

**On the Technical Protection of Copyright:  
The Digital Millennium Copyright Act, the European Community Copyright Directive  
and Their Anticircumvention Provisions**

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I. Introduction

At the beginning of the new millennium digital technology and the global economy create a new environment for copyright law.<sup>1</sup> Both, perhaps, are best represented by the Internet – the global net of networks for the exchange of digital data – which has become one of the driving forces of the world economy. Many new business models have been introduced, which rely largely on the fact that the digital format allows perfect copies to be made at almost no costs; and that the Internet allows copies to be widely distributed in almost no time. For some people, digital technology and global networks are the basis for the modern information society, or even the knowledge society, where everyone has easy access to as much content as he is interested in.

For others this is a threat. With the growing importance of new communication technologies, in particular the Internet, it is argued that these technologies will also provide new

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<sup>1</sup> For a comprehensive study on copyright law in this new environment, in particular the Internet, *see, e.g.*, LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 122-141 (1999); STUART BIEGEL, BEYOND OUR CONTROL? 279-320 (2001); LAWRENCE LESSIG, THE FUTURE OF IDEAS (2001); JESSICA LITMAN, DIGITAL COPYRIGHT (2001); SIVA VAIDHYANATHAN, COPYRIGHTS AND COPYWRONGS: THE RISE OF INTELLECTUAL PROPERTY AND HOW IT THREATENS CREATIVITY (2001).

opportunities to exploit works; or to use a more dramatic term, that these new technologies will bring about new risks of “piracy”. For the copyright owners (e.g. music companies, film studios) the same features of digital technology that greatly expand the authorized use of copyrighted works, also make it difficult to police their unauthorized use. One of the best-known examples is MP 3 technology through which a CD recording can be compressed to a file the size of a Word file, and then distributed on the Net.

But this analysis is not the end of the story because technology is not only a threat to copyright but it can also be used to protect intellectual property. It was Lawrence Lessig who, among others, drew our attention to the ambiguous relationship between copyright and technology (or to use Lessig’s word, code) in cyberspace.<sup>2</sup> At first sight, the Internet allows perfect copies of digital works to be made at practically no cost and imposes an almost impossible task on enforcing intellectual property rights. This is why, in Lessig’s words, the Internet seems to be the worst of both worlds for copyright owners: both a place where the ability to copy and distribute could not be better, and where the protection of the law could not be worse.<sup>3</sup> But at a closer look, digital technologies also give copyright owners methods of establishing a new and very efficient system of control – not only over unauthorized use but over any use. Finally, in order to complete the picture, one has to consider that technology can be used to circumvent such control measures.

The main thrust of current activities is to adapt intellectual property rights to new technologies, and to promote the development of technological measures that will protect against unauthorized acts of exploitation, and electronic information that could be attached to the works or other subject matter in order to facilitate the management of rights. The industry is already engaged in efforts to introduce such technology on a massive scale.<sup>4</sup>

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<sup>2</sup> LESSIG, *supra* note 1, at 124-125.

<sup>3</sup> *See id.* at 125.

<sup>4</sup> For the different activities in this field, *see*, Markus Fallenböck & Johann Weitzer, *Digital Rights Management: Recent Legal and Technological Developments in the United States and Europe and Their Impact on Information Management*, Computer und Recht International (forthcoming 2003).

Parallel to the development and use of protection and identification schemes, a market for “pirate” devices will develop, that will enable or facilitate the unauthorized circumvention of and/or removal of these schemes. The industry has stressed the need to meet this risk by adopting, at the international and the national levels, specific rules providing rapid and effective legal protection of identification and protection schemes.

Legislators around the world have therefore identified an increased need for more effective protection against unauthorized acts of exploitation, and, linked to this, the necessity to identify the protected material disseminated on the networks, and the respective holder of the copyright.<sup>5</sup>

By comparing the U.S. and European perspective with a clear emphasis on the U.S.<sup>6</sup>, this paper will analyze the legal structure of anticircumvention provisions, their policy reasons and objectives and their impact on the rights of users. It asks whether the scope of these provisions is appropriate (too broad, too narrow), and how one could reconcile the competing interests of the public and the holders of copyright.

## II. One View of the Cathedral: Digital Technology as a Threat to Copyright

The concerns of copyright owners result from two key aspects of digital technology: ease of copying and ease of distribution. The impact of these features becomes even clearer when one

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<sup>5</sup> This attitude was very dominant in recent legislation that tried to adapt copyright law to the digital world. *See, e.g.*, the views expressed by an important player in the U.S. legislative process, Orrin G. Hatch, *Toward a Principled Approach to Copyright Legislation at the Turn of the Millennium*, 59 U. Pitt. L. Rev. 719, 726 (1998). Moreover, this article gives an insight into values and principles that enjoy significant support among legislators involved in copyright issues. The author emphasizes the principle that copyright is a property right that ought to be respected as any other property right. In talking about the political considerations, he argues that “... [c]opyright legislation is indeed influenced by the copyright industries because they are important to the national economy and because they are so crucial to stimulating creativity and making creative works available”.

<sup>6</sup> As the title of this paper indicates, the focus is on two recent examples of legislative activities in this field: the U.S. Digital Millennium Copyright Act (hereinafter DMCA), and the European Parliament and Council Directive on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society (hereinafter Copyright Directive).

looks at the advantages digital technology offers over analog technology. First, the quality of digital copies is superior to analog ones. Second, media that store digital information are usually less expensive than their analog equivalents. Third, digital technology facilitates interactive systems and the transmission of digital works in networks. As the Internet becomes the platform for hundreds of millions of users, it is the perfect place for the exchange of information on a massive scale.

It is obvious that digital technology's many advantages also facilitate copyright infringement. The issues raised are not new and most of them were discussed in the advent of radio and television broadcasting. Yet, unlike those earlier technologies, the combination of digitization and new telecommunication media gives the public an interactive means of obtaining copyrighted works on demand. Moreover, the combination of digital technology and the Internet exacerbates many of the problems of international copyright protection. Because international borders do not restrict the Internet, it is now possible for digital works to reach every market in the world by purely electronic means.

These concerns also had their effect on the legislative bodies dealing with copyright law in the digital world. In the course of the discussion about the Digital Millennium Copyright Act (DMCA)<sup>7</sup> in the U.S. House of Representatives, the Committee on Commerce, which played a critical role in considering this legislation, concluded its examination by recognizing that "the digital environment poses a unique threat to the rights of copyright owners, and as such, necessitates protection against devices that undermine copyright interests. In contrast to the analog experience, digital technology enables pirates to reproduce and distribute perfect copies of works - at virtually no cost at all to the pirate. As technology advances, so must our laws."<sup>8</sup>

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<sup>7</sup> Pub. L. No. 105-304, 112 Stat. 2860 (1998), codified, in relevant part, at 17 U.S.C. 1201 (Supp. IV 1999).

<sup>8</sup> Report of the House Comm. on Commerce, H.R. Rep. No. 105-551, pt. 2, at 25 (1998).

### III. The Other View: Digital Technology to Protect Copyright

While digital technology may facilitate infringement, copyright owners have a vast variety of management and protection systems at their disposal to counteract this threat. These technological protection measures<sup>9</sup> have the potential to control tightly the access to and/or the use of a digital work.<sup>10</sup> For example, they may restrict users from rendering, copying, or transferring a work unless they pay a fee to the copyright owner. Of course, these systems vary greatly in terms of sophistication, security protection, and versatility. At one end of the spectrum, there are systems that require a simple password to access digital information and do not prevent subsequent copying or distribution of the information. More sophisticated systems, however, can manage many future uses of a digital work long after it has been obtained from the copyright owner.

Although a detailed explanation of these protection measures is beyond the scope of this paper, two examples should be mentioned: encryption and digital watermarking. Encryption usually refers to the process of scrambling or encoding digital information so that it is only readable to those who have the tools to decrypt it. Digital watermarking is the process whereby certain digital information is integrated into the actual work in a way that is not humanly discernible (for instance, by minutely altering the sounds of a digital sound

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<sup>9</sup> Technological protection measures generally refer to techniques that permit providers of information in digital form to regulate access to and/or use of their products. These measures can perform a vast range of functions. They can simply gather information about every use of a digitally encoded work. They can also limit or altogether prevent its use. Both the DMCA and the Copyright Directive use the term “technological measure”. In this paper the term “technological protection measures” is generally used in reference to the above mentioned definition, but can have a different meaning when used in the context of different acts of legislation.

<sup>10</sup> For more detailed information about the technology and its legal implications, see, e.g., Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at “Copyright Management” in Cyberspace*, 28 Conn. L. Rev. 981, 983 (1996). Neil Smith & Andrew V. Smith, *Technical Protection Devices and Copyright Law*, 3 B.U. J. SCI. & TECH. L. 7 (1997); Mark Stefik, *Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 Berkeley Tech. L.J. 137, 138-40 (1997); Tom W. Bell, *Fair Use vs. Fared Use: The Impact of Automated Rights Management on Copyright’s Fair Use Doctrine*, 76 N.C.L. Rev. 557 (1998); Mark Gimbel, Note, *Some Thoughts On the Implications of Trusted Systems for Intellectual Property Law*, 50 Stan. L. Rev. 1671, 1675-80 (1998); Rosemarie F. Jones, *Wet Footprints? Digital Watermarks: A Trail to the Copyright Infringer on the Internet*, 26 Pepp. L. Rev. 559, 568-573 (1999).

recording), but capable of being perceived by special reading devices or software. Digital watermarking has two primary uses: first, to identify copyrighted works by providing identifying information in the watermarks; second, to control use of the work by placing instructions in the watermark that limit the uses a device may make of the work. Both digital watermarking and encryption have different levels of sophistication and each may be used in conjunction with the other as part of a particular protection system.

A practical example for the use of watermarking can be found on DVDs (Digital Versatile Disc) If a DVD with watermarking is copied, the watermark follows the copy, no matter how the copying occurred. Expert knowledge and considerable computer power are required to remove the watermark. Digital watermarking also allows functions such as “traitor tracing”, a method of locating illegal copies, and the verification of the contents integrity and authenticity. The latter may also be achieved by the use of hash-functions or digital signatures.

#### IV. The Interplay Between Law and Technology

The preceding paragraphs emphasize that digital technology is not only a threat to copyright but also offers new and very effective ways of protecting it. This clarification is important because the public discussion very often cites only the negative impacts for copyright owners which leads to a one-sided evaluation of the consequences. In fact, digital technology is a tool that can be used for different purposes and it is always possible to counter technology with technology. This can be seen by continuing the example of encryption. Like any form of technological protection measure encryption is liable to be decoded. Users who wish to access encrypted information may be able to use decryption software instead of asking the copyright

owner for the code that would enable them to use the information. They may wish to do so for legitimate reasons, such as to quote a paragraph from a literary work, or to simply avoid paying without any legally recognized justification. To avoid this, copyright owners only have to make certain that they use effective protection measures.

Given this scenario, one could argue that the solution should be left to technology. Copyright owners are allowed to protect their works with whatever technology that is effective and user-friendly.<sup>11</sup> Nevertheless, users would be allowed to circumvent these technologies (of course, there is still traditional copyright law which would decide whether the underlying use is an infringement or not). This would create a technological race and a market for circumvention devices where users can decide whether they have a net gain from using such devices or from paying the fees. In this world technology (and a technology market) would become the most important mechanism for protecting intellectual property. Of course, one has to ask about the shortcomings of this option: Who would bear the cost of the technological race that may emerge? Drawing a parallel to the situation of protection measures in the software arena, one could argue that copyright owners would end up bearing most of the costs. Users would benefit from a legal market of relatively cheap circumvention devices, many of them even available for free on the Internet. In contrary, copyright owners would have to invest in protection research and implementation.

But legislators around the world decided otherwise. Recent legislation, such as the DMCA or the Copyright Directive, attempts to reinforce the efficacy of technological protection measures by making circumvention illegal. Decisively, this legislation restricts the use of circumvention technology by creating detailed anticircumvention rules. And this is where the law returns. It is true that technological protection measures can regulate the access to

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<sup>11</sup> This refers to the delicate balance copyright owners have to keep in using protection measures. The technically best system may be economically irrelevant if its authorized use becomes so cumbersome that consumers lose interest. This is a special problem in the Internet where users expect seamless surfing from one website to the other. Even relatively simple identification mechanisms, for example, still deter a high percentage of users from further proceeding in their search for information. This behavior may change, as the Internet develops into a space of intensified “zoning” activities.

copyrighted works more effectively than any law possibly could. But technology also counters that. There are means to circumvent this protection. Therefore, law is needed to prevent this from happening on a large scale.<sup>12</sup> This is an example of the close interplay between law and technology, acting as mechanisms to control behavior<sup>13</sup>. Whether these legal provisions are effective, and what they mean in the context of copyright doctrine are two questions this paper ventures to answer.

#### V. Setting the Framework: The World Intellectual Property Organization (WIPO) Treaties of 1996

As noted above, international organizations as well as states respond to this development by passing new legislation.<sup>14</sup> One of the most important legislative activities, that laid the framework for both the DMCA and the Copyright Directive, are the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty<sup>15</sup>. In general, the WIPO Copyright Treaty concerns copyright protection on the global information infrastructure, and the WIPO Performances and Phonograms Treaty gives sound recordings protection similar to that of the works currently covered by the Berne Convention.<sup>16</sup>

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<sup>12</sup> Of course, it is impossible to prevent every kind of circumvention. There will always be a certain group of users, who – through their skills and motivation – circumvent technological protection measures. However, by prohibiting in particular the trafficking of circumvention devices, the vast majority of users is excluded from these activities simply because they lack the technical expertise to circumvent on their own.

<sup>13</sup> This interplay is not only driven by law and technology, but also by the influence of social norms and the market. For this model and its application to the Internet, see LESSIG, *supra* note 1, at 85-99.

<sup>14</sup> For these activities, see Ron Reiling, *Intellectual Property Regimes for the Information Age: Policies of the United States, the European Union and the World Intellectual Property Organization*, 3 B.U. J. SCI. & TECH. L. 9 (1997); Michael J. O'Sullivan, *International Copyright: Protection for Copyright Holders in the Internet Age*, 13 N.Y. Int'l L. Rev. 1 (2000).

<sup>15</sup> WIPO Copyright Treaty, adopted December 20, 1996, WIPO Doc. CRNR/DC/94; WIPO Performances and Phonograms Treaty, adopted December 20, 1996, WIPO Doc. CRNR/DC/95; Agreed Statements Concerning the WIPO Copyright Treaty, adopted December 20, 1996, WIPO Doc. CRNR/DC/96.

<sup>16</sup> For a more comprehensive assessment, see, e.g., David Nimmer, *A Tale of Two Treaties*, 22 Colum.-VLA J.L. & Arts 1 (1997); David Nimmer, *Aus der Neuen Welt*, 93 Nw. U. L. Rev. 195 (1998).



The Copyright Treaty expressly recognizes that computer programs are covered by the Berne Convention as literary works and that copyrightable compilations of data (databases) are also covered by the Convention as such.<sup>17</sup> For the first time, the Copyright Treaty recognizes a broad right of public distribution for covered works and recognizes a right of rental for computer programs, cinematographic works, and works embodied in sound recordings.<sup>18</sup> Two other features of the Treaty are the recognition of a broad right of communication to the public, which would include the Internet, and an Agreed Statement that interprets the existing reproduction right of the Berne Convention to fully apply in the digital environment.<sup>19</sup>

In this context, the most significant provision is Article 11, which requires member states to provide legal protection and effective legal remedies against the circumvention of effective technological measures, that are used by holders of copyright or related rights in connection with the exercise of their rights. Moreover, Article 12 requires the implementation of adequate and effective legal remedies to preserve the integrity of rights management information. Rights management information is information which identifies the work, the author of the work, the owner of any right in the work, or information about the terms and conditions of use of the work which is attached to a copy of a work or appears in connection with the communication of a work to the public.<sup>20</sup> The purpose of this provision is to prohibit the removal and altering of certain electronic rights management information attached to a work or other subject matter and thereby facilitate licensing and prevent unauthorized copying.

Although the WIPO Treaties are the result of an international bargaining process, many provisions – including Article 11 of the Copyright Treaty – were heavily influenced by the U.S. agenda in this field. This agenda had been laid out in a “Green Paper” of July 1994<sup>21</sup> and

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<sup>17</sup> See Article 4 and Article 5 of the WIPO Copyright Treaty respectively.

<sup>18</sup> See Article 6 and Article 7 of the WIPO Copyright Treaty respectively.

<sup>19</sup> See Article 8 of the WIPO Copyright Treaty and Agreed Statement Concerning Article 1(4).

<sup>20</sup> See Article 12(2); Rights management information is also referred to as copyright management information.

<sup>21</sup> See Information Infrastructure Task Force Working Group on Intellectual Property Rights, Intellectual Property Rights and the National Information Infrastructure (Preliminary Draft, July 1994).

a “White Paper” of September 1995<sup>22</sup>, which analyzed copyright law as applied to works in digital format.<sup>23</sup> The main focus of these reports was U.S. domestic law, but the White Paper also saw in the WIPO negotiations an opportunity to gain international acceptance for the copyright rules that the White Paper was urging for the United States.<sup>24</sup>

## VI. The Digital Millennium Copyright Act

### A. Introduction

On October 28, 1998, President Clinton signed into law the DMCA, a complex law that makes major changes in U.S. copyright law to address the digital networked environment.<sup>25</sup>

Title I of the DMCA amends the Copyright Act to comply with the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty.<sup>26</sup>

As described above, both treaties require contracting parties to provide legal remedies against the circumvention of technological measures that protect copyrights. To create provisions about circumvention, Congress added a new chapter, Chapter 12 (“Copyright Protection and Management Systems”), to Title 17 of the United States Code.<sup>27</sup> The underlying goal of the DMCA is to bring U.S. copyright law “squarely into the digital age.”<sup>28</sup> This law proposes to

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<sup>22</sup> See Information Infrastructure Task Force Working Group on Intellectual Property Rights, Intellectual Property Rights and the National Information Infrastructure, app. (September 1995) <http://www.uspto.gov/web/offices/com/doc/ipnii/lawcopy.pdf>. The White Paper contains substantially the same analysis and recommendations as the Green Paper.

<sup>23</sup> For a comprehensive analysis of the U.S. position, see Pamela Samuelson, *The U.S. Digital Agenda at WIPO*, 37 Va. J. Int'l L. 369 (1997); see also LITMAN, *supra* note 1, at 89-130.

<sup>24</sup> See Samuelson, *supra* note 23, at 380; see also LITMAN, *supra* note 1, at 129.

<sup>25</sup> Some people regard this to be the most sweeping revision ever to the Copyright Act of 1976; see David Nimmer, *A Riff on Fair Use in the Digital Millennium Copyright Act*, 148 U. Pa. L. Rev. 673, 674 (2000).

<sup>26</sup> Some commentators argue that in the field of circumvention U.S. law already met the standard set by Article 11 of the WIPO Copyright Treaty. See, e.g., LITMAN, *supra* note 1, at 131.

<sup>27</sup> For a detailed description of the legislative history, see, e.g., Nimmer, note 25, at 681-722; LITMAN, *supra* note 1, at 130-150.

<sup>28</sup> Report of the Senate Comm. on the Judiciary, S. Rep. No. 105-190, at 2 (1998).

"make digital networks safe places to disseminate and exploit copyrighted materials."<sup>29</sup> By creating "the legal platform for launching the global digital on-line marketplace for copyrighted works," its aim is to "make available via the Internet the movies, music, software, and literary works that are the fruit of American creative genius."<sup>30</sup>

Like the Audio Home Recording Act of 1992 (AHRA)<sup>31</sup>, the DMCA also represents a new approach to copyright legislation where Congress has decided to regulate technology directly instead of regulating the usage of a copyrighted work. But unlike the AHRA, which focuses primarily on digital sound recordings and devices that play them, the DMCA is a highly complex statute that covers subjects as diverse as copyrights for boat hull designs and safe harbors for Internet service providers. Of the five titles that make up the DMCA, this paper will address only the provisions in Title I dealing with the circumvention of copyright management systems.<sup>32</sup> These anticircumvention provisions grant copyright owners a cause of action against individuals who either circumvent the technological measures that protect their copyrighted works or provide the technological means for others to do so. The DMCA creates three essential prohibitions.

#### B. An Overview to Section 1201 ("Circumvention of copyright protection systems")

Within Chapter 12 it is Section 1201 that contains three principal rules relating to circumventing access control and other technological measures used to protect copyrighted

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<sup>29</sup> See *id.* at 2.

<sup>30</sup> *Id.* at 2.

<sup>31</sup> Pub. L. No. 102-563, 106 Stat. 4237 (1992), codified at 17 U.S.C. 1001-1010 (1994); for a comparison between the AHRA and the DMCA, see Benton J. Gaffney, *Note: Copyright Statutes that Regulate Technology: A Comparative Analysis of the Audio Home Recording Act and the Digital Millennium Copyright Act*, 75 Wash. L. Rev. 611 (2000).

<sup>32</sup> For a description of the anticircumvention provisions and their impact, see Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U.L. Rev. 354, 414-429 (1999); Jane C. Ginsburg, *Copyright Legislation for the "Digital Millennium"*, 23 Colum.-VLA J.L. & Arts 137 (1999); Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anticircumvention Regulations Need to be Revised*, 14 Berkeley Tech. L.J. 519 (1999); Nimmer, *supra* note 25, 684-742; LITMAN, *supra* note 1, 143-145.

works; these are: a basic anticircumvention provision in Section 1201(a)(1)<sup>33</sup>, a ban on trafficking devices that circumvent access control measures in Section 1201(a)(2)<sup>34</sup>, and a ban on trafficking devices that circumvent copy control measures in Section 1201(b)<sup>35</sup>. The basic provision prohibits gaining unauthorized access to a work by circumventing a technological protection measure put in place by the copyright owner to control access to the copyrighted work. The access-device provision prohibits manufacturing or making available technologies, products and services used to defeat technological measures controlling access. Finally, the copy-device provision prohibits the manufacture and distribution of the means of circumventing technological measures protecting the rights of a copyright owner under the Copyright Act.

At the outset, two major categorizations should be highlighted that can be derived from the structure of Section 1201. The first refers to the distinction between the prohibition of the act of circumvention itself (as stated in the basic provision) and the prohibition of devices that enable circumvention (as stated in the access-device and the copy-device provisions).<sup>36</sup> The first prohibition is focused on conduct (the mere act of circumvention violates this provision), whereas the second concentrates more on technology.<sup>37</sup>

More important than this first categorization, however, is the second one which is based on the distinction between access and copy protection. Section 1201(a), containing the basic provision and the access-device provision, constitutes an *access*-anticircumvention provision. Section 1201(b) is a *copy*-anticircumvention provision. This distinction is also the basis for structuring this paper.

It is important to underline that the anticircumvention provisions do not alter the exclusive rights of copyright owners. To show a violation of these provisions, a finding of copyright

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<sup>33</sup> In this paper referred to as the basic provision.

<sup>34</sup> In this paper referred to as the access-device provision.

<sup>35</sup> In this paper referred to as the copy-device provision.

<sup>36</sup> Access-device provision and copy-device provision together are referred to as anti-device provisions.

<sup>37</sup> The statutory language prohibits certain activities (“manufacture”, “import” etc.) but the general goal is to regulate the existence of circumvention technology.

infringement is not necessary. The violation of one of the anticircumvention provisions is a separate violation under U.S. copyright law. A defense to copyright infringement, however, is not a defense to the independent prohibition on circumvention and circumvention devices.

### C. Section 1201(a): Access-anticircumvention

The core of this paragraph is the basic provision that states that no person shall circumvent a technological measure that effectively controls access to a work protected under this title. This is complemented by the access-device provision, which provides that no person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that -

- is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under Title 17;
  - has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under Title 17;
- or
- is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing a technological measure that effectively controls access to a work protected under Title 17.

In this context two definitions are important. First, Section 1201(a)(3)(A) defines that to circumvent a technological measure means to descramble a scrambled work, to decrypt an encrypted work, or otherwise avoid, bypass, remove, deactivate, or impair a technological protection measure. Second, Section 1201(a)(3)(B) states that a technological measure effectively controls access to a work if the measure, in the ordinary course of its operation,

requires the application of information, or process or treatment, with the authority of the copyright owner, to gain access to the work.<sup>38</sup>

For further discussion, it is important to note, once again, the distinction between the ban on the circumvention of access control and on the circumvention of copy control. This is also made clear by the structure of Section 1201. The basic provision and the access-device provision appear together in the same paragraph. The House committee report comments that those two bans pertain “when a person has not obtained authorized access to a copy or a phonorecord of a work for which the copyright owner has put in place a technological measure that effectively controls access to his or her work”.<sup>39</sup> Or to put it in a more colorful language: “The act of circumventing a technological protection measure put in place by a copyright owner to control access to a copyrighted work is the electronic equivalent of breaking into a locked room in order to obtain a copy of a book.”<sup>40</sup>

It is important to note that the access provisions are independent of the underlying use that a person is intending. The basic provision contains an absolute ban on circumventing access control measures, regardless of the question of whether the intended use constitutes copyright infringement and whether defenses are available. Because of this broad proscription, several accompanying provisions mitigate the potential for harsh results. First, the basic provision did not become effective until two years after the enactment of the DMCA (it, therefore, became effective on October 28, 2000). Second, the statute provides an exemption for those adversely affected by virtue of such prohibition in their ability to make non-infringing uses of that particular class of works. Finally, the statute requires that the Librarian of Congress evaluate the prohibition during the two-year moratorium and during each succeeding three-year period to make rules allowing additional exemptions.

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<sup>38</sup> Circumvention of access-control technologies can include a variety of activities, for example: X borrows a friend’s password so that X can read an Internet magazine he does not subscribe to. Y uses a software utility that permits her to view a DVD movie she purchased in the U.S. on a player manufactured and sold in the European Union and licensed to play only DVDs from that region. *See also* LITMAN, *supra* note 1, at 143-145.

<sup>39</sup> Report of the House Comm. On Commerce, H.R. Rep. No. 105-551, pt. 1, at 17 (1998).

<sup>40</sup> *Id.* at 17.

The access-device provision is a supplementary prohibition to the basic ban on circumvention but its impact is even more far-reaching. Its goal is to provide meaningful protection and enforcement of the copyright owner's right to control access to his or her copyrighted work. Building on previous legal solutions outside the copyright arena (such as those barring manufacture of equipment to receive unauthorized cable television service and decrypting cable programming), the access-device provision was drafted to target circumvention technology, and to ensure that legitimate multipurpose devices can continue to be made and sold (responding to the obvious fact that, for instance, every personal computer can be programmed to function as a circumvention device). Its limited application to works that are designed for infringement or have only limited commercial significance other than to infringe seeks to preserve the balance between effectively protecting copyright owners, and simultaneously allowing the development of technology. According to the legislative history, it is not aimed at products that are capable of commercially significant non-infringing uses, such as consumer electronics, telecommunications, and computer products – including videocassette recorders, telecommunications switches, personal computers, and servers – used by businesses and consumers for perfectly legitimate purposes. Although such devices are not covered by the prohibition, a manufacturer cannot escape liability by labeling as a common household device something primarily designed to infringe.<sup>41</sup> The access-device provision was not suspended. It took effect on October 28, 1998 when the DMCA was enacted, and has already been the basis of litigation.<sup>42</sup>

Thus, the distinction between the basic provision and the access-device provision is the first prohibits acts of circumvention; and the second prohibits technologies designed to circumvent systems that prevent unauthorized access to protected works. It is important to note that these provisions create a new, independent prohibition on circumvention that is outside the usual

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<sup>41</sup> See Nimmer, *supra* note 25, at 687-688.

<sup>42</sup> For examples of DMCA litigation *see infra* E and I.

reach of copyright law. They target the circumvention of access control and not copyright infringement. Despite the limited goal of the access provisions their interpretation by the courts in recent litigation makes obvious that access controls are given the greatest protection under the DMCA. In a following part of this paper it will be examined whether this trend leads to an expansion of Section 1201(a) beyond the intended area, and whether this is a problem from the viewpoint of users.<sup>43</sup>

#### D. Section 1201(b): Copy-anticircumvention

Under the heading “additional violations” Section 1201(b) contains the ban on devices for the circumvention of copy control. This provision provides that no person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that -

- is primarily designed or produced for the purpose of circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner under Title 17 in a work or a portion thereof;
- has only limited commercially significant purpose or use other than to circumvent protection afforded by a technological measure that effectively protects a right of a copyright owner under Title 17 in a work or a portion thereof; or
- is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner under Title 17 in a work or a portion thereof.

While similar to the access-device provision in its wording and its focus on technology, Section 1201(b) differs from 1201(a) in that it seeks to protect copyright owners' statutory rights to their works under the Copyright Act as opposed to preventing unauthorized access to

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<sup>43</sup> See *infra* D.



their works. One of the most important results flowing from this distinction is that the copyright owners' rights protected under the copy-anticircumvention provision are subject to the limitations of the Copyright Act while the protections against unauthorized access are not. Thus, the basic provision in Section 1201(a) is inapplicable to the subsequent actions of a person once he has obtained authorized access to a copy of a work protected under the Copyright Act, even if such actions involve circumvention of additional forms of technological protection measures. Instead, Section 1201(b) comes into play here. The interesting thing about this provision is that it allows the usage of circumvention technology but bans the trafficking of such devices. Likewise the access-device provision Section 1201(b) was not suspended and therefore took effect on October 28, 1998.

#### E. Distinctions Between 1201(a) and 1201(b): Access-anticircumvention and Copy-anticircumvention

The similar wording of the two anti-device provisions makes it necessary to come back in more detail to the fundamental distinction drawn earlier in this paper. Although they have in common the regulation of technology, the differences between the access-device provision and the copy-device provision highlight the different concepts and impacts of Section 1201. This, as mentioned before, is supported by the structure of the entire Section. The copy-anticircumvention provision appears in its own statutory paragraph, and it contains nothing comparable to the basic provision in Section 1201(a). Accordingly, there is a clear contrast between the two schemes. As to access-circumvention, the person engaging in that conduct has violated the basic provision; anyone enabling this conduct through publicly offering devices to achieve the prohibited circumvention is independently liable under the access-device provision. By contrast, a person who engages in circumvention related to a work to which he has lawful access does not violate any provision of Section 1201 (of course, he may

be liable under traditional copyright law). Only someone who publicly offers devices to achieve this kind of circumvention becomes liable under the copy-device provision.

This difference raises the following question: Why is Section 1201 drafted to include a basic provision and a ban on access-circumvention devices without any comparable basic provision corresponding to the ban on copy-circumvention devices? The reason there is no such prohibition clearly shows the different approaches and the changes Section 1201 brought to copyright law. The prohibition on circumvention activities in the basic provision is necessary because prior to the DMCA, the conduct of circumvention was never before made unlawful.<sup>44</sup> The ban on access-circumvention devices enforces this new prohibition. In contrast, the copyright law has long forbidden copyright infringements, so no new prohibition was necessary. The ban on copy-circumvention devices enforces the longstanding prohibitions on infringements.<sup>45</sup>

The problem is that the relationship between these two provisions is highly complicated, mainly because the DMCA leaves it unclear how far the access-anticircumvention provision extends.<sup>46</sup> There are two main positions: “Access” can be understood to refer only to initial access, or it can include all subsequent acts to gain access, like viewing, listening, or using a work. In a technological context, the latter interpretation would mean that “access” is almost “omnipresent”. It appears that courts so far have followed this version, expanding the access-anticircumvention provision in its application and thereby naturally narrowing the application of the copy-device provision. This tendency is revealed in particular in *Universal City Studios, Inc. v. Corley*<sup>47</sup> and *RealNetworks, Inc. v. Streambox, Inc.*<sup>48</sup>, two cases brought under the DMCA.<sup>49</sup>

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<sup>44</sup> Nimmer, *supra* note 25, at 691.

<sup>45</sup> See Report of the Senate Comm. on the Judiciary, S. Rep. No. 105-190, at 12 (1998); see also, Nimmer, *supra* note 25, at 691.

<sup>46</sup> For the problems in defining “access”, see, e.g., Ginsburg, *supra* note 32, at 140; LITMAN, *supra* note 1, at 144, 153.

<sup>47</sup> The trial court decision can be found at *Universal City Studios, Inc. v. Reimerdes*, 111 F.Supp. 2d 294 (S.D.N.Y. 2000) and additions at 111 F.Supp. 2d 346 (S.D.N.Y. 2000). This case, also known as the DeCSS or

The *Corley* case was the first one to present the problems related to the access question. If access means only initial access, then DeCSS should not violate the access-anticircumvention provision. As Jessica Litman points out, DeCSS is useful only to people who already have a DVD, and all of those people are authorized to gain access to the content in order to view it.<sup>50</sup> But if access includes all subsequent acts of using, then use of DeCSS would violate the access-anticircumvention provision; and this is what the court finally decided. The main consequence is that this provision prohibits circumvention of access control for any reason except the exemptions<sup>51</sup> enumerated in the statute.<sup>52</sup>

But this broad interpretation poses several problems: First, it seems not to reflect the legislative intent. According to the legislative history, the two provisions are not interchangeable, and many devices will be subject to challenge only under one of the subsections. A broad application of Section 1201(a), construing it in a way that every device for the circumvention of copy control can also be one for the circumvention of access control, makes the copy-device provision superfluous. Second, the interests of users are harmed because by expanding the application of the access-anticircumvention provision not only is it

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*Corley* case, is maybe the most prominent case in the DMCA context. DeCSS is software tool that permits users to decrypt the so-called Content Scramble System (CSS). CSS is an encryption-based security and authentication system used to provide access control and copy protection to inhibit the unauthorized reproduction and distribution of motion pictures released on DVD. A very helpful description of the DeCSS case and links all the related materials can be found under <http://eon.law.harvard.edu/openlaw/DVD/roadmap.html>. For more relevant examples of recent U.S. case law, in particular the Appeals Court decision of the DeCSS case, see *infra* I.

<sup>48</sup> 2000 WL 127311 (W.D. Wash. January 18, 2000). The district court granted RealNetworks an injunction enjoining the defendant from manufacturing, importing, licensing or marketing versions of the Streambox VCR product or similar products that circumvent RealNetworks' technological protection measures or versions of the Streambox Ferret product or similar products that modify RealNetworks' RealPlayer program, including its interface, source code or object code. The Streambox VCR device mimics a RealPlayer and circumvents the "secret handshake" authentication procedure that a RealServer requires before it will stream content. The court held that the Streambox VCR circumvents both the access control and copy protection measures. The court also determined that under the DMCA the "secret handshake" authentication procedure that must take place between a Real Server and a Real Player before the server will begin streaming content to a user constitutes a "technological measure" that "effectively controls access" to copyrighted works.

<sup>49</sup> For other early DMCA cases, see also *Sony Computer Entertainment America Inc. v. Gamemasters*, 87 F. Supp. 2d 976 (N.D. Ca. 1999); *DVD Copy Control Ass'n, Inc. v. McLaughlin*, 2000 WL 48512 (Cal. Super. Ct. January 21, 2000); *CSC Holdings, Inc. v. Greenleaf Electronics, Inc.*, 2000 WL 715601 (N.D. Ill. June 2, 2000).

<sup>50</sup> LITMAN, *supra* note 1, at 153.

<sup>51</sup> For a description of these exemptions see *infra* G.

<sup>52</sup> Apart from the statutory implications, there is, of course, also a contractual aspect. What if DVD manufacturers and other content retailers contractually prohibit the use of any circumvention technology? This question cannot be answered within this paper, however, it requires further research.

illegal to traffic circumvention devices but also the activity itself becomes unlawful. This restricts legitimate uses.<sup>53</sup> Courts should construe 1201(a) narrower and restrict it to situation with initial access to a work.<sup>54</sup>

#### F. The function of the basic provision

Besides the general distinction between provisions on access-anticircumvention and copy-anticircumvention, it is also important to emphasize the relationship between the basic ban on anticircumvention activities and the ban on trafficking of devices that enable such activities. It is clear that, from the wording and the legislative history, the basic provision is imposed on the act of circumvention per se, not on the act of circumvention in order to infringe a protected right. In a separate paragraph Section 1201 defines violations with respect to circumvention of measures that protect a right of the copyright owner. Thus, it becomes clear that the basic prohibition imposed by Section 1201(a)(1) on circumvention of any measure that effectively controls access to a work operates irrespective of whether the access gained, apart from the circumvention needed to effect it, infringes a right in the work.

Discerning the relationship between the basic provision and the anti-device provisions is crucial to understanding the anticircumvention provisions as a regulatory framework.<sup>55</sup> From a practical perspective, the prohibition on manufacture, importation, or sale of circumvention devices is the more important of the two prohibitions. Even if a few users can circumvent without relying on the products or services of others, the vast majority of users will have to rely on such products or services. Prohibition of the devices to circumvent effectively excludes the vast majority of users from most uses of protected information.

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<sup>53</sup> For a detailed description of the anti-device provisions and their impacts on users' interests, in particular from the perspective of free expression, see Shaun Sparks, *Busting the Code: The Anti-Trafficking Provision of the Digital Millennium Copyright Act and Free Expression in Digital Media*, 6 International Journal of Communications Law and Policy 1 <<http://www.ijclp.org>>. For a general analysis of freedom of speech issues in the DMCA, see Benkler, *supra* note 32, at 420-430.

<sup>54</sup> Pamela Samuelson convincingly argues that the anti-device provisions should be narrowed by legislative acts or judicial interpretation. See Samuelson, *supra* note 32, at 546-558.

<sup>55</sup> See Benkler, *supra* note 32, at 416.

Despite the practical importance of the anti-device provisions, the direct prohibition on circumvention per se plays an important conceptual role in the anticircumvention framework. If the act of circumvention were privileged to users, it would be difficult to sustain a prohibition on trafficking of the devices necessary to enable users to engage in circumvention.

It is only because the underlying behavior – circumvention – is unlawful, that a prohibition on the technology necessary for engaging in that behavior can be justified.<sup>56</sup> Although one could argue that the practical implications of the basic ban on anticircumvention may be limited, it sends an important signal to the community and provides the fundamental justification for further prohibitions. In this way, it can be understood as an interplay between law and social norms where the government is trying to influence norms by legislation.

#### G. Exemptions

The Act's numerous exemptions from the anticircumvention provision reflect a wide range of concerns about the implications of extensively deployed technological protection measures, and a comprehensive ban on circumventing these measures. As the bill advanced through Congress, numerous exemptions were integrated into Section 1201. These exemptions have different thresholds for qualification, and apply to different subsections of Section 1201. The result is a highly complex system.

##### *1. The general exemption in Section 1201(a) and the rulemaking procedure*

Congress was aware that notwithstanding an extensive list of specified exemptions, there may be still other legitimate reasons for circumventing technological protections. Accordingly, Congress suspended application of the prohibition on circumvention of access controls for two years, until the Librarian of Congress could conduct a rulemaking proceeding to

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<sup>56</sup> See *id.* at 416.

determine whether additional exemptions were needed.<sup>57</sup> The DMCA further requires the Librarian of Congress to conduct a similar rulemaking every three years thereafter. The Librarian's principal task is to investigate whether the prohibition on circumvention will adversely affect the ability of users of copyrighted works to make non-infringing uses of the work.

If in this rulemaking it is determined that users are, or are likely to be in the succeeding 3-year period, adversely affected in their ability to make non-infringing uses of that particular class of works, then the basic prohibition against circumvention shall not apply to persons who are users of this class of works.

Section 1201(a)(1) itself does not give direct content to what is meant by "a particular class of works." It is no surprise that in the rulemaking procedure, one of the key issues discussed was how "class" of works is to be defined. The Copyright Office asked for comments from the public on the criteria to be used in answering this question. One side of the comments is represented by a joint submission from a number of library associations. They took the position that "the class of works should be defined, in part, according to the ways they are being used because that is precisely how the limitations on the otherwise exclusive rights of copyright holders are phrased" and concluded that "all categories of copyrighted works should be covered by this rulemaking".<sup>58</sup> In summing up, this position asks the Librarian to adopt a function-based definition of classes of works. In contrast, a coalition of organizations representing copyright owners argued for a narrower approach, rejecting a focus on particular types of uses of works.

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<sup>57</sup> In October 2000, the Copyright Office of the Library of Congress completed the first rulemaking and published its decision; see Library of Congress, *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, 65 Federal Register 64555 (October 27, 2000); for a description and summary of the procedure and links to related materials see also <http://www.loc.gov/copyright/1201/>. Currently, the Copyright Office is conducting the second rulemaking for which comments were due until December 18, 2002. See also <http://www.loc.gov/copyright/1201/>.

<sup>58</sup> 65 Federal Register 64559.

Based on a review of the statutory language and the legislative history, the Librarian came to the conclusion that a “class” of works cannot be defined in terms of the status of the user or the nature of the intended use. Instead, a “class” of works has to be defined, primarily, if not exclusively by reference to attributes of the works themselves. The starting point for this determination is Section 102 of the Copyright Act<sup>59</sup>, which contains the categories of authorship<sup>60</sup>. This does not mean, however, that a “class” of works must be identical to a “category”. In fact, that usually will not be the case. A “class” of works might include works from more than one category of works; one could imagine a “class” of works consisting of certain sound recordings and musical compositions, for example. More frequently, a “class” would constitute some subset of a Section 102 category.

The language used by the Librarian shows that in the rulemaking procedure a narrow application of “class” will prevail. This is motivated by the concern that a broad application might lead to unjust results in light of the fact that the entire “class” must be exempted from the anticircumvention provision if the required adverse impact is demonstrated. How the mechanism could work can be shown by the following example: if a showing had been made that users of motion pictures released on DVD's are adversely affected in their ability to make non-infringing uses of those works, it would be too sweeping if the Librarian's only choice were to exempt motion pictures. Limiting the class to motion pictures distributed on DVD's, or more narrowly to motion pictures distributed on DVD's using the content scrambling system of access control would be a classification. Such a classification would begin by reference to attributes of the works themselves, but could then be narrowed by reference to the medium on which the works are distributed, or even to the access control measures applied to them.

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<sup>59</sup> See 17 U.S.C. 102.

<sup>60</sup> Literary works, musical works, dramatic works, pantomimes and choreographic works, pictorial, graphic, and sculptural works; motion pictures and other audiovisual works; sound recordings; and architectural works.

In fact, the two exemptions finally announced by the Librarian of Congress, reflect this approach to a different extent. The first class, “Compilations consisting of lists of websites blocked by filtering software applications,” fits (almost) perfectly within the chosen approach of classification. The second class, “Literary works, including computer programs and databases, protected by access control mechanisms that fail to permit access because of malfunction, damage or obsolescence,” is a somewhat broader solution.<sup>61</sup> It includes all literary works (a Section 102 category) and specifically mentions two subclasses of literary works, but narrows the exemption by reference to attributes of the technological measures that control access to the works.<sup>62</sup>

## *2. Evaluation of the Rulemaking by the Copyright Office*

Considering the impact of the rulemaking, each proceeding may lead to publication of any class of copyrighted works for which the determination has been made that non-infringing uses by persons who are users of a copyrighted work are, or are likely to be, adversely affected. That publication makes the basic provision inapplicable to such users with respect to such class of works. If the evidence developed during the rulemaking procedure is insufficient

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<sup>61</sup> For the two exemptions in more detail, see 65 Federal Register 64564. These exemptions are in effect from October 28, 2000 to October 28, 2003. Before that period expires, the Register will initiate a new rulemaking to consider de novo what classes of copyrighted works, if any, should be exempt from Section 1201(a)(1)(A) commencing October 28, 2003. This means that even if an adverse effect – on whatever class of works - does not currently pertain, a new rulemaking procedure can reach a different result. The whole structure takes into account that the situation in a digital environment may not remain static. Accordingly, the statute provides for various periods of evaluation. The release from the basic provision applies not only to currently disadvantaged users, but also to the extent that they are likely to suffer that adverse effect during the succeeding evaluation period. This means that during each three-year period, a new rulemaking proceeding must take place.

<sup>62</sup> A lot of other exemptions were considered during the rulemaking procedure, but finally not recommended. Among these are for example: audiovisual works on DVD, video games in formats playable only on dedicated platforms, material that cannot be archived or preserved, or exemption for public broadcasting companies. As the Register of Copyrights in his recommendation pointed out, many of the policy arguments made are more appropriately directed to the legislator rather than to the regulator who is operating under the constraints imposed by Section 1201(a)(1). Many of the proposed classes do not qualify for exemption because they are not true “classes of works” as described above. In many cases, proponents attempted to define classes of works by reference to the intended uses to be made of the works, or the intended user. These criteria do not define a “particular class of copyrighted work.” For almost all of the proposed classes, the proponents failed to demonstrate that there have been or are about to be adverse effects on non-infringing uses that have “distinct, verifiable, and measurable impacts.” In most cases, those proponents who presented actual examples or experiences with access control measures presented, at best, cases of “mere inconveniences, or individual cases, that do not rise to the level of a substantial adverse impact.” For more details, see 65 Federal Register 64566.



to determine whether that adverse impact has taken place with respect to a particular class of copyrighted works, then the basic provision stays in effect for that class. Even though the prohibition on acts of circumvention was suspended for two years, the anti-device provisions took effect in 1998. Moreover, under the rulemaking process the Librarian is authorized only to create additional exemptions to Section 1201(a)(1). However, the Librarian is not authorized to create additional exemptions to the anti-device provisions of Sections 1201(a)(2) and (b).

In evaluating the rulemaking procedure set up by Section 1201(a), several interesting aspects about the relationship to other branches of government appear. First, the scope of the rulemaking differs from most of the regulations promulgated by the Copyright Office or the Librarian of Congress. Whereas most rulemaking administers only technical aspects of copyright law, Section 1201(a) authorizes the Librarian to exempt entire classes of works, thereby exempting a whole group of users from potential liability under the anticircumvention provisions.<sup>63</sup>

Second, the determination whether a person is likely to suffer an adverse effect under copyright law is usually made by a court adjudicating a certain controversy. Instead, the statute directs the Librarian of Congress to engage in a rulemaking proceeding in order to identify a general class of works where an adverse effect exists or is likely to exist.<sup>64</sup>

Therefore, to the extent that an aggrieved plaintiff believes that the Librarian of Congress has erred, it would seem that her sole remedy is to initiate a challenge to the rulemaking procedure pursuant to the Administrative Procedure Act (APA), rather than asking the court to limit the exemption and to hold the defendant liable under the anticircumvention

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<sup>63</sup>In this context, several commentators have raised concern over whether the DMCA's delegation to the Librarian of Congress is constitutional. This has been challenged on the grounds that the delegation of rulemaking authority to the Librarian is an intra-legislative delegation and therefore unconstitutional as a violation of separation of powers. For further discussion, see Benkler, *supra* note 32, at 427; JeanAne Marie Jiles, *Copyright Protection in the New Millennium: Amending the Digital Millennium Copyright Act to Prevent Constitutional Challenges*, 52 Admin. L. Rev. 443, 454 (2000).

<sup>64</sup> See Nimmer, *supra* note 25, at 697-698.

provisions. It is even more interesting to reverse the question. One could ask whether a defendant, whose use of a copyrighted work falls not under an exemption granted by the Librarian's rulemaking, can nonetheless claim, as a defense to liability for an anticircumvention violation, that his use should be exempted. David Nimmer argues, not without substance, that the wording of the statute could open the door for a court to evaluate the defendant's conduct and the effect of his using the subject work. If the factors for exemption are present, then that defendant, notwithstanding his failure to fall within the published exemptions, might be able to prevail in arguing that he is exempt under the statute.<sup>65</sup> Whatever the merits of this position are, it is obvious that the rulemaking procedure and the relationship to the courts' application of the anticircumvention provisions undoubtedly add a level of complexity to prosecuting any claims under Section 1201.

### *3. Some special exemptions*

Although it is beyond the scope of this paper to treat each special exemption exhaustively, it is nonetheless interesting to review them briefly and separately.

#### **a. Reverse Engineering**

Section 1201(f) allows software developers to circumvent technological protection measures in a lawfully obtained computer program in order to identify the elements necessary to achieve interoperability of an independently created computer program with other programs. A person may engage in this circumvention only if the elements necessary to achieve interoperability are not readily available and the reverse engineering is otherwise permitted under the copyright law. Furthermore, a person may develop and employ technological means to circumvent and make available to others the information or means for the purpose of achieving interoperability. It is important to mention that Section 1201(f) provides an exemption to all anticircumvention provisions of Section 1201. The exemption in Section

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<sup>65</sup> *Id.* at 698.

1201(f) is – from a comparative perspective – notable in the following respect: the language describing the acts of reverse engineering that justify circumvention comes directly from Article 6 of the European Union Software Directive.<sup>66</sup> This is one of the rare cases where language from a EU Directive has been incorporated into U.S. law.

### **b. Encryption Research**

Section 1201(g) provides an encryption research exemption intended to advance the state of knowledge in the field of encryption technology and to assist in the development of encryption products. This research often involves efforts to circumvent the encryption – so called “ethical hacking”. Circumvention in the course of good faith encryption research may be allowed if the following conditions are met: The researcher lawfully obtained the copyrighted work; Circumvention is necessary for the encryption research; The researcher made a good faith effort to obtain authorization from the copyright owner before the circumvention; and Circumvention is otherwise permissible under the applicable laws.

In addition to the above factors, Section 1201(g) directs the court to consider three other factors:

- Whether the information derived from the research was disseminated to advance the knowledge or development of encryption technology or to facilitate infringement;

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<sup>66</sup> Council Directive 91/250/EEC on the legal protection of computer programs, O.J. L 122, May 17, 1991, at 42. In its relevant part, Article 6 of the Directive provides as follows:

“Decompilation

1. The authorization of the rightholder shall not be required where reproduction of the code and translation of its form within the meaning of Article 4(a) and (b) [naming exclusive rights of the rightholder] are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs, provided that the following conditions are met:

(a) these acts are performed by the licensee or by another person having a right to use a copy of a program, or on their behalf by a person authorized to do so;

(b) the information necessary to achieve interoperability has not previously been readily available to the persons referred to in subparagraph (a); and

(c) these acts are confined to the parts of the original program which are necessary to achieve interoperability.

2. The provisions of paragraph 1 shall not permit the information obtained through its application:

(a) to be used for goals other than to achieve the interoperability of the independently created computer program;

(b) to be given to others, except when necessary for the interoperability of the independently created computer program; or

(c) to be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.

- Whether the researcher is engaged in a legitimate course of study, is employed, or is appropriately trained or experienced in the field of encryption technology; and
- Whether the researcher timely notifies the copyright owner with the findings and documentation of the research.

Furthermore, a person may develop and employ, or provide to his collaborator, technological means to circumvent for the sole purpose of performing acts of good faith encryption research. Unlike the reverse engineering exemption, which applies to both the access-anticircumvention and the copy-anticircumvention provisions, the encryption research exemption applies only to the former.

Although it is important to establish an exemption for “ethical hacking”, the procedures and limitations imposed by the exemption are likely to have a chilling effect on encryption research. In particular, this concern results from the fact that the ability to provide circumvention devices is restricted to research collaborators as opposed to the general encryption research market.

### **c. Security Testing**

In addition to the encryption research exemption, Section 1201(j) provides another exemption for information security activities. The exemption for security testing was added to resolve concerns related to the effect of the anticircumvention provisions on efforts to test the security value and effectiveness of technological measures employed to protect the security of computer systems. Sometimes the only way to test a computer system's security is to try to break in. The security testing exemption permits circumvention of access controls conducted in the course of security testing if it is otherwise legal under applicable law. Security testing is defined as obtaining access, with the authorization of the owner or operator of the computer system, to a computer, computer system, or computer network, for the sole purpose of testing, investigating or correcting a potential or actual security flaw or vulnerability. In determining if this exemption is applicable, Section 1201(j)(3) requires the court to consider whether the

information derived from the security testing was used solely to promote the security measures and whether it was used or maintained so as not to facilitate infringement. Section 1201(j)(4) also permits the development, production or distribution of technological means for the sole purpose of performing permitted acts of security testing. Like the encryption research exemption, the security testing exemption applies only to the access-anticircumvention provision of Section 1201(a).

#### **d. Protection of Personally Identifying Information**

Section 1201(i) addresses personal privacy issues by permitting circumvention for the limited purpose of identifying and disabling technological means such as a “cookie” which collects or disseminates personally identifying information reflecting the online activities of the user. This exemption applies only: if the user is not provided with (1) adequate notice that information is being collected and the capability to prevent or restrict such collection or dissemination; and (2) if the circumvention has no other effect on the ability of any person to gain access to any work.

The wording of this provision in connection with the general framework of Section 1201 makes it almost useless. First, a user is not allowed to circumvent if the website notifies him that it collects information, for example, through placing a “cookie”. Thus, once the user receives the notice, he must choose between accepting the collection of information or refraining from proceeding further with his online activity. Second, this provision creates only an exemption to the basic provision in Section 1201(a)(1), but not to the access-device provision. This again leads to the general question how ordinary users are expected to circumvent for legitimate purposes if the manufacture and distribution of related devices are prohibited.

#### **e. Nonprofit Libraries, Archives, and Educational Institutions**

Section 1201(d) provides an exemption for nonprofit libraries, archives, and educational institutions to gain access to a commercially exploited copyrighted work solely to make a

good faith determination of whether to acquire such a work. A qualifying institution may gain access only when it cannot obtain a copy of an identical work by other means and access may not last longer than necessary. Such an entity is not allowed to use this exemption for commercial advantage or financial gain.

Again, the provision does not specifically permit the trafficking of the devices necessary to effectuate the permitted circumvention. Even if a permission to develop the devices is implied, the exemption granted by Section 1201(d) is of little practical impact because the sellers of digital information products have every incentive to permit their largest customers to examine the goods to the extent necessary to make a purchase decision. Nevertheless, the exemption is not without some effect. Its explicit grant discourages the application of a number of general exemptions that the Copyright Act recognizes for nonprofit libraries, archives, and educational institutions. For example, a library is privileged to copy a single article from a journal it owns, if it gives the copy to an individual user for private and scientific use. Relying on this general exemption, one could argue that a library is allowed to circumvent the technological protection measures of an online journal to which it subscribes in order to make a copy for an individual user. But the existence of a specific (very narrow) exemption in Section 1201(d), makes it more difficult to argue in favor of such a defense.<sup>67</sup>

#### **f. Law Enforcement and Intelligence Activities**

Section 1201(e) permits circumvention, and the development of circumvention devices, for any lawfully authorized investigative, protective, or intelligence activity by a federal, state, or local government employee, or a person under contract to federal state, or local government. This latter clause is particularly important because it allows the private sector to develop circumvention devices for use by government in law enforcement activities. This exemption is very effective as it applies to all anticircumvention provisions.

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<sup>67</sup> For this problem, *see* Benkler, *supra* note 32, at 418; LITMAN, *supra* note 1, at 145.

### **g. Protection of Minors**

The strong anticircumvention provisions of Section 1201 might prevent parents from effectively monitoring their children's use of the Internet. Accordingly, Section 1201(h) was added to allow the development of circumvention components that would permit a parent to access a restricted website visited by his child.

### **H. Summary of Section 1201 DMCA**

The purpose of Section 1201 is to encourage private, technological protections of copyrighted works. By establishing strong anticircumvention provisions, the legislator aims to encourage protection through technology and to create a market for the development of such technological means. In doing this, the DMCA goes much further than the WIPO Copyright Treaty does. The DMCA not only makes the act of circumvention illegal, but also the trafficking of devices necessary to effectuate circumvention. These broad provisions raise concerns about a unilateral interference in favor of copyright owners' interests.<sup>68</sup> These concerns are not mitigated by the system of exemptions provided in Section 1201. In fact, while the exemptions respond locally to a variety of user interests, they do not respond to the most fundamental objection to the anticircumvention provisions of the DMCA. The objection is that Section 1201 has the effect of preventing most people from accessing or using copyrighted works protected by technological measures without permission, even for a privileged purpose.<sup>69</sup>

The one-sidedness of Section 1201 might be explained by looking at the greater picture, meaning the political compromise behind the DMCA.<sup>70</sup> Title I of the DMCA – the WIPO Treaties implementation – was seen as benefiting the copyright owners. In the legislative

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<sup>68</sup> For an extensive analysis of this problem, *see infra* VIII.E.

<sup>69</sup> This is why some commentators argue that the exemptions should be supplemented with a general exemption for "other legitimate purposes". *See, e.g.*, Samuelson, *supra* note 32, at 543-546.

<sup>70</sup> For a comprehensive analysis of the political bargaining process that led to the DMCA, *see* LITMAN, *supra* note 1, at 122-145.

process, Congress tried to offset this benefit with a provision the copyright owners did not want: Title II of the DMCA, which limits the copyright infringement liability of online service providers. Within the political process Section 1201 was not considered in isolation, rather, in the context of a much broader act of legislation. This made it easier to convince the parties involved that this legislation, taken as a whole, achieved a relatively balanced result.

### I. Recent U.S. Case Law

Matters of anticircumvention law are not only a political compromise or copyright theory. This is demonstrated by recent cases involving DeCSS.<sup>71</sup> These cases are *Universal City Studios, Inc. v. Corley*<sup>72</sup> and *DVD Copy Control Association v. Bunner*<sup>73</sup>. The most watched opinion was the *Corley* case in which the effect of the anticircumvention provisions is clearly demonstrated. In this case Universal sued *2600* Magazine and its publisher Eric Corley because *2600* posted a copy of a computer program, known as DeCSS, as part of its story about a young Norwegian hacker who figured out how to bypass CSS.<sup>74</sup> Universal convinced the trial judge that DeCSS was an illegal circumvention technology, the public availability of which threatened the viability of the motion picture industry. After being ordered in January 2000 to take down DeCSS from the *2600* site, Corley decided to link to sites where DeCSS could be found. In August 2000, the trial judge ruled that linking also violated the DMCA and forbade posting or linking to source or object code forms of DeCSS.

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<sup>71</sup> See *supra* E.

<sup>72</sup> The trial court decision can be found at *Universal City Studios, Inc. v. Reimerdes*, 111 F.Supp. 2d 294 (S.D.N.Y. 2000) and additions at 111 F.Supp. 2d 346 (S.D.N.Y. 2000). See *supra* E.

<sup>73</sup> Decision by the Court of Appeal of the State of California, Sixth Appellate District, No. HO21153, the decision can be found at [http://www.eff.org/IP/Video/DVDCCA\\_case/20011101\\_bunner\\_appellate\\_decision.html](http://www.eff.org/IP/Video/DVDCCA_case/20011101_bunner_appellate_decision.html).

<sup>74</sup> This also resulted in a criminal trial in Norway. Norwegian prosecutors, acting largely on a complaint from the American entertainment industry, had maintained that the Norwegian hacker Jon Johansen acted illegally when he shared his DVD decryption code with others by putting it out on the Internet. In January 2003 the Oslo city court ruled in Mr Johansen's favor, clearing him of all the charges. In a unanimous ruling it said that nobody could be punished for breaking into his own property – he had legally bought the DVDs whose codes he subsequently cracked. Nor was there any evidence that he or anyone else had used his program to produce or watch pirated copies of films; see <http://www.aftenposten.no/english/local/article.jhtml?articleID=466519>.



The U.S. Second Circuit Court of Appeals<sup>75</sup> upheld the injunction and the DMCA from Corley's claims that the statute violated his First Amendment right to free speech.<sup>76</sup> In its decision, the New York-based court dissected the nature of the computer program. It concluded that even though computer code qualifies as speech, the DMCA regulates only its content-neutral function – the quality that allows the code to instruct a computer to perform. No matter what other information DeCSS might convey, the court said, the government has an interest in restricting its non-speech aspect to protect copyright holders, such as the motion picture industry. This is the final decision in this case since in July 2002 the defendants decided not to seek U.S. Supreme Court review.<sup>77</sup>

Interestingly, the entertainment industry has a tougher time in state court under trade secrets law.<sup>78</sup> A California state appeals court ruled that the First Amendment trumps trade secret law when it comes to DeCSS. The three-judge panel called the computer language that generates software federally protected “pure speech” not subject to pretrial injunctions when challenged under state law. DVD Copy Control, a trade association of businesses in the movie industry, sued under California's version of the Uniform Trade Secrets Act, which is similar to laws in most U.S. states. The association conceded that computer code may be speech, but convinced a trial judge to grant a preliminary injunction against website operator Andrew Bunner. DVD Copy Control argued that failure to stop the Internet posting of a software program that bypasses CSS would cause the industry severe and irreparable harm. The Court of Appeal deemed the source code a constitutionally protected written expression of the author's ideas and information about decryption of DVDs. The appeals court lifted the injunction but stayed its own action pending an appeal to the state supreme court. The court also noted that DVD

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<sup>75</sup> *Universal City Studios, Inc. v. Corley*, 273 F.3d 429 (2<sup>nd</sup> Cir. 2001); for a detailed analysis of the background of the case and the decision by the court, see William Friedman, *The Good Guys Win in the Movies. The Second Circuit Hands the Movie Studios a Big Win Against Decryption Programs*, Computer und Recht International 40 - 41 (2002).

<sup>76</sup> For details on the First Amendment claim, see Friedman, *supra* note 74, at 42 - 45

<sup>77</sup> See <http://www.2600.com/news/>.

<sup>78</sup> The case was decided according to California's implementation of the Uniform Trade Secrets Act, Civil Code Section 3426.1 et. seq.

Copy Control may, of course, bring an action for damages or even injunctive relief against anyone who violates the act by conduct rather than speech.

## VII. The European Community Copyright Directive

### A. Introduction

In 1997 the Commission transmitted to the Parliament and the Council a proposal for a European Parliament and Council Directive on the harmonisation of certain aspects of copyright and related rights in the Information Society.<sup>79</sup> This marked the beginning of a legislative process for one of the most intensively debated proposals in recent EU history.<sup>80</sup> After the European Parliament had examined the proposal in detail in its committees, it gave its opinion in the plenary session in favor of the proposal as amended.<sup>81</sup> The Commission reacted with an amended proposal for a Directive, in which it endeavored to take Parliament's opinion into account as far as possible.<sup>82</sup> After more than four years the Directive was finally adopted in May 2001.<sup>83</sup> The Directive then has to be implemented by the Member States by

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<sup>79</sup> In this paper referred to as Copyright Directive. For the initial proposal by the Commission, see O.J. C 108, April 7, 1998, at 6.

<sup>80</sup> The process follows the co-decision procedure laid down in Article 251 of the EC Treaty. According to the co-decision procedure, Council and Parliament both have to approve the proposal in order to become a Directive.

<sup>81</sup> Opinion of the European Parliament of February 10, 1999, O.J. C 150, May 28, 1999, at 171.

<sup>82</sup> Amended Proposal for a European Parliament and Council Directive on the harmonisation of certain aspects of copyright and related rights in the Information Society, O.J. C 180, June 25, 1999, at 6; see also the Council Common Position (EC) No. 48/2000 of September 28, 2000, O.J. C 344, December 1, 2000, at 1.

<sup>83</sup> Copyright Directive, O.J. L 167/10, June 22, 2001. The Directive entered into force on June 22, 2001 and has to be transposed into national laws before December 22, 2002; See also Kamiel J. Koelman, *A Hard Nut to Crack: The Protection of Technological Measures*, European Intellectual Property Review 272 (2000); Marie-Thérèse Huppertz, *The Pivotal Role of Digital Rights Management Systems in the Digital World*, Computer und Recht International 105 (2002); Karin Retzer, *On the Technical Protection of Copyright*, Computer und Recht International 134 (2002).

bringing into force the laws, regulations and administrative provisions necessary to comply with its content.<sup>84</sup>

The general objective of the Directive is to adapt legislation on copyright to new technologies, in particular the Internet, and implement the international obligations arising from the two WIPO Treaties at Community level. The complimentary provision to the DMCA's Section 1201 is Article 6 about obligations as to technological measures.

#### B. Background<sup>85</sup>

In its initial proposal the Commission stressed the importance of legal protection of the integrity of technical identification and protection schemes. It further noted that the laws of the Community Member States only provided for rather general, if any, rules which may cover this issue. Furthermore, the Commission expressed the fear that a fragmented approach at Member States' level with respect to the legislation that should flank the technical protection and identification schemes used by holders of copyright and related rights would not only entail difficulties for the protection of copyright and related rights, but also adversely affect the proper functioning of the Internal Market. Disparities in levels of protection might hinder the development of new services at European level, and would imply serious distortions of competition. Therefore, as the Commission concluded, action to establish an equivalent level of protection amongst all Member States seemed necessary. This would ensure the proper functioning of the Internal Market, and would at the same time establish a level playing field in which new Information Society services can develop.

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<sup>84</sup> For the implementation in national law *see* Retzer, *supra* note 82, at 135.

<sup>85</sup> For the background of the Copyright Directive, *see* the Explanatory Memorandum to the Commission's initial proposal, COM(97) 628 final, December 10, 1997, at 2 (hereinafter Explanatory Memorandum).

C. Protection of Technological Measures and Rights-Management Information

Article 6<sup>86</sup> of the Copyright Directive requires the member states to provide adequate legal protection against circumvention activities.<sup>87</sup> This provision should clarify the initial wording of the proposal by explicitly forbidding the act of circumvention itself. Under this provision it is required that the person engaged in circumventing technological measures has no authority to do so, and that these activities are directed against effective technological measures designed to protect any copyright or any rights related to copyright as provided by law or the sui generis right provided for in Chapter III of the EC Database Directive.<sup>88</sup> Furthermore, it is a condition that the person committing such an act is doing so knowingly.

Article 6(2) obliges the Member States to provide adequate legal protection against any activities, including the manufacture or distribution of devices, products or components or the provision of services, carried out without authority, which:

- are promoted, advertised or marketed for the purpose of circumvention, or
- have only a limited commercially significant purpose or use other than to circumvent, or
- are primarily designed, produced, adapted or performed for the purpose of enabling or facilitating circumvention.

Finally, Article 6(3) contains two important definitions. First, the expression “technological measures” means any technology, device or component that, in the normal course of its operation, is designed to prevent or inhibit the infringement of any copyright or any right related to copyright as provided by law or the sui generis right provided for in Chapter III of the EC Database Directive. Second, technological measures shall be deemed “effective” where the use of a protected work or other subject matter is controlled through application of an access control or any other type of protection process which achieves the protection

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<sup>86</sup> See Huppertz, *supra* note 82, at 106 – 109.

<sup>87</sup> Article 6 cannot apply to computer programs as Article 7 of Directive 91/250/EEC continues to have effect.

<sup>88</sup> Directive 96/9/EC of the European Parliament and of the Council on the legal protection of databases, O.J. L 77/20, March 27, 1996. Chapter III of this Directive introduced a sui generis protection for certain databases into European Community law.

objective in an operational and reliable manner with the authority of the rights-holders. Such measures may include encryption, scrambling or other transformation of the work or a copy control mechanism .

Article 7(1)<sup>89</sup> requires the Member States to provide adequate legal protection against any person knowingly performing without authority any of the following acts:

- the removal or alteration of any electronic rights-management information;
- the distribution etc. of works from which electronic rights-management information has been removed or altered without authority.

Article 7 is an entirely new area for virtually all of the member states' copyright laws and therefore requires additional rules and concepts in national law.

#### D. A Comparison between the anticircumvention provisions of the DMCA and the Copyright Directive

The wording of Article 6 of the Copyright Directive is in part inspired by the corresponding provisions of the WIPO Treaties of 1996. These Treaties form the basis for both the Copyright Directive and the DMCA, which share the goal of fulfilling these international obligations. It is therefore obvious that the Directive and the DMCA have certain features in common. Nevertheless, there are certain similarities – and differences – that are worthwhile examining. The focus in this paper will be on a comparison of the leading principles and not so much of the legislative language. The following paragraphs will briefly deal with a comparison of certain details. The rest of the paper is then dedicated to an analysis of common principles and their impact on the overall structure of copyright.<sup>90</sup>

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<sup>89</sup> Compare Huppertz, *supra* note 82, at 106 – 109; for the implementation in national law *see* Retzer, *supra* note 82, at 135 - 138.

<sup>90</sup> *See infra* VIII.

Some differences in the legislative language result from a different terminology, others exist because of the inherent distinction between the legislative instruments. Compared with Section 1201 of the DMCA, Article 6 retains more flexibility. This can be explained by the nature of a Directive, which is addressed to the Member States and therefore has to give them some latitude to implement the provisions according to their national legal traditions. However, both provisions, Section 1201 and Article 6 provide for more specific and far-reaching rules than the WIPO Treaties do. In this context, one of the most important similarities between the DMCA and the Directive needs to be mentioned. Both anticircumvention provisions are not directed simply against the “circumvention of technological measures” as in the WIPO Treaties, but cover any activity, including preparatory activities such as the manufacture and distribution, as well as services, that facilitate or enable the circumvention of these devices. Both acts are based on the notion that the real danger for intellectual property rights will not be the single act of circumvention by individuals, but the preparatory acts carried out by commercial companies that could produce, sell, rent or advertise circumvention devices.<sup>91</sup> Therefore, Section 1201 and Article 6 prohibit the activity of circumvention itself and the trafficking in devices that enable circumvention. In this respect both provisions go far beyond WIPO Treaty requirements.

It is no surprise that the definition of what is a circumvention device is almost similarly worded. Both provisions refer to devices that are marketed for the purpose of circumvention; or that have only a limited commercially significant purpose other than to circumvent; or that are primarily designed for the purpose of circumventing protection measures. This means that under both provisions only those activities and services are prohibited which have only a limited commercially significant purpose or use other than to circumvent. This solution

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<sup>91</sup> This is, for example, clearly expressed by the Commission in its initial proposal, *see* Explanatory Memorandum, *supra* note 84, at 41.

ensures that general-purpose equipment and services are not outlawed merely because they may also be used in breaking copy protection or similar measures.

As in the WIPO Treaties, both provisions contain an element concerning the technical “effectiveness” of the protection measure. This implies that copyright owners have a duty to demonstrate the effectiveness of the technology chosen in order to obtain protection. In contrast to Section 1201 of the DMCA, the Copyright Directive provides no explicit definition for the term circumvention. Seen in the context of the definition of protection measures, however, it becomes clear that the Directive has a very similar concept of circumvention to the one used in the DMCA. Both acts prohibit activities like decryption or descrambling of measures without the authority of the copyright owner.

Section 1201 and Article 6 both have a basic ban on circumvention activities. However, from the different structure of the provisions result some very interesting differences. First, it is interesting to note that Article 6 adds an element of knowledge by the party liable for the circumvention. Thereby it excludes those activities from the basic ban which are carried out without the knowledge that they will enable circumvention of technological protection devices.<sup>92</sup> Section 1201 has no similar provision. It contains an absolute ban on the circumvention of access-control measures, irrespective of the state of mind or knowledge of the person circumventing the technological protection measure.<sup>93</sup> At first sight, it may seem that Section 1201 is the stronger prohibition. This, however, has to be seen in the context of the entire structure of both provisions. Article 6 follows a completely different structure. Whereas Section 1201 is very much shaped by the distinction of access and copy circumvention, this distinction seems to be not so strong in Article 6. Article 6 is more characterized by the distinction between the basic ban on circumvention and the trafficking ban. The question now is how far reaching the circumvention ban is in Article 6. One has to

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<sup>92</sup> See *id.* at 41.

<sup>93</sup> See Benkler, *supra* note 32, at 415.

remember that the ban in Section 1201 only applies to the circumvention of technological measures that control access to a work. The distinction between access and copy circumvention is not so clear in the context of Article 6. The basic ban refers to the circumvention without authority of any effective technological measures designed to protect any copyright. In this provision there is no distinction between the circumvention of access and copy control measures. This would make Article 6, despite its reference to the knowledge of the acting person, even more far-reaching than Section 1201(a)(1). This is supported by the definition of effective technological measures in Article 6(3) of the Commission proposal. This paragraph referred to measures that control the access to or use of a protected work through application of an access code or other types of protection process. This would suggest that the anticircumvention provisions protect access and copy control measures against both the act of circumvention itself and the trafficking in circumvention devices. In its Common Position the Council deleted the term “access” in this paragraph stating that questions relating to access to works fall outside the field of copyright.<sup>94</sup> In a way, the Council is expressing concerns raised in the U.S. discussion, that by protecting access control measures, copyright law is expanded into completely new areas. The final Directive adopted a compromise insofar as the term “access control” only appears in the definition of what is an “effective” technological measure.

The most interesting question concerns the relationship between circumvention and copyright infringement. One of the most criticized features of Section 1201 of the DMCA, is that it prohibits circumvention whether or not the underlying use is privileged. Thereby the provision makes circumvention itself illegal and leads to a complete separation from the question of copyright infringement. A defendant in such a case cannot use a defense under traditional copyright law but can only rely on the limited exemptions granted in Section 1201 itself.

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<sup>94</sup> See Council Common Position, *supra* note 81, at 20.



The position of the Directive in this matter is difficult to evaluate. Article 6(1) prohibits the circumvention of technological measures; Article 6(3) defines them as any technology, device or component that is designed to prevent, or inhibit the infringement of any copyright. According to the Commission's interpretation, Article 6 prohibits only activities aimed at an infringement of a copyright, a related right or a sui generis right in databases granted by Community and national law.<sup>95</sup> This would imply that not any circumvention of technical means of protection should be covered, but only those which would lead to an infringement of a right, i.e., which are not authorized by law or by the author. The authorization by law refers to the general exemptions and limitations of traditional copyright law, which, of course, differ from Member State to Member State. An extensive list of exemptions to the various exclusive rights of copyright owners is codified in Article 5 in order to achieve harmonization within the EU. These exemptions allow users of protected works to perform certain activities without being held liable for copyright infringement. They allow, for example, copying on any medium for the private use, copying of works by libraries, museums, educational organizations or social institutions, use for the purpose of parody, quotations for purposes such as criticism or review etc. According to the Commission's proposal, the exemptions provided for in Article 5 would generally prevail over the legal protection of technological measures provided for in Article 6. Under this interpretation, only measures preventing the infringement of copyright are protected, the non-existence of any infringing activity also makes the anticircumvention provisions inapplicable.

The wording and interpretation by the Commission attracted criticism from the Council, which has taken a different approach.<sup>96</sup> It has adopted in Article 6(3) of its Common Position a definition of the protected technological measures which is broader than the one proposed by the Commission. Here the Council defines these measures as devices that are designed to

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<sup>95</sup> See Explanatory Memorandum, *supra* note 84, at 41.

<sup>96</sup> See Council Common Position, *supra* note 81, at 19.

prevent or restrict acts, in respect of works, which are not authorized by the rightholder.<sup>97</sup> In the Council's definition, there seems to be no connection to copyright infringement. This should make it clear that Article 6(1) protects against circumvention of all technological measures designed to prevent or restrict acts not authorized by the rightholder, regardless of whether the person performing the circumvention would infringe a copyright. This definition would bring Article 6 closer to Section 1201 and establish an independent prohibition on circumvention which generally is detached from the question whether the underlying use constitutes an infringement or not. This again is important for the impact of this legislation on the market and social norms as it bans circumvention per se.

As this position strengthens content providers, the Council sought to balance the result in order to safeguard the protection of the legitimate interests of beneficiaries of exemptions. In its Common Position, the Council added a new paragraph 4 to Article 6 in which the Council lays down an obligation on the Member States to take appropriate measures to ensure that rightholders make available to beneficiaries of certain exemptions the means for benefiting from these exemptions.<sup>98</sup> This is an interesting solution because it shows a strong interference of law. First, the law intervenes to generally prohibit circumvention, then it intervenes again to ensure that copyright owners make available the means to obtain certain works. How this provision works out in practice remains to be seen.

It is interesting how the DMCA and the Directive try to provide for at least a limited amount of exemptions to their strong anticircumvention provisions. As far as these exemptions are concerned the question of flexibility becomes crucial. To a great extent, copyright legislation is enacted in response to new technological developments. Statutes that regulate technology are particularly susceptible to becoming outdated because the technological paradigms they are designed to address often change rapidly and in unexpected ways. Thus, copyright statutes

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<sup>97</sup> *See id.* at 10.

<sup>98</sup> *Id.* at 10.

that remain relevant despite technological change ensure that future innovation will not diminish the effectiveness of the overall policy of maximizing the production and availability of copyrighted works. In the field of exemptions, both the DMCA and the Directive try to provide for a certain amount of flexibility. The Directive provides the Member States with the option of adapting the exemptions in case the availability of certain works for legitimate uses is not given. As mentioned before, it is one of the characteristics of this kind of Community legislation to give the Member States leeway in adapting their laws. Of course, as this is directed to the national legislators, the implementation often takes time.

The user exemption and the rulemaking procedure of the DMCA also try to address unforeseen effects or problems that may result from the prohibition on acts to circumvent copyright protection systems. At least in regard to acts of circumvention, the rulemaking provisions of the DMCA allow it to address both any unforeseen negative effects it might have and the development of new technologies that reduce its effectiveness. This level of flexibility results from the continued post-implementation evaluation of the statute's effectiveness by the Librarian of Congress and the Copyright Office. The hope is that by combining rulemaking authority with this monitoring capacity, the Librarian of Congress can react more quickly and efficiently to resolve a problem than if Congress has to amend the statute.<sup>99</sup>

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<sup>99</sup> For the problems resulting from this structure, *see supra* VI.F.

## VIII. Anticircumvention Provisions on Two Different Sides of the Atlantic: Are there any Common Principles?

### A. Introduction

Despite obvious differences between the U.S. and the European regulation there are some fundamental considerations that both models have in common. In the following part of this paper, the focus is on the leading principles shared by both the DMCA and the Directive. The aim here is not to compare certain provisions and legislative techniques but to emphasize the similar policy goals. In particular, it is interesting to describe the impact of this kind of legislation in the light of the fact that its focus is more on technology than on use. What does this mean in the area of copyright law? And how does this legislation affect other ways of regulating behavior: like social norms and the market? The underlying premise of this analysis is, that social norms, technology and the market are objects of law's regulation and can therefore be influenced by its content.<sup>100</sup> But each of these areas has its own dynamics whose impact also depends on the balance that law strikes. By regulating these areas law also delegates powers to the different players. This is especially interesting in the field of anticircumvention where the law seems to delegate a significant amount of power to copyright owners.

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<sup>100</sup> Lawrence Lessig's work highlights this interplay between different regulators of behavior and the particular role that technology (or code or architecture) plays. See LESSIG, *supra* note 1, at 85-99. However, the analysis in this paper is more consistent with an approach Lessig called the "New Chicago School". See Lawrence Lessig, *The New Chicago School*, *Journal of Legal Studies* 27 (1998). This analysis does not see the other regulators as displacing law. Rather, it is based on a complex interplay between all four main regulators, in which law can interfere by modifying the positions of the parties involved.

B. Regulation of technology – Regulation Through Technology?

*1. General Thoughts*

In the United States as well as in the European Union the debate on copyright legislation for the digital environment highlighted two main goals<sup>101</sup>: promoting the continued growth and development of electronic commerce; and protecting intellectual property rights. These goals are, of course, interconnected. On the one hand, they are mutually supportive. A vibrant electronic marketplace provides new ways for the creators of intellectual property to make their works available to consumers; and a strong supply of intellectual property – whether in the form of software, music, movies, literature, etc. – drives the demand for a more flexible and efficient electronic marketplace.

On the other hand, these goals are in conflict with each other. The amount of copyright protection desired by those holding the right almost never equals the amount users of works are willing to accept. Protection and availability are opposing goals and between them significant trade-offs exist. The important question is how to strike the right balance?

Although there are various differences between copyright law in the U.S. and in most European countries, the general idea of how these objectives can be achieved is fairly similar. The focus of copyright law has traditionally been on regulating the use of protected works – not the devices or means by which these works are delivered or used by consumers – thereby trying to ensure an appropriate balance between the interests of copyright owners and users. In this model, the use of works is somehow regulated in a negative way by giving copyright owners certain exclusive rights to their works, and then providing for certain exemptions to secure the availability of these works for uses that are in the interest of the public. This makes clear that copyright, in the U.S. system as well as in the European one, has never been understood as an absolute right. Instead, the public should have the opportunity to make use of works, either lawfully (through authorization of the copyright owner or authorization by

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<sup>101</sup> For the European context, see Explanatory Memorandum, *supra* note 84, at 1-20.

law) or unlawfully. In the latter case the law encourages the copyright owner to defend his interests by bringing suit against users who infringe his rights. Thus, the traditional method of copyright protection relies on self-enforcement of copyright owners' exclusive rights after the use has occurred. It was then in the responsibility of the courts to decide whether the use is infringing or not. This implies that protected works are available. This, of course, also implies that the burden and the costs of enforcing the system first fall on the copyright owner. In the first place, he has to "accept" the use of his work, and only afterwards the legal system allows him to recover if the use was infringing one of his rights. Moreover, the outcome of this process is in many cases not easy to foresee.

The anticircumvention provisions that were incorporated into the DMCA and the Copyright Directive significantly change this structure. In this manner, copyright law expands its reach.<sup>102</sup> These provisions target not only questions related to the use of protected works, but more important they regulate technology necessary to access and use these works. The question is how significant is their impact on shaping future technological measures. At first sight, anticircumvention provisions do not seem to actively influence technology but just proscribing certain kinds of it. But this also implies shaping of technology, as it requires individuals to use certain technologies rather than others.<sup>103</sup> This effect is achieved in two ways: a direct and an indirect way. In the direct way both provisions basically ban circumvention devices. This means they prohibit producing and distributing products or providing services that are aimed at circumventing technological protection measures. In an indirect way, both legislative acts encourage technological solutions by enforcing private parties' use of protection measures with legal sanctions for circumvention. For example, if unauthorized access to a copyrighted work is effectively prevented through use of a password, it would be a violation according to the DMCA and the Copyright Directive to defeat or

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<sup>102</sup> See Nimmer, *supra* note 25, at 683.

<sup>103</sup> See ANDREW L. SHAPIRO, *THE CONTROL REVOLUTION: HOW THE INTERNET IS PUTTING INDIVIDUALS IN CHARGE AND CHANGING THE WORLD WE KNOW* 82 (1999).

bypass the password and to make the devices to do so, as long as the primary purpose of these devices was to perform this kind of act. This does not mean that copyright owners are obliged to use technological protection measures but by giving them special protection the legislator creates incentives to use them.

The important thing to be seen in this kind of legislation is the effect it has on the reach of protection. The focus is not on the regulation of use (and letting the courts decide whether there is infringement or not). Rather, this legislation, focusing on technology, begins one step earlier. By protecting certain technologies and outlawing others the focus shifts from use to access. In doing so, it reverses the whole system. Now the cost is on the user, who has either to pay the fee or to invest time into circumventing (as he is not allowed to obtain circumvention technology).

The impact of this can be made clear by an analogy to the offline world.<sup>104</sup> Think of a world in which no one had ever thought of building a fence. Sometimes it happened that people in walking on the sidewalk strayed over property lines and walked into a private garden. The homeowners, in protecting their property, then sued, and sometimes they won (or lost). Some owners decided to do nothing. After many years someone came up with the idea of a fence and people started putting up fences. In order to protect their property, a law was passed that not only prohibited messing with the fence but also prohibited the carriage or use of any tools to do so. In the traditional world, everyone is (technically) able to walk through another person's garden; afterwards the owner can recover if the user has no defense for his activity. In contrast, in the anticircumvention world it not only is illegal to trespass or to cut a hole into the fence, but also to manufacture or distribute the wire-cutter itself.

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<sup>104</sup> This analogy draws on one formulated by Yochai Benkler. See Benkler, *supra* note 32, at 420-421.

Another development worth noting is the detachment of copyright protection from the act of infringement.<sup>105</sup> The DMCA deliberately creates a prohibition independent of infringement. The main argument presented in favor of this solution was that by limiting the prohibition on circumvention to infringing uses, Congress would provide a roadmap to keep the purveyors of circumvention devices and services in business reducing the legal protection for self-help technologies to an inadequate and ineffective level.<sup>106</sup> It is argued that if law recognizes circumvention as a legitimate way to make privileged uses, it will become more difficult to sue manufacturers and distributors of circumvention technology.<sup>107</sup> In the U.S. case, this has to be seen through the prism of the *Sony* decision.<sup>108</sup> Here, the U.S. Supreme Court has stated that the manufacturers of devices with bona fide non-infringing uses cannot be sued simply because these devices can also be used to make infringing uses. While the *Sony* decision expressly concerned only copyright contributory liability, its underlying principle is important in understanding the goal of the DMCA in this point: The fundamental idea of *Sony* applied to circumvention would give protection to manufacturers and distributors of technology that has wide uses for acceptable circumvention; it would be difficult to hold these parties liable absent a showing that they intend to aid circumvention for inappropriate uses. Copyright owners would have to do the same kind of costly work they do in the traditional setting. They would have to discover where infringement occurs, sue the responsible parties, and if a manufacturer knows of and contributes to this infringement, they could sue the manufacturer as well. But if circumvention itself is illegal then there is no non-infringing use of

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<sup>105</sup> From a formal viewpoint one could argue whether anticircumvention provisions are after all part of copyright law. This question was raised in the drafting process of the DMCA. As Congress itself recognized, “these [...] provisions have little, if anything, to do with copyright law”. See Report of the House Comm. on Commerce, H.R. Rep. No. 105-551, at 24. In a letter to Congress 62 copyright law professors called these provisions “an unprecedented departure into the zone of what might be called ‘paracopyright’”. *Id.* at 24-25.

<sup>106</sup> See The WIPO Copyright Treaties Implementation Act: Hearing on H.R. 2281 Before the Subcomm. on Telecommunications, Trade, & Consumer Protection of the House Comm. on Commerce, 105th Cong. 58 (1998) at 57.

<sup>107</sup> See Benkler, *supra* note 32, at 425.

<sup>108</sup> *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417 (1984). See also Benkler, *supra* note 32, at 425-426; LITMAN, *supra* note 1, at 131.



circumvention technology. Copyright owners can then go after all manufacturers of products that permit circumvention without linking their suit to specific acts of infringement.<sup>109</sup>

As described above, the aim of the Copyright Directive in this respect is not so clear. Whereas the Commission in its proposal wanted to keep a certain link between infringement and circumvention, the Council in its common position seemed to follow the U.S. model. The result is strengthening of the legal position of copyright owners, in particular because the enforcement of their rights becomes much easier. Besides this legal process argument, the prohibition of circumvention itself also sends important signals to the market and the user community.<sup>110</sup>

Why are legislators employing such measures? One main consideration has to do with legislative efficiency and effectiveness.<sup>111</sup> This relies on the assumption that regulating users alone would be difficult but regulating the technology that users use would not be as difficult. Therefore, both provisions are not directed simply against the “circumvention of technological measures” as in the WIPO Treaties, but cover any activity, including preparatory activities such as the manufacture and distribution, as well as services, that facilitate or enable the circumvention of these devices. Both provisions are based on the assumption that the real danger for intellectual property rights will not be the single act of circumvention by individuals, but the preparatory acts carried out by commercial companies that could produce, sell, rent or advertise circumventing devices. This is why the main focus is on the protection against any activities. This includes the manufacture or distribution of devices, products or components, which are promoted or marketed for the purpose of circumvention, or have only a limited commercially significant purpose or use other than to circumvent, or are primarily designed for the purpose of enabling or facilitating circumvention.

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<sup>109</sup> See Benkler, *supra* note 32, at 426.

<sup>110</sup> See *infra* C and D.

<sup>111</sup> See Gaffney, *supra* note 31, at 627-632.

From the legislators' perspective, regulating technology is far more effective than regulating uses because technology regulation overcomes the problem of decentralized conduct.<sup>112</sup> By regulating technology, the legislator can require technology manufacturers to install systems that restrict the extent to which a device will allow unauthorized copying or distributing of copyrighted works. If a statute limits the ability of a device to make unauthorized copies or distributions of a work, then this legislation attempts to remove a tool that is considered to facilitate "digital piracy" before it can be used<sup>113</sup>. Regulating technology has the advantage of preventing "piracy" before it can occur by mitigating or eliminating the means used to facilitate it. But, one could ask, if the legislators regulates one technology in a way users do not like why cannot they just come up with a different one. The answer to this question has to do with the idea of network effects. Technological protection is grounded on the power of network effects. Communication networks can only function if they have common standards and protocols. By building the desired features of protection into those standards, regulation of behavior is very effective because it is very hard to defect from them without leaving the network and all of its benefits.<sup>114</sup>

## *2. Regulating the technology instead of the use: easier enforcement*

Statutes that regulate technology can also be more easily enforced than statutes that regulate uses of copyrighted works.<sup>115</sup> Digital technology facilitates decentralized use, thereby limiting the effectiveness of traditional copyright law at providing protection. To the extent that such activities do harm copyright owners, the users' decentralized nature will make it difficult for copyright owners to prevent these activities. Even if legislators made it easier to bring suit, the

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<sup>112</sup> *Id.* at 629-630.

<sup>113</sup> James Boyle expressed this thought in a very dramatic manner: "Rather than have the sovereign strike your head from your shoulders after you violate copyright (but only if you can be found, and your jurisdiction is agreeable), it is better by far to design the system so as to hardwire in the desired regulatory features"; James Boyle, *A Nondelegation Doctrine for the Digital Age?*, 50 *Duke L. J.* 5, 11 (2000).

<sup>114</sup> *Id.* at 12.

<sup>115</sup> See also Gaffney, *supra* note 31, at 629-632.

costs of collecting and enforcing judgments would be prohibitive. Because this model relies on the ability of copyright owners to bring suit to enforce their exclusive rights, it is effective only if copyright owners can cost-effectively identify defendants and bring suit against them. Identifying viable defendants, in turn, usually depends on the degree to which the relevant act is centralized. Regulating technology can help overcome the problem of decentralization by focusing on the technical key players that set most of the standards. By moving the protection to the point of access a certain effect of re-centralizing can be achieved. Thus, from the perspective of effective enforcement, regulating technology may give copyright owners a position that is better enforceable.<sup>116</sup>

### *3. Regulation through technology: the complex interplay between law and technology*<sup>117</sup>

Both acts of legislation serve as examples for the new interplay between law and technology. There are commentators who claim that technology can regulate behavior in a very effective way and in this sense becomes a force analogous to law.<sup>118</sup> Looking at the possibilities of technological protection measures in the circumvention context, one could argue that technology is about to displace law as the primary protection of intellectual property. In other words, it is not so much about regulation of technology but regulation through technology. It is the technology that in fact regulates peoples' behavior.

At first sight, this seems to be quite obvious in the circumvention context. This is the reason why this kind of legislation is so technology focused. Legislators deliberately decided to focus their regulation on technology and not so much on the user knowing that shaping the

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<sup>116</sup> *Id.* at 630.

<sup>117</sup> Although outside the scope of this paper, some commentators have noted that in addition to the regulation of technology, contract arrangements also provide means for copyright owners to protect their interests. These contracts allow copyright owners to obtain both actual and legal protection of their copyrights and represent a strong complement to technological protection measures. See Julie E. Cohen, *Some Reflections on Copyright Management Systems and Laws Designed to Protect Them*, 12 Berkeley Tech. L.J. 161, at 181-182 (1997).

<sup>118</sup> See LESSIG, *supra* note 1, at 85-99; Joel R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules Through Technology*, 76 Tex. L. Rev. 553 (1998); Ethan M. Katsh, *Software Worlds and the First Amendment: Virtual Doorkeepers in Cyberspace*, 1996 U. Chi. Legal F. 335 (1996).

underlying technological conditions is a very effective way to enable or restrict certain behavior in a networked society. But the relationship between law and technology is more complicated as law still plays an important role in setting the framework and distributing power. This can be made obvious in the context of the fence analogy already drawn. What will prevent people from crossing the fence is law, not technology. Tools are available, it is the prohibition on their use, that alters the positions of the parties. If law did not interfere, then we would face a situation in which there is pure technological competition. Copyright owners would always have to face circumvention and therefore could only rely on the effectiveness of their technological protection measures. In this situation anticircumvention provisions intervene and influence the balance. The key question is to what extent copyright owners will be able to use technology to protect access to their products without having to face measures that counter their efforts. As shown above, the anticircumvention provisions generally strengthen the copyright owners' side. In a way, this is a kind of delegation of powers. The anticircumvention provisions by favoring one technology over the other, delegate power to copyright owners. This is not new, as law always assigns rights or privileges that change the balance of power. But in the context of the regulatory power that technical standards have in a networked society, this changes the balance of copyright law: from a system where in a given setting copyright owners are assigned a certain protection to a system where the owners decide upon the standards of use. Technological protection measures can unilaterally alter the range of access and use under an owner's control. And, like other technological measures, they can do so without reference to whether the use they regulate is permitted or prohibited by law. They can as easily prevent a parody or a tiny quotation inserted in a critical review as they can prevent wholesale copying and distribution by a competitor. In this context, anticircumvention provisions encourage copyright owners to create protection systems that allow such tight control of digital works that the systems effectively grant new rights beyond the bounds of traditional copyright law. Such an

expansion could hurt the public interest by making digital works less available or less usable.<sup>119</sup>

### C. Anticircumvention provisions and their influence on social norms

As discussed in an earlier part of this paper, the DMCA and the Copyright Directive contain a prohibition on circumvention per se and a prohibition on circumvention devices. The ban on circumvention has only a limited impact due to difficulties in enforcing it, and the fact that most users are dependent on circumvention devices (whose manufacture and distribution is prohibited anyway). The important function of the circumvention ban lies, therefore, in its signal to the user community that circumvention itself is a bad act. This is also made clear by the language used. The DMCA, for example, states that “no person shall circumvent a technological measure that effectively controls access...”. Through provisions like that legislators also try to influence social norms.

### D. Anticircumvention provisions and market forces: subsidize certain technologies

Through their anticircumvention provisions, the DMCA and the Copyright Directive make a deliberate choice in favor of one technology over another. Both encourage copyright owners to develop and use protection systems by providing a cause of action against the users and manufacturers of technologies that circumvent these systems. Technological protection measures are costly to develop and implement and the more control and tighter security they offer, the more expensive they are. Given these high costs, the incentive to develop advanced protection systems would be undermined if no legal remedy existed against individuals who could circumvent these systems or traffic in circumvention technologies. By granting a strong legal protection, the DMCA and the Copyright Directive create confidence in the

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<sup>119</sup> For the concerns relating to the public interest, see Benkler, *supra* note 32, at 420-427; LITMAN, *supra* note 1, at 151-163; Nimmer, *supra* note 25, at 722-742; Samuelson, *supra* note 32, at 537-558.

effectiveness of protection systems, which is essential for the development of a market. Moreover, the development of protection measures is endorsed by the legislators thereby encouraging a transparent and intensive competition. In contrast to that, the prohibition of circumvention devices sends a completely different signal to the market. In this way both legislative acts try to influence the market and use its regulatory power.

E. The endangered balance of copyright: Anticircumvention provisions encourage overprotection<sup>120</sup>

In particular, both acts of legislation raise a lot of questions about the rights of users. Copyright law traditionally has permitted public use while protecting intellectual property. An important example of the public use dimension in U.S. law is the doctrine of fair use.<sup>121</sup> In this context, it is interesting to consider how this right is affected by the promotion of technological means to protect information and the legal efforts to ban circumvention.

The principle of fair use involves a balancing process, whereby the exclusive interests of copyright owners are balanced against the competing needs of users of information. This critical balance is now embodied in Section 106 of the Copyright Act, which grants copyright holders certain enumerated rights, and in Section 107, which codifies the fair use doctrine. The anticircumvention provisions potentially threaten this balance. The reason the DMCA may undermine fair use is that its anticircumvention provisions encourage and legally preserve technological protection measures that give copyright owners more control over their works than they are entitled to under copyright law.

The fair use doctrine allows a variety of uses of copyrighted works, regardless of whether the copyright owner has given permission to make that use. If measures effectively prevent a fair

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<sup>120</sup> The underprotection argument that is made in the context of the DMCA seems to be of little concern. Some argue that the DMCA fails to protect copyright holders adequately because it narrowly defines circumvention technology and does not protect copyrighted works already distributed without technological protection measures. *See* Gaffney, *supra* note 31, at 633.

<sup>121</sup> For the effect of Section 1201 of the DMCA on fair use, see Benkler, *supra* note 32, at 420-427; LITMAN, *supra* note 1, at 151-163; Nimmer, *supra* note 25, at 722-742; Samuelson, *supra* note 32, at 537-558.

use, then only by circumventing them will users be able to engage in this kind of use. The fact that Congress deliberately allowed circumvention of copy-control, does not strengthen the position of users, for two reasons: First, the expansion of access control in recent court decisions threatens to limit the leeway given to users in Section 1201(b). Second, most users lack the expertise necessary to circumvent technological protection measures unless they can obtain some device or technology to assist them. However, they cannot do that, as the sale and distribution of such devices are illegal. Thus, the effectiveness of the exemption for non-infringing uses is substantially lessened (even eliminated) by the strict prohibitions against the manufacture and distribution of circumvention technologies. This is emphasized by the fact that the determination of fair use is a fact-specific endeavor, and it is therefore extremely difficult to design a technology that would circumvent use-control only for fair use purposes and thus be legal under the DMCA. In other words, only hackers would be able to have fair use privileges. Thus, by encouraging copyright owners to devise any protection system that benefits them most and by excluding most users from counteracting, the DMCA risks tipping the balance of copyright law toward an overprotection of copyright owners' interests.

This leads to the provocative question whether there is still a place for fair use. In another context, some commentators have already argued that the law simply allows fair use activities, as it would be economically unproductive to pursue such small scale utilization?<sup>122</sup> In other words, fair use is a consequence of inefficient technology and can simply be removed as soon as efficient technological means are available. The role of the law is simply to secure that these technological solutions are not circumvented. The opposing view emphasizes that fair use is inherent in copyright law in order to guarantee a minimum of public use, thereby safeguarding First Amendment interests of free speech and the advancement of knowledge. These fundamentally different positions lead to different consequences. Under the first point

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<sup>122</sup> In the discussion about the impact of video technology, it was argued that the finding of fair use is appropriate when market failure is present. See, e.g., Wendy J. Gordon, *Fair Use As Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, [82 Colum. L. Rev. 1600, 1605 \(1982\)](#)

of view, the marketplace can be left to develop, and if user rights are limited in this process, the only lesson to derive is that the technological and economic situation evidently has changed. Furthermore, it is argued that on the whole digital technologies make more content available to users at a lower price. Thus, there is no reason why users should not pay for this opportunity. Protection measures are just a means to control and meter the use of this cheaper content. This is, from a different perspective, just repeating the idea of leaving circumvention protection to the market. Under the second point of view, any danger to the public's rights posed by the digital environment must be negated. If users have, as some argue, a (constitutional) right to fair use, then Congress was under an obligation to frame Section 1201 in a manner that preserves this right. To the extent that Congress neglected this obligation, there should be, continuing an idea Julie Cohen already argued a couple of years ago, a general right to circumvent protection systems if they infringe on traditional fair use.<sup>123</sup> This view, of course, collides with the strong anticircumvention provisions of the DMCA. Moreover, it relies on the argument that fair use is a constitutional right which finds no support in legal doctrine.

Whether the anticircumvention provisions in the Copyright Directive pose a similar threat to the public's interest is difficult to tell. First of all, European copyright law generally does not provide a comprehensive fair use doctrine as does U.S. law. Second, the Directive explicitly addresses this issue through Article 6(4) second subparagraph. However, the solution provided by the Directive remains very general as it relies in most part on private initiative by the industry and user associations involved. The provision concerns the private copying exception and allows member states to take appropriate measures to ensure that users have the means to effectively benefit from the exception, to the extent necessary and where the users have legal access. Moreover, the fact that the Directive has to give the Member States a

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<sup>123</sup> Cohen, *supra* note 10, at 981-982.



certain leeway in implementing it makes it difficult to measure the impact in comparison to the DMCA.

## IX. Conclusion

In concluding, it might be useful to continue the fence analogy explained before and include an additional element. This element – as it was briefly discussed in the previous chapter – is the public use dimension, or to put it more in terms of space: the public domain. Imagine that people not only put up fences all around their property, but also across the sidewalks in front of their homes. For most people, it now becomes physically impossible to walk on public sidewalks. Of course, there are a few people who can climb over the fence. But for the vast majority the only way to get access is to use a ladder or a wire-cutter. Yet, in order to protect the homeowners' property the law prohibits the carriage or use of tools to cross any fence.<sup>124</sup>

The anticircumvention provisions of the DMCA and the Copyright Directive have a somewhat analogous impact. The public interest may be harmed by technological protection measures that tightly control not only the use but also the access to a digital work. While these measures may protect the exclusive rights provided under traditional copyright law, the corresponding limits on those rights do, for the most part, not apply. Thus, many uses that copyright law encourages, such as taking excerpts from works for educational purposes, could be completely prevented by certain measures.

Moreover, the anticircumvention provisions extend copyright protection in time. The general idea of the first sale doctrine is that once the copyright owner consents to initial transfer of a work's copy, he loses control over its subsequent flow. Of course, the owner keeps his exclusive rights like the control over reproduction but the first sale doctrine prevents him

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<sup>124</sup> See Benkler, *supra* note 32, at 420-421.

from interfering with future transfers of the same copy; for instance, by demanding a royalty upon subsequent disposition. In this manner, traditional copyright law accords the public substantial leeway in using published works. The digital environment and the legal protection created by the anticircumvention provisions of both the DMCA and the Directive place unprecedented stress on those subsequent activities. Potentially, they allow copyright owners to control not only access and use, but more importantly, the entire flow of their works as well. Technological protection measures make it easy to monitor such activities as resales and reviews, thereby extending control in time. Moreover, by adding only a small portion of an original work to a larger piece it is possible to take things out of the public domain (at least in part): The original works will remain in the public domain. The digital versions, however, may not be freely accessible. All this has to be evaluated with a view to future developments: If access to works via electronic means becomes the universal norm, the real impact of this kind of legislation will become evident. Without reevaluation the effective result could be to convert public domain works into royalty-generating items.<sup>125</sup>

This reevaluation will be necessary as the exemptions granted in the DMCA and the Directive, despite some differences in reach, are not sufficient to overcome these concerns. This is very obvious in the case of the DMCA: a first analysis of how the anticircumvention provisions work in practice leads to the conclusion that their complex system of user exemptions is of doubtful effectiveness. If the courts apply Section 1201 as written, and the first cases point to a strict interpretation, the only users whose interests are truly safeguarded are those few who personally possess sufficient expertise to counteract whatever technological measures are used by the copyright owners.<sup>126</sup> Article 6 of the Directive seems to give users more leeway although a final evaluation has to depend, first, on the implementation by the Member States and, second, on the interpretation by the courts.

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<sup>125</sup> See Nimmer, *supra* note 25, at 710-713.

<sup>126</sup> For extensive case studies on the effect of Section 1201 on users, see Nimmer, *supra* note 25, at 727.

Nevertheless, in this situation it is justified to argue that the exemptions announced as securing balance between owner and user interests, in both the DMCA and the Copyright Directive, largely fail to achieve their stated goals.

In short, notwithstanding future developments, concern about the public domain in the digital environment is necessary. A scenario, in which the work itself is effectively placed “under lock and key”, and the copyright owner can almost perfectly control the initial act of access and any subsequent use, may be possible. Thus, arises what one could call the danger of moving towards a “pay-per-use” society.

Anticircumvention provisions play an important role in this development. The goal of this paper is to argue that they represent a major change in the copyright world. The effects of this change may not be of such a practical importance but more in influencing attitudes. Despite many differences, the uniting theme of the copyright systems in the U.S. and Europe is the idea of balancing the interests of copyright owners and users. This balance is threatened by the anticircumvention provisions of both the DMCA and the Directive. This results from a shift in the focus of protection from regulating use to regulating technology/access. With this comes a new interplay between law and technology. These provisions alter the old balance by delegating power to the copyright owners without outlining the values the owners have to reflect in creating the protection measures. The copyright owner is privileged to include a protection measure. By doing so, the owner erects a legal barrier between the user and the user's privileged uses of the work. The barrier is legal, not technical or physical, because circumvention technology exists. What prevents the privileged use is that it is illegal to circumvent the barrier. In this way law, enables enforcement through technology. And this enforcement is more effective than ever. Whereas a legally enforced right is subject to balancing, a technologically based scheme of copyright protection has no such balancing. For

the average user it is either access or no access; there is no balancing. This is a potential source of overprotection<sup>127</sup>.

Both legislative acts are characterized by a tendency of separating protection from infringement, though to a different extent. Both effectively prohibit circumvention for most users, with the consequence of giving the copyright owner a power to unilaterally decide upon the possibility of making privileged uses. The alternative would have been to create a more narrowly tailored legislation, one that enhances penalties for an infringing use achieved by knowing circumvention of a technological protection measure. This could avoid many of the above mentioned effects on the balance between user and copyright owner interests. But the U.S. and the EU, based on the framework of the WIPO Treaties decided to take another path. It is too early to evaluate the practical implications of this legislation, especially in the context of the Directive. But this was not the goal of this paper. The goal was to illustrate, by comparing two regulatory regimes in different circumstances, a common general shift in copyright law that will affect the way we read, listen to music etc. How much, it remains to be seen.

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<sup>127</sup> See SHAPIRO, *supra* note 102, at 177-179.