</sup> See, e.g., *Universal City Studios, Inc. v. Reimerdes*, 111 F. Supp. 2d 294 (S.D.N.Y. 2000), *aff'd sub nom.* *Universal City Studios, Inc. v. Corley et al.*, 273 F. 3d 429 (2nd Cir. 2001); *U.S. v. Elcom Ltd.*, 203 F. Supp. 2d 1111 (N.D. Cal. 2002); *Paramount Pictures Corp. v. Triton Technologies Inc.*, No. CV 03-7316 (S.D.N.Y. filed Sept.17, 2003); *321 Studios v. MGM*, 307 F. Supp.2d 1085 (N.D. Cal. 2004).

ability to make “fair use”—unauthorized, but lawful, uses of protected digital media that they have purchased.

During the debates leading up to enactment of the DMCA, members of the U.S. Congress had expressed concern that the DMCA could have this impact. For this reason, the DMCA includes several mechanisms intended to protect fair and other non-infringing uses. First, it contains a clear statement of legislative intent to preserve fair use. 17 U.S.C. 1201(c)(1) provides:

Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title.

This was intended to clarify that consumers could make fair use of digital works to which they had lawful access. Second, the DMCA does not contain a ban on the act of circumventing copy control TPMs.

In practice, these provisions have been meaningless because the DMCA bans the circumvention tools that would be needed by non-technologically sophisticated users to make non-copyright infringing uses. The early series of DMCA cases concerning DVD decryption software made it clear that if circumvention software falls within one of the DMCA’s tools ban, the fact that it can be used to make downstream fair use and other lawful uses is no defense to the circumvention device ban. Thus, even if making a personal back up copy of one of your DVDs were considered fair use, there would be no tools available to enable this activity.

The DMCA contains a third mechanism designed to protect lawful use—the triennial rulemaking process permitting the Librarian of Congress to grant three yearly exemptions to the ban on the act of circumventing a TPM. Congress intended this to be a fail-safe mechanism to monitor and protect consumers’ non-infringing uses from inappropriate encroachment by TPMs. However, it has not been effective at doing so for three reasons. First, and most fundamentally, the exemption does not extend to legalizing the tools that would be necessary to make use of any particular exemption granted. Unfortunately, for the vast majority of non-technologically sophisticated users who cannot create their own circumvention tools, this makes the exemption process meaningless. Second, the rulemaking is governed by technical rules and procedural burdens that have made it practically impossible for consumers to participate

without engaging lawyers to frame their submissions.<sup>47</sup> Third, because the process takes place only once every three years, it is unable to keep pace with the technical developments that encroach upon fair and other lawful uses.

Perhaps the clearest demonstration of the DMCA's overriding impact on existing copyright law exceptions and limitations concerns the visually disabled community. U.S. copyright law has a statutory exception permitting non-profit organizations to create Braille or other alternative translations of books for the blind. The operation of this provision is well understood in the analogue book world. However, that is not true for electronic books, which often are released by publishers with technological protection measures that may restrict uses such as the number of copies that may be made, the device upon which an eBook might be read, and whether an eBook could be printed, or read aloud by text to speech conversion software. Because this copyright law exception is not expressly recited as an exception to the DMCA bans, it is not possible to circumvent technologically protected eBooks for this purpose. As a result, the American Federation of the Blind sought exemptions in the 2003 and 2006 rulemakings to allow blind persons to circumvent to use text to speech software for technologically-protected eBooks.<sup>48</sup> Even though three yearly exemptions to the ban on the act of circumventing an access control TPM were granted in the DMCA rulemaking process, this did not legalize creation and distribution of the tools needed to utilize the exemptions.

In addition to the DMCA's impact on copyright exceptions, overbroad TPM regimes and obsolescent DRM technologies pose a

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<sup>47</sup> EFF, *THE DMCA TRIENNIAL RULEMAKING; FAILING THE DIGITAL CONSUMER*, (Dec. 2006), [http://www.eff.org/IP/DMCA/copyrightoffice/DMCA\\_rulemaking\\_broken.pdf](http://www.eff.org/IP/DMCA/copyrightoffice/DMCA_rulemaking_broken.pdf).

<sup>48</sup> See *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, 37 C.F.R. § 201 (2006) (2006 Comments of the American Foundation for the Blind), available at [http://www.copyright.gov/1201/2006/comments/discipio\\_afb.pdf](http://www.copyright.gov/1201/2006/comments/discipio_afb.pdf); 37 C.F.R. § 201 (2006 Testimony of the American Foundation for the Blind), available at <http://www.copyright.gov/1201/2006/hearings/transcript-mar29.pdf>. Determination of the Librarian of Congress, 71 Fed. Reg. 68,472 (Nov. 27, 2006) (including the following exemption: "Literary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling either of the book's read-aloud function or of screen readers that render the text into a specialized format."); see also *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, 37 C.F.R. § 201 (2003), available at <http://www.copyright.gov/1201/2003/comments/026.pdf>; Determination of the Librarian of Congress, 68 Fed. Reg. 62,011 (Oct. 31, 2003), available at <http://www.copyright.gov/fedreg/2003/68fr2011.pdf> (including a three-year exemption for: "Literary works distributed in ebook format when all existing ebook editions of the work (including digital text editions made available by authorized entities) contain access controls that prevent the enabling of the ebook's read-aloud function and that prevent the enabling of screen readers to render the text into a specialized format.")

serious threat to the public's right of access to works that are no longer protected under copyright. The problem is part technical, part legal. Digital rights management technologies do not cease to function when copyright expires in a protected work. The DMCA does not contain an express limitation for public domain and uncopyrightable works, nor does it expressly and affirmatively permit circumvention or provide a means of accessing circumvention tools where copyright term has expired on a TPM-protected work.

Libraries, archives and public interest organizations have been concerned for some time that legally-enforced DRM that becomes obsolescent may block the public's statutory right to access public domain material that is in the collection of libraries and archives.<sup>49</sup> Library associations, the Internet Archive and public interest organizations sought exemptions in the DMCA rulemakings in 2000, 2003 and 2006.<sup>50</sup> The U.S. Librarian of Congress granted an exemption for 2000–2003 for “Literary works, including computer programs and databases, protected by access control mechanisms that fail to permit access because of malfunction, damage or obsolescence,” and exemptions for 2003–2006 for “Computer programs protected by dongles that prevent access due to malfunction or damage and which are obsolete” and “Computer programs and video games distributed in formats that have become obsolete and which require the original media or hardware as a condition of access” and a renewal of that exemption in 2006.<sup>51</sup> However, the Librarian of Congress declined to grant a circumvention exemption in the 2003 rulemaking for access to public domain movies released on DVD.<sup>52</sup>

Obsolescence is likely to be an ongoing concern as copyrighted works are increasingly made available only in technologically protected digital formats. Unfortunately, the DMCA regime is structurally ill-equipped to handle this issue. Even if consumers were able to act collectively and overcome the procedural burdens required to engage successfully in the triennial exemption rulemaking (which does not appear likely based on previous experience), that process is only able to provide time-limited, piecemeal relief. Most importantly,

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<sup>49</sup> See the submission made by LACA, the Libraries and Archives Copyright Alliance, and the British Library's evidence to the U.K. All Party Parliamentary Internet Group (APIG) Inquiry into Digital Rights Management.

<sup>50</sup> See Recommendation of Copyright Register and Determination of Librarian of Congress, 65 Fed. Reg. 64,555 (Oct. 27, 2000), available at <http://www.copyright.gov/1201/docs/register-recommendation.pdf>; Determination of Librarian of Congress, 68 Fed. Reg. 62,011 (Oct. 31, 2003), available at <http://www.copyright.gov/fedreg/2003/68fr2011.html>.

<sup>51</sup> *Id.*

<sup>52</sup> 68 Fed. Reg. 62,011, 62,015; 2003 Recommendation of Register of Copyrights, at 99.



the DMCA process lacks a mechanism permitting consumers to access the circumvention tools and services necessary to utilize any exemption granted.

These issues could be addressed by modifications to the current U.S. TPM legal regime. For instance, an express provision could be inserted to ensure that expiry of the copyright term on a technologically protected work provides a complete defence to the act of circumventing a technological protection measure. However, in order to be effective, this will also require lawful availability of circumvention tools. To preserve access for lawful non-infringing uses of copyrighted works and to protect access to public domain material located on TPM-protected formats in combination with copyrighted works, a simple and expeditious administrative procedure could be established for information users to petition to import and use necessary circumvention tools for this purpose. This could be done by creating an administrative procedure similar to that in former section 116A of the Australian Copyright Act of 1968 (discussed below).

Alternatively, access could be provided on a more limited scale for particular classes of users, such as libraries and archives. The DMCA could be amended to provide a complete defense for manufacture and supply of circumvention technologies to libraries and archives, or it could place the burden on rightsholders by requiring content producers to provide either the relevant DRM keys or decryption information to deposit libraries at the time a work is added to a library or archive collection, or to provide libraries and archives with a non technologically-protected “clean” copy of the digital work. This could enable libraries and archives to undertake digital preservation of cultural assets, and permit such institutions, as intermediaries, to make accessible copies available to information users and/or disabled people, to avail themselves of the statutory exceptions and limitations to copyright, albeit in a somewhat mediated fashion.<sup>53</sup>

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<sup>53</sup> See EFF Submission to the United Kingdom’s H.M.Treasury’s Gowers Review of U.K. Intellectual Property Law, April 2006, available at [http://www.eff.org/global/uk/EFF\\_Gowers\\_submission.pdf](http://www.eff.org/global/uk/EFF_Gowers_submission.pdf) [hereinafter EFF Submission]; see also Sections 49 and 50 of the Australian Copyright Act of 1968, which permit libraries, archives and cultural institutions to reproduce and communicate works to make them available to users for research and study purposes and to other libraries and archives, and Recommendation 25 of the report of the Australian Parliament House of Representatives Standing Committee on Legal and Constitutional Affairs on the Review of Technological Protection Measure Exceptions, which recommended permitting circumvention by libraries, archives and cultural institutions for these purposes.

## 2. Anti-Competitive Misuse

U.S. copyright owners have used TPMs backed by the DMCA to obtain new monopolies over non-copyrightable products and technologies that interoperate with their copyrighted works. This has had anti-competitive impacts for consumers, and prevented the creation of new interoperable technologies.

The DMCA has been used in efforts to lock consumers into purchasing proprietary monopoly-priced products and to prevent the development of legitimate aftermarkets. For instance, Lexmark, the second largest printer distributor in the U.S., has tried to use the DMCA to block the creation of an aftermarket in recycled printer cartridges that were being sold to consumers at a lower price than Lexmark's own authorized refilled cartridges.<sup>54</sup> A garage door manufacturer, Chamberlain Group, has tried to use the DMCA to ban the sale of its competitor's universal garage remote control opener.<sup>55</sup> A telecommunications company has used the DMCA to block cell phone unlocking services, and a proprietary data storage company used the DMCA to ban its customers' use of an independent computer maintenance service.<sup>56</sup>

Each of these cases turned on particular features of the DMCA. First, the definition of circumvention of a TPM framed by reference to "authority of a copyright owner" (see above), and second, the unclarity (now largely resolved) about whether the DMCA requires an explicit nexus between legal protection for TPMs and the possibility of copyright infringement. While the above cases were resolved on appeal in favor of the legitimate aftermarket parties, the courts' decisions were based on very fact-specific analysis. Accordingly, it would be premature to conclude that these court rulings will stop a more determined rightsholder from making future anti-competitive misuse of the DMCA.

This is a fundamental deficiency in the DMCA's legal framework. It could be addressed by various means. First, by modifying the DMCA to require explicit proof that circumventing a particular TPM

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<sup>54</sup> *Lexmark International, Inc. v. Static Control Components, Inc.*, 253 F. Supp. 2d 943 (E.D. Ky. 2003), *vacated and remanded on other grounds*, 387 F.3d 522 (6th Cir. 2004).

<sup>55</sup> *The Chamberlain Group, Inc. v. Skylink Technologies, Inc.*, No. 02 C 6376 (N.D. Ill., 2003); *aff'd*, 381 F.3d 1178 (Fed. Cir. 2004); *see also* See Timothy B. Lee, *Circumventing Competition: The Perverse Consequences of the Digital Millennium Copyright Act*, CATO Policy Analysis No. 564 (Mar. 21, 2006) [http://www.cato.org/pub\\_display.php?pub\\_id=6025](http://www.cato.org/pub_display.php?pub_id=6025).

<sup>56</sup> *See Storage Technology Corporation v. Custom Hardware Engineering*, No. Civ.A. 02-12102RWZ, 2004 WL 1497688 (D. Mass. July 2, 2004), *vacated*, 421 F.3d 1307 (Fed. Cir. 2005); *TracFone Wireless, Inc. v. SOL Wireless Group, Inc.*, No. 05-23279-CIV-Altonaga/Turnoff (S.D. Fla. Feb. 28, 2006).

will result in copyright infringement in order to obtain legal protection against circumvention of that TPM. Second, by providing protection for competition outside of the DMCA's framework. Establishing a low-barrier administrative process to deal expeditiously with anti-competitive misuses of the DMCA's provisions could do this. This could take the form of a modified version of the administrative process established by the U.K. implementation of the EU Information Society Directive (see below).<sup>57</sup>

### *3. Control Over Pace and Nature of Innovation of Disruptive Technologies*

U.S. motion picture copyright owners have used TPMs backed by the DMCA together with restrictive licensing terms to obtain control over the features of the players and devices on which their content can be played. By doing so, they have obtained control over the pace and nature of innovation of technologies that could otherwise disrupt their current business models. While the U.S. Congress did not intend the DMCA to have this effect, it is now clear that this was one of the reasons U.S. rightsholders sought legal protection against circumvention of TPMs. It was the central part of a well-documented strategy to exert control over the pace and nature of innovation.<sup>58</sup>

This is particularly clear with respect to DVD players. DVD players need to have decryption keys, to decrypt one of the technological measures placed on motion pictures released on DVDs—the Content Scramble System or CSS. Anyone who wants to manufacture a DVD player must obtain a licence from the DVD Copy Control Association in order to obtain the necessary decryption keys for the device to unlock the CSS on a DVD placed in the player. The DVD-CCA claims that the CSS encryption technology is a trade secret. Obtaining access to that proprietary information is the “hook” by which the DVD-CCA can contractually oblige manufacturers to design and sell DVD players with particular features.

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<sup>57</sup> Others have also suggested that this could be dealt with by application of a reinvigorated copyright misuse doctrine, at least in the United States, which has such a doctrine. See Dan Burk, *Anti-Circumvention Misuse*, (Minnesota Public Law Research Paper No. 02-10, 2002), available at <http://ssrn.com/abstract=320961>.

<sup>58</sup> See Dean S. Marks & Bruce H. Turnbull, *Technical Protection Measures: The Intersection of Technology, Law and Commercial Licenses*, presented at WIPO Workshop on Implementation Issues of the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), December 6–7, 1999, WIPO Doc. WCT-WPPT/IMP/3, available at [http://www.wipo.int/documents/en/meetings/1999/wct\\_wppt/](http://www.wipo.int/documents/en/meetings/1999/wct_wppt/).

The DMCA's particular legal framework plays an important role here. As noted above, the DMCA defines "circumvention" and when a technological measure "effectively controls access" to a work by reference to the "authority of the copyright owner."<sup>59</sup> U.S. motion picture rightsholders claim that the only "authorized" DVD players are those that comply with the DVD Copy Control Association's license conditions. As a result, a technology innovator that distributes a DVD player with additional features—such as the ability to skip through advertisements—something possible on many free and open source software players—would be unauthorized and violate the DMCA's device ban, even if use of the movie would not infringe copyright.

U.S. rightsholders have also used region-coding technologies, backed by the DMCA and other national TPM laws, to geographically segment markets for video games (such as the Sony Playstation) and motion pictures released on DVD. The DVD CCA license requires DVD manufacturers to ensure that DVD players enforce region-coding restrictions, and display content from only a single "home" region. Region coding protects no copyright interest, since international exhaustion rules could allow consumers to possess and use lawfully acquired DVDs from other regions. However, despite that, U.S. rightsholders have claimed, in testimony before the U.S. Copyright Register, that multi-region DVD players that would allow consumers to watch DVDs lawfully purchased in another country are "unauthorized" circumvention devices outlawed by the DMCA, and that consumers who use such players violate the DMCA's circumvention act ban.<sup>60</sup>

Thus, U.S. copyright owners have used the DMCA and the comparatively weak protection offered by the CSS TPM as a means of exerting control over the features available in DVD players, and to block the release of new technologies that would disrupt their existing business models. The DMCA's legal framework has proven very effective for this purpose. The same is true for innovation in portable media players. For example, while consumers can watch movies purchased from the Apple iTunes store on their Apple Video iPod, they cannot lawfully rip their own DVD collections to the same iPod.

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<sup>59</sup> 17 U.S.C. § 1201(a)(3).

<sup>60</sup> See Testimony of Representatives of MPAA (Steve Metalitz) and AOL/Time Warner (Dean Marks) Library of Congress, Copyright Office, Public Hearings on Exemption to Prohibition on Circumvention of Copyright Protection for Access Control Technologies, Docket No. RM 2002-4, May 15, 2003, available at <http://www.copyright.gov/1201/2003/hearings/schedule.html> (asserting that multi-region DVD players violate section 1201).

#### 4. *Chilling Effect on Scientific Research and Publication*

U.S. copyright owners have also used the DMCA to chill scientific research and to block publication of research that discusses security vulnerabilities in protection technologies. There are concerns within the U.S. that this has weakened computer security, which depends on research and testing.

In 2001, a music industry group threatened DMCA liability against a Princeton professor and his research team when they tried to publish a research paper describing weaknesses in the music industry's proposed digital watermark technology.<sup>61</sup> The industry group considered that the information in the paper was a "circumvention tool" and publishing it was banned under the DMCA. The research team withdrew their paper after the music industry also sent threat letters to their employers and the conference organizers. After Professor Felten and his team filed a lawsuit to clarify their right to research and publish, the music industry body withdrew its threat. While the research team was eventually able to publish a vetted version of its paper after several months of litigation, significant harm was done. One of the team lost his position and a second decided to discontinue computer security research as a result of the litigation.

Professor Felten's case has had an ongoing chilling effect on scientific research and publication. Researchers in the U.S. and overseas have refused to publish the results of security vulnerability research or have removed previously published research from the Internet for fear of DMCA liability. Within the U.S. there is growing concern about the impact of the DMCA on computer security research. In 2002, former White House Cyber Security adviser Richard Clarke admitted that the DMCA had had a chilling effect on security research and called for DMCA reform.

The importance of ensuring a safe environment for scientific research into encryption and computer security has been highlighted by the recent Sony rootkit CD copy-protection scandal. Consumers became aware during 2005 that Sony BMG had sold audio CDs with two types of copy protection software that installed itself onto purchasers' computers as hidden files, and exposed those computers to security threats. Computer science researchers who discovered the security flaws delayed releasing their results and raising the alarm for fear of potential DMCA liability.<sup>62</sup>

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<sup>61</sup> For further details, see EFF REPORT, UNINTENDED CONSEQUENCES: SEVEN YEARS UNDER THE DMCA (Apr. 2006), available at [http://www.eff.org/IP/DMCA/unintended\\_consequences.php](http://www.eff.org/IP/DMCA/unintended_consequences.php).

<sup>62</sup> J. Alex Halderman & Edward W. Felten, *Lessons from the Sony CD DRM Episode*,

This is a further fundamental shortcoming in the DMCA regime that requires statutory modification to remedy. This could be done by incorporating an exception from civil and criminal liability for circumvention acts and tools for lawful non-infringing uses of TPM-protected works.

### III. ALTERNATIVE TPM LEGAL REGIMES

#### A. *The European Union*

The European Union has quite a complex TPM legal regime. At least three directives govern TPMs on works. Articles 6 and 8 of the 2001 EU Directive on Harmonizing Copyright in the Information Society (2001/29/EC) were intended to implement the WCT. They provide the framework for legal protection of TPMs on copyrighted works that are not computer programs in the EU and its Member States. The 1991 Computer Programs Directive created legal protection for technical devices on software,<sup>63</sup> and the 1998 Conditional Access directive also regulates DRM on television delivered via conditional access cable service.<sup>64</sup> This paper focuses on the 2001 Directive provisions.

##### 1. *Type of Ban*

Like the DMCA, the EU CD bans both the act of circumventing a TPM and manufacture, distribution and importation of circumvention tools. However, the EU CD is both broader, and narrower, than the DMCA in certain respects. Unlike the DMCA, it bans the act of

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*available at* <http://itpolicy.princeton.edu/pub/sonydrm-ext.pdf>; *see also* Testimony of Prof. Edward W. Felten, Library of Congress, Copyright Office, Public Hearings on Exemption to Prohibition on Circumvention of Copyright Protection for Access Control Technologies, Docket No. RM 2005-11A (Mar. 31, 2006), *available at* <http://www.copyright.gov/1201/2006/hearings/transcript-mar31.pdf>, (describing ways in which DMCA hindered research into Sony-BMG CD copy-protection software).

<sup>63</sup> Council Directive 91/250/EEC of 14 May 1991 on the Legal Protection of Computer Programs, art. 7(1)(c), which bans the “act of putting into circulation, or the possession for commercial purposes of, any means the sole intended purpose of which is to facilitate the unauthorized removal or circumvention of any technical device which may have been applied to protect a computer program.”

<sup>64</sup> Directive 98/84/EC of the European Parliament and of the Council of November 20, 1998, on the Legal Protection of Services Based on, or Consisting of, Conditional Access, art. 4 (requiring Member States to prohibit the manufacture, import, distribution, sale, rental or possession for commercial purposes of “illicit devices” meaning “any equipment or software designed or adapted to give access to a protected service in an intelligible form without the authorisation of the service provider”); *see also* Stefan Bechtold, *Digital Rights Management in the United States and Europe*, 52 AM. J. COMP. LAW 323 (2004).

circumventing both access and copy control TPMs.<sup>65</sup> Like the DMCA it requires Member States to prohibit the manufacture and distribution of devices that can circumvent both access control and copy control TPMs.<sup>66</sup>

## 2. Scope of Ban

Article 6 does not explicitly require a nexus between circumvention protection and copyright. Whether such a link is required has been the subject of much analysis from legal scholars.<sup>67</sup> Reflecting this uncertainty, there are significant differences in the approach taken by Member States in the implementation of these provisions in national law. Some have limited legal protection for TPMs to the scope of national copyright law. Other countries have not interpreted Article 6(3) in that way, resulting in new bans on accessing TPM-protected content.<sup>68</sup>

## 3. Exceptions and Limitations

The Information Society Directive includes a special “countermeasure” provision to accommodate certain copyright exceptions and limitations, Article 6(4).<sup>69</sup> Unlike the DMCA’s more rigid enumerated list of seven specific exceptions, the Directive does not contain explicit exceptions to the circumvention act and device bans. Instead Article 6(4) allows EU Member States some flexibility in creating mechanisms to accommodate a specified sub-set of the “harmonized” exceptions and limitations that Member States may choose to include in their national copyright law under Article 5 of the Directive.<sup>70</sup> Article 6(4) creates a limited obligation on rightsholders and EU Member States to provide the means of making certain uses of technologically-protected works to beneficiaries of those copyright exceptions. In addition, Recital 48 clarifies that

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<sup>65</sup> Information Society Directive, *supra* note 13, at art. 6(1); 6(3).

<sup>66</sup> *Id.* at art. 6(2) and 6(3).

<sup>67</sup> See *id.* at art. 6(3); IViR Study, *supra* note 25, at 77 ff (arguing that the Information Society Directive provides protection beyond the EU’s obligations under the WIPO Treaties); Urs Gasser, *Legal Frameworks and Technological Protection of Digital Content: Moving Forward Towards a Best Practice Model*, (Berkman Center Research Publication No. 2006-04, June 2006), available at <http://ssrn.com/abstract=908998>; Urs Gasser and Michael Girsberger, *Transposing the Copyright Directive: Legal Protection of Technological Measures in EU-Member States—A Genie Stuck in the Bottle?*, (Berkman Working Paper No. 2004-10, Nov. 2004), available at <http://ssrn.com/abstract=628007>; Stefan Bechtold, *Commentary on Article 6 in THOMAS DREIER & BERNT HUGENHOLTZ, CONCISE EUROPEAN COPYRIGHT LAW* (Kluwer Law International, 2006).

<sup>68</sup> See IViR Study, *supra* note 25 and Gasser, *supra* note 67.

<sup>69</sup> See Information Society Directive, *supra* note 13, at art. 6(4).

<sup>70</sup> *Id.*

Article 6 imposes no obligation to design devices and services to correspond to particular TPMs so long as they do not fall within the device ban.

The concept of an affirmative countermeasure that puts the onus on rightsholders to make sure that users can continue to exercise copyright exceptions in respect of technologically-protected works is laudable from a public policy perspective. It offers the possibility of avoiding many of the pitfalls experienced under the U.S. DMCA regime, and places the costs of facilitation on the party most able to bear them. However, on closer examination, the countermeasure provision in Article 6(4) offers less assistance than first appearances suggest.

First, Article 6(4) only applies to a limited subset of the possible harmonized exceptions available to EU Member States under Article 5 of the Directive, and not to the full range of statutory exceptions that might exist in national law.<sup>71</sup> Second, it applies only to the ban on the act of circumvention, and not to manufacture or provision of circumvention devices and services that an average consumer might need to circumvent a TPM.<sup>72</sup> Even then, it only applies to circumvention of copy control TPMs once lawful access has been obtained, and so not to access control TPMs.<sup>73</sup>

Third, Article 6(4) is conditional. It assumes that rightsholders will voluntarily take measures to make available the means of utilizing privileged exceptions to beneficiaries, and does not require Member States to take action to ensure that beneficiaries can do so, unless rightsholders fail to do so within "a reasonable time."<sup>74</sup> Most importantly, the obligation to provide the means of exercising exceptions has a major carve-out that arguably makes the whole countermeasure framework of little practical relevance to the digital environment.<sup>75</sup> It does not apply to content that is made available interactively on the Internet subject to a contract or license agreement.

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<sup>71</sup> *Id.* Article 6(4) requires Member States to take measures in respect of the "public policy" set of permissible exceptions: acts of reproduction using reprographic equipment (Article 5(2)(a)); acts of reproduction by publicly accessible libraries, educational institutions, libraries and archives (Article 5(2)(c)); ephemeral recordings of works made by broadcasting organizations (Article 5(2)(d)); reproductions of broadcasts by certain non-commercial institutions (prisons, etc) (Article 5(2)(e)); use for the sole purpose of illustration for teaching or scientific research (Article 5(3)(a)); and use for the disabled (Article 5(3)(b)). By comparison, for the private copy exception, (Article 5(2)(b)) it permits, but does not require Members States to take action. *Id.*

<sup>72</sup> Article 6(4) of the Information Society Directive provides: "Notwithstanding the legal protection provided for in paragraph 1."

<sup>73</sup> IViR Study, *supra* note 25, at 109.

<sup>74</sup> Information Society Directive, *supra* note 13, Recital 41.

<sup>75</sup> Bernt Hugenholtz, *Why the Copyright Directive is Unimportant, and Possibly Invalid*, available at <http://www.ivir.nl/publications/hughenoltz/opinion-EIPR.html>.



Leaving aside this exclusion and the limitations on the mechanism, the Article 6(4) framework gives EU Member States significant flexibility as to how they implement this provision. EU Member States have followed four main approaches: some countries have created a right of self help that entitles exception beneficiaries to circumvent; a second set of countries have created an arbitration proceeding; a third set of countries have created a direct right of action to enforce privileged exceptions in a court of law; and a fourth set of countries have created an administrative or executive authority to regulate the use of TPMs.<sup>76</sup> For instance, the U.K. implementation of this provision of the Information Society Directive involves an administrative procedure. Where a TPM prevents a person from carrying out a “permitted act,” the person can issue a notice of complaint to the U.K. Secretary of State, who must then initiate an investigation to determine “whether any voluntary measure or agreement relevant to the copyright work the subject of the complaint subsists.”<sup>77</sup> If the Secretary of State determines that no voluntary measure or agreement exists, he or she may order the rightsholder to ensure that the complainant can benefit from the permitted act under U.K. copyright law. Failure to comply with the direction is treated as a breach of statutory duty, and permits action to be taken by the complainant or a representative body.<sup>78</sup> As currently established, the U.K. procedure does not specifically deal with potential anti-competitive misuses of TPMs. However, a modified version of this procedure might be able to do so, and in conjunction with reduced penalties, would go a long way to reducing the chill of anti-circumvention bans.<sup>79</sup>

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<sup>76</sup> Gasser, *supra* note 67; IViR Study, *supra* note 25, at 126 ff.

<sup>77</sup> Section 296ZE of the U.K. Copyright, Designs and Patent Act of 1988, amended by Copyright and Related Rights Regulations of 2003; see also Ian Brown, *Implementing the EU Copyright Directive*, in FOUNDATION FOR INFORMATION POLICY RESEARCH REPORT 123, available at <http://www.fipr.org/copyright/guide/eucd-suide.pdf>; Gasser, *supra* note 67, at 27; IViR Study, *supra* note 25, at 128–29.

<sup>78</sup> Section 296ZE(5), *supra* note 77.

<sup>79</sup> *Id.*; see also EFF Submission, *supra* note 53, at 10:

[U]pon receipt of a credible allegation of anti-competitive use, the Secretary of State should be required to undertake a factual inquiry and make a speedy determination about whether the TPM is being used in a way that appears to violate national competition policies. Once a credible allegation of anti-competitive use has been made, the burden of proof should shift to the entity using the TPM to provide evidence to the Secretary of State to the contrary.

A provision should be included in sections 296–296ZF of the CDPA removing legal protection against circumvention of rightsholders’ technological measures where there is a judicial determination that those TPMs are being used in a way that violates U.K. competition policies. The provision should also provide a conditional defence and significantly reduced penalties for circumvention of a TPM where the

How effective each of these processes can be at achieving the desired end of preserving exceptions depends on the burden they place on exception beneficiaries, and the fairness of the procedural rules involved. Requiring exception beneficiaries to go to court to enforce an exception obviously puts the cost of enforcement of exceptions on users, rather than rightsholders. Similarly, an administrative process that puts significant obstacles in the way of users seeking to utilize exceptions will result in recalibration of the copyright balance in favor of rightsholders that use TPMs at the expense of copyright users. However, an appropriately balanced administrative procedure that gives copyright users an expeditious way of accessing technologically-protected works for non-infringing purposes, that, unlike current Article 6(4), covers both circumvention acts and tools, and that provides a mechanism for dealing with potentially anti-competitive misuses of TPMs, could serve the interests of both copyright owners and the copyright users community.

#### 4. Penalties

Article 8 of the Directive requires Member States to provide appropriate remedies and sanctions that are “effective, proportionate and dissuasive,” including actions for damages and injunctions, and provision for seizure of infringing material and circumvention devices.<sup>80</sup>

#### B. WIPO Model Copyright Law

In recent years, as part of the WIPO Technical Assistance program, WIPO has provided recommendations on draft legislative provisions to Member States that have sought advice on how to implement their WCT and WPPT obligations. As a result of these efforts, the WIPO Model Law provisions concerning TPMs have been adopted in a number of countries in Africa and the Caribbean, and now form the third major model for TPM legal regimes.

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defendant has acted on a good faith belief that the TPM is being used in an unlawful, anti-competitive fashion. In particular, in order to dispel any chill on legitimate competitors, remedies should be restricted to injunctive relief, demonstrated damages suffered by the plaintiff, or similar relief, rather than prescribed per-piece statutory damages, retroactive royalties, or criminal penalty.

<sup>80</sup> Information Society Directive, *supra* note 13, at art. 8.

Article 30 of the Enforcement Chapter of the WIPO Draft Law of Copyright and Related Rights (2005) provides as follows.<sup>81</sup>

30.(1) The following acts shall be considered unlawful and, in the application of Sections 27 to 29, shall be assimilated to infringements of the rights protected under this Law:

(i) the manufacture or importation for sale or rental of any device or means specifically designed or adapted to circumvent any device or means intended to prevent or restrict reproduction of a work, a phonogram or a broadcast, or to impair the quality of copies made;

(ii) the manufacture or importation for sale or rental of any device or means that is susceptible to enable or assist the reception of an encrypted program, which is broadcast or otherwise communicated to the public, including by satellite, by those who are not entitled to receive the program;

(iii) the removal or alteration of any electronic rights management information without authority;

(iv) the distribution, import for distribution, broadcasting, communication to the public or making available to the public, without authority, of works, performances, phonograms or broadcasts, knowing or having reason to know that electronic rights management information has been removed or altered without authority.

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<sup>81</sup> WIPO Draft Law of Copyright and Related Rights (2005 version) (on file with the author), derived from the 1976 Tunis Model Law developed jointly by the WIPO Committee of Experts and UNESCO, cited in FICSOR, *supra* note 7, ¶¶1.16-1.17. The WIPO Draft Copyright Law was previously available on the WIPO website, but no longer appears to be so. Footnote 57 to the Draft Copyright Law states that: "These provisions are currently being updated." And continues:

This category of enforcement provisions is of particular importance in relation to digital technologies. In certain cases, the only practical means of preventing copying is through so-called "copy-protection" or "copy-management" systems, which contain technical devices that either prevent entirely the making of copies, or make the quality of the copies so poor that they are unusable. Technical devices are also used in decoders or in systems of access control. However, it is technically possible to manufacture devices by means of which these systems may be circumvented. The manufacture, importation and distribution of such devices should be considered infringements of copyright to be sanctioned in the same way as other violations.

(3) In the application of Sections 27 to 29, any illicit device and means mentioned in paragraph (1) and any copy from which rights management information has been removed, or in which such information has been altered, shall be assimilated to infringing copies of works, and any illicit act referred to in subsection (1) of this Section shall be treated as an infringement of copyright or related rights to which the civil remedies and criminal sanctions provided for in Sections 27 to 29 are applicable.<sup>82</sup>

### *1. Type of Ban*

The WIPO provision prohibits circumvention devices and services, but not the act of circumvention per se. Although the provision does not refer to “access control TPMs” or “copy control TPMs” by name, the provision would clearly apply to copy control TPMs.<sup>83</sup> The phrase “prevent or restrict reproduction” of a work could also be construed to

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<sup>82</sup> The equivalent provision in the alternative WIPO Draft Law of Copyright and Related Rights for civil law countries provides as follows:

29.(1) The following acts shall be considered unlawful and, in the application of Sections 26 to 28, shall be assimilated to infringements of the rights protected under this Law:

- (i) the manufacture or importation for sale or rental of any device or means specifically designed or adapted to circumvent any device or means intended to prevent or restrict reproduction of a work, a phonogram or a broadcast, or to impair the quality of copies made;
- (ii) the manufacture or importation for sale or rental of any device or means that is susceptible to enable or assist the reception of an encrypted program, which is broadcast or otherwise communicated to the public, including by satellite, by those who are not entitled to receive the program;
- (iii) the removal or alteration of any electronic rights management information without authority;
- (iv) the distribution, import for distribution, broadcasting, communication to the public or making available to the public, without authority, of works, performances, phonograms or broadcasts, knowing or having reason to know that electronic rights management information has been removed or altered without authority.

(2) In the application of Sections 26 to 28, any illicit device and means mentioned in paragraph (1) and any copy from which rights management information has been removed, or in which such information has been altered, shall be assimilated to infringing copies of works, and any illicit act referred to in subsection (1) of this Section shall be treated as an infringement of copyright or related rights to which the civil remedies and criminal sanctions provided for in Sections 26 to 28 are applicable.

<sup>83</sup> See WIPO Draft Law of Copyright, *supra* note 81.

extend the ban to devices and services that circumvent access control TPMs.<sup>84</sup>

## 2. *Scope of Ban*

The WIPO provision's TPM ban is broader than the scope of national copyright law. The provision does not contain a nexus between legal protection for TPMs and copyright infringement. It would therefore appear to ban all circumvention devices and services, irrespective of whether they could be used for lawful non-copyright infringing purposes. In addition, the Article makes it clear that manufacture or importation of a circumvention device or service, regardless of its purpose or actual use, should be treated as a violation of copyright law and subject to civil and criminal sanctions.<sup>85</sup> As a result, this provision would ban from the marketplace a broad range of devices and services that would be necessary for consumers and beneficiaries of exemptions to circumvent TPMs in order to exercise existing national copyright law exceptions and limitations for technologically-protected works.

Apart from the absence of a nexus to copyright infringement, it is also worth noting that the scope of this device and service ban is far broader than the corresponding ban in the U.S. DMCA. The WIPO provision bans anything that is "specifically designed or adapted to circumvent any device or means."<sup>86</sup> This would capture devices and technologies that have dual or multiple purposes beyond circumvention but have been adapted after market for circumvention use, and vendors who market tools that may be adapted for circumvention even if the vendor might not have knowledge of their use in circumvention.

## 3. *Exceptions and Limitations*

The WIPO TPM provision does not contain any specific exceptions to the device and service ban. In addition, because the WIPO TPM provision does not require a nexus to copyright under national law, there is no mechanism to accommodate existing national exceptions and limitations. As a result, this provision would preclude the exercise of all existing exceptions and limitations in respect of technologically-protected works. Thus, this provision creates the broadest TPM ban of the three major WCT implementation

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<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

approaches reviewed, and correspondingly creates the greatest risk of restricting access to knowledge for legitimate and non-copyright infringing purposes.

### *C. Australia*

Australia adopted specific TPM anti-circumvention legislation in the 2000 Copyright Amendment (Digital Agenda) Act (the DAA). The DAA created an innovative TPM legal regime that has since been replaced by a regime modeled on the DMCA framework as a result of implementation of the 2004 U.S.-Australia Free Trade Agreement.

#### *1. Type of Ban*

The DAA sought to regulate commercial vendors of circumvention devices and services. Unlike the approach taken in the DMCA and the EU Copyright Directive, the original Australian law did not contain a ban on the act of circumventing a TPM, which would have applied to individual end-users of copyrighted works.

The DAA prohibited the commercial manufacture and supply of circumvention devices and services. Section 116A(1) made it an offence to make, sell, let for hire, promote, advertise, market, or distribute, or import a circumvention device, with knowledge that the device or service would be used to circumvent, or facilitate the circumvention of, a technological protection measure.<sup>87</sup>

The device and services regulation was more tailored than the approach taken in the DMCA and EUCD in three respects.

First, the DAA applied to a narrower range of devices. The prohibition applied to sole purpose circumvention devices and devices with limited other commercial significance or purpose other than circumvention.<sup>88</sup> Second, instead of an absolute ban on circumvention technologies, the DAA set up an administrative process, described below, that provided access to circumvention devices to “qualified persons” for certain non-copyright infringing “permitted purposes.”<sup>89</sup>

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<sup>87</sup> Copyright Amendment (Digital Agenda) Act of 2000 § 116A(1) (Cth) (amending Copyright Act of 1968 (Cth)), available at [http://www.austlii.edu.au/au/legis/cth/consol\\_act/caaa2000294/](http://www.austlii.edu.au/au/legis/cth/consol_act/caaa2000294/).

<sup>88</sup> *Id.* § 10(1): “circumvention device means a device (including a computer program) having only a limited commercially significant purpose or use, or no such purpose or use, other than the circumvention, or facilitating the circumvention, of an effective technological protection measure.”

<sup>89</sup> *Id.*

## 2. *Scope of Ban*

Third, the scope of the DAA ban was narrower because legal protection against circumvention was only given to TPMs that had a nexus with national copyright law. Unlike the DMCA, the DAA provided protection against circumvention of copy control TPMs which restricted uses of copyrighted works, but not for “pure” access control TPMs. This was reflected in the DAA’s definition of “technological protection measure” as:

a device or product, or a component incorporated into a process, that is designed, in the ordinary course of its operation, to prevent or inhibit the infringement of copyright in a work or other subject matter by either or both of the following means:

- (a) by ensuring that access to the work or other subject matter is available solely by use of an access code or process (including decryption, unscrambling or other transformation of the work or other subject matter) with the authority of the owner or licensee of the copyright;
- (b) through a copy control mechanism.<sup>90</sup>

And subsequently affirmed by the Australian High Court in the *Sony v. Stevens* case, concerning a MOD chip that bypassed the region coding technological measure on Sony Playstations that controlled access to videogames but did not prevent copying.<sup>91</sup>

## 3. *Exceptions and Limitations*

By comparison with the legal regime in the DMCA and the EUCD, the DAA created a more flexible circumvention device regulation that attempted to regulate commercially-incentivized circumvention activity, while accommodating certain existing statutory copyright exceptions that support socially-beneficial activities through limited access to the means of circumvention required to exercise those exceptions.

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<sup>90</sup> *Id.*

<sup>91</sup> *Stevens v Kabushiki Kaisha Sony Computer Entm't.* [2005] HCA 58, (Austl.).

The DAA effectively created an administrative process that allowed certain persons or entities to obtain access to circumvention tools and services in two situations:

(a) Use for Permitted Purposes: Supply of circumvention devices or services for use by “Qualified Persons” who provided the supplier with a declaration stating that they wished to circumvent to make one of various “Permitted Purposes” and that the protected work was not readily available to the person in a form that is not protected by a technological protection measure.<sup>92</sup>

(b) Making and importation of circumvention devices “for use only for a permitted purpose relating to a work or other subject-matter that is not readily available in a form that is not protected by a technological protection measure”; or “for the purpose of enabling a person to supply the device, or to supply a circumvention service, for use only for a permitted purpose.”<sup>93</sup>

From the perspective of copyright users, the DAA framework had one major deficiency—it did not protect non-commercial personal copying. Even though the DAA did not ban the act of circumventing a TPM for legitimate purposes, it removed from the marketplace the circumvention tools that would be needed by end users to exercise copyright exceptions for protected works. The “Permitted Purposes” mechanism provided a means of accommodating only a sub-set of the exceptions and limitations to Australian copyright law. Most importantly, the “Permitted Purposes” exception did not extend to use of tools or services for non-copyright infringing “fair dealing” of a work under sections 40–42 of the Copyright Act. A 2004 review of the copyright regime recommended extending the Permitted Purposes exception to ensure that circumvention tools and services would be

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<sup>92</sup> Copyright Amendment (Digital Agenda) Act of 2000 § 116A(3). “Permitted purposes” included:

- Reproduction of computer programs for purposes of interoperability, to correct errors and for security testing;
- Lawful copying by libraries, archives, educational and other institutions, including institutions assisting persons with an intellectual disability; and
- A lawful use of copyrighted material for the services of the Commonwealth or a State.

<sup>93</sup> *Id.* § 116A(4).



available to facilitate circumvention for all copyright law exceptions, including non-infringing fair dealing.<sup>94</sup> This would have appropriately narrowed the scope of legal protection for TPMs to the scope of Australian copyright law. However, the 2004 TPM recommendations were not implemented due to restructuring of the Australian TPM regime as a result of the 2004 US-Australia free trade agreement.

#### *D. US-Australia Free Trade Agreement*

Article 17.4(7) of the Free Trade Agreement concluded between the U.S.A. and Australia in 2004 required Australia to rewrite its legislation to adopt a legal protection regime for TPMs mirroring the structure of the U.S. DMCA legislation.<sup>95</sup>

The central issue in the public debate about how to implement the FTA's TPM obligations was the scope of legal protection to be given to TPMs. Did the new law have to protect "pure" access control TPMs that restrict access to works irrespective of whether they prevent copyright infringement, or instead, should legal sanctions apply to circumventing a TPM only where it would lead to copyright infringement? As the U.S. experience with the DMCA had made clear by the time that this public debate took place in Australia, imposing legal sanctions for circumventing pure access control TPMs without any nexus to copyright infringement, would effectively override existing exceptions and limitations and could harm innovation and competition policy by allowing rightsholders to use TPMs to control development of interoperable technologies.<sup>96</sup>

The 2006 Australian legislation reflects these concerns. In terms of structure, it introduces legal protection for access control TPMs as well as copy control TPMs. It incorporates a ban on the act of circumvention of an access control TPM, and on the manufacture, sale and supply of tools and services that circumvent TPMs (defined to include both access and copy control TPMs).

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<sup>94</sup> Phillips Fox, Digital Agenda Review Report, (Jan. 2004), [http://www.ag.gov.au/www/agd/agd.nsf/Page/Publications\\_PhillipsFoxreportDigitalAgendareview-January2004](http://www.ag.gov.au/www/agd/agd.nsf/Page/Publications_PhillipsFoxreportDigitalAgendareview-January2004). See Recommendation 17, paragraph 2: "That the permitted purposes in section 116A (3) be amended so as to clearly allow any supply or use of a circumvention device or service for any use or exception allowed under the Act, including fair dealing and access to a legitimately acquired non-pirated product." *Id.*

<sup>95</sup> U.S.-Australia Free Trade Agreement, art. 17.4(7), May 18, 2004.

<sup>96</sup> For this reason the Australian Parliamentary Committee review set up to consider the structure and nature of exceptions to the new TPM regime recommended that the scope of legal protection given to TPMs should continue to be limited to the contours of national copyright law. See *Review of Technological Protection Measure Exceptions*, issued by House Standing Committee on Legal and Constitutional Affairs of the House of Representatives, Australian Parliament on March 1, 2006, available at <http://www.aph.gov.au/house/committee/laca/protection/report/fullreport.pdf>.

The Australian law gives a copyright owner or exclusive licensee a right to bring an action against a person who knowingly does an act that circumvents an “access control technological protection measure” on a work.<sup>97</sup> “Access control technological protection measure” is defined to mean a TPM used “in connection with the exercise of the copyright.”<sup>98</sup> The new law also includes new definitions of “technological protection measure” and “circumvention devices.”<sup>99</sup> Taken together, these appear to specifically exclude from the ban on circumvention tools and services devices and technologies that would play lawful copies of movies and videogames that are subject to region coding technological measures used to geographically segment markets (e.g., a multiregion DVD player that plays a lawfully purchased DVD from another geographical region), and also devices that would bypass embedded computer programs in machines or devices that “restrict the use of goods (other than the work) or services in relation to the machine or device.”<sup>100</sup> This would appear to cover non-copyrightable items such as universal garage door openers and printer cartridges, which have been the subject of DMCA litigation in the U.S.<sup>101</sup> The new Australian law removed the flexible “Permitted Purposes” mechanism and replaces it with the seven specified exceptions listed in the DMCA and a proceeding for granting four yearly exemptions to the ban on the act of circumvention.<sup>102</sup>

The new law also contains an important remedy clearly designed to combat possible misuses of TPMs for non-copyright purposes such as attempted control of interoperable technologies. It allows a person who has been threatened with a groundless threat of TPM legal proceedings to bring legal action for an order declaring that the threat is unjustifiable, an injunction to restrain the copyright owner or exclusive licensee from continuing with the groundless threat, or an award of damages for loss suffered as a result of the threat.<sup>103</sup>

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<sup>97</sup> Copyright Amendment Act of 2006 (Cth), Schedule 12, Part 1, § 9 (inserting new § 116AN into the Copyright Act of 1968 (Cth)).

<sup>98</sup> *Id.* at Part 1, § 1 (inserting new definition in subsection 10(1)).

<sup>99</sup> *Id.* at Part 1, § 3 & 5 (inserting new definition in subsection 10(1)).

<sup>100</sup> *See id.* at Part 1, sec. 1.

<sup>101</sup> *See* Part III(C)(2), *supra*.

<sup>102</sup> Copyright Amendment Act of 2006 (Cth), Part 1, § 9 (inserting exceptions in §§ 116AN(3) and 116AO(3) (interoperability), 116AN(4) and 116AO(4) (encryption research), 116AN(5) and 116AO(5) (computer security testing), 116AN(6) (privacy), 116AN(7) and 116AO(6) (law enforcement and national security), 116AN(8) (libraries' acquisition decisions), and 116AN(9), 132APC(9) and 249(4) (exemption for prescribed acts of circumvention by regulations issued by the Governor General)).

<sup>103</sup> *Id.* § 202A.

#### IV. DAMAGE MINIMIZATION RECOMMENDATIONS

None of the three most widely adopted implementation models described above provide adequate safeguards to prevent TPM laws from encroaching on non-copyright public policies such as national competition regulation, citizens' access to knowledge, freedom of expression and technology innovation. Fortunately, WCT and WPPT compliance does not require countries to adopt the DMCA's TPM regime, nor the European Union or WIPO draft law implementation models. Based on the review of the deficiencies in the U.S. TPM regime and the range of policy options available to countries obligated to implement the WIPO Treaties' TPM obligations, following is a set of recommendations on how to structure legal protection for TPMs to minimize harm to important non-copyright public policies.<sup>104</sup>

(1) Require a nexus between legal protection against circumvention of TPMs and copyright infringement. Circumventing a technological protection measure or manufacturing and supplying circumvention devices and services should only be unlawful if done for the purpose of, or if it would lead to, infringement of copyright under national law. In other words, the scope of legal protection for TPMs should match the contours of national copyright law.

(2) Countries choosing to regulate the manufacture and supply of circumvention devices and/ or services should create a flexible mechanism to permit access to, and use of, circumvention devices and services to use copyrighted works for non-copyright infringing purposes. This could be done by establishing a low-barrier process along the lines of the administrative procedure in former section 116A of the Australian Copyright Act.

(3) Preserve room for regulating anti-competitive misuse of TPMs. National TPM legislation should incorporate a "no mandate" provision to make it clear that technology developers do not have to design new products, or "refit" existing products to make them respond to particular technological protection measures. This provision should

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<sup>104</sup> For more detailed recommendations, see *EFF Briefing Paper on Technological Protection Measures for Delegates at the WIPO Intergovernmental Intersessional Meeting on Proposals to Establish a WIPO Development Agenda* (Apr. 2005), available at [http://www.eff.org/IP/WIPO/dev\\_agenda/EFF\\_WIPO\\_briefing\\_041205.pdf](http://www.eff.org/IP/WIPO/dev_agenda/EFF_WIPO_briefing_041205.pdf).

apply to devices *at the time they were designed*. In addition, TPM laws should expressly provide that rightsholders shall not use TPMs for anti-competitive purposes. TPM laws should establish a low-barrier administrative process for identifying potential anti-competitive misuses, expeditiously providing a remedy and reduced penalties for “good faith” circumvention. This could be based on a modified version of an administrative process under Article 6.4 of the EU Information Society Directive, such as that implemented in U.K. law, or possibly the injunction remedy provided for in the new Australian law.

(4) TPM circumvention penalties should be structured carefully to minimize the penumbral chill from anti-circumvention regulations and to incentivize socially-beneficial activities such as scientific research, education, cultural preservation by archives, libraries’ provision of access to knowledge resources, and facilitating access to disabled communities.

(5) Countries should establish a regular review of the impact of the TPM legal regime on lawful non-infringing uses, and a fair process for granting meaningful exemptions to the full scope of the anti-circumvention ban for legitimate non-infringing uses.<sup>105</sup>

## CONCLUSION

At the tenth anniversary of the adoption of the WCT and WPPT, it is time for a comprehensive evaluation of the costs, benefits and policy implications of legally-enforced TPMs. Evidence is mounting that TPMs have not been effective for their intended purpose of preventing widespread digital copyright infringement. At the same time, it is now clear that overbroad legal protection for TPMs can cause harm to a wide range of important public policies outside the sphere of copyright regulation. National legislators contemplating implementation of the WIPO Treaties’ TPM provisions should therefore give careful consideration to the scope and structure of the legal protection provided to rightsholders’ TPMs and be wary of adopting the models found in existing TPM legal regimes.

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<sup>105</sup> For useful analysis of how to structure a balanced regular review process, see the AUSTRALIAN PARLIAMENT’S HOUSE OF REPRESENTATIVES’ STANDING COMMITTEE ON LEGAL AND CONSTITUTIONAL AFFAIRS REPORT ON TPM EXCEPTIONS, *supra* note 14, particularly chapter 3, paragraphs 3.41–3.98; see also EFF Submission, *supra* note 53.

