A NEW INTERFACE BETWEEN COPYRIGHT LAW AND TECHNOLOGY:

HOW USER-GENERATED CONTENT WILL SHAPE THE FUTURE OF ONLINE DISTRIBUTION♦

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I. INTRODUCTION

It is now recognized that copyright law and technology influence each other in a dialectic relationship. It is almost unanimously affirmed that technology challenges copyright law, and copyright law tends to react initially by fighting and subsequently by encompassing the new ways of exploiting copyrighted works developed by the new technologies, when necessary through reform of the law. Law, in turn, shapes technology by influencing the emergence of certain new technologies as well as their design and architecture.[1]

This dialectic relationship has been shaped by two relevant periods. The first dates back to when digital technology encountered the Internet. The second is more recent and occurred when the Internet morphed into the World Wide Web 2.0, creating the availability of broadband connections (mostly wireless) and software programs that enable the creation of and editing of digital content. Meanwhile, the spread of devices such as hard drives and memory capacities increased while the cost of these electronic components needed to create digital content decreased.[2] In this Article, I affirm that both periods had and still have relevant effects on online distribution and, in turn, on the relationship between copyright law and technology.

In order to assess how online distribution has evolved and to what extent the relationship between copyright law and technology has been altered, this Article is structured as follows: Part II describes the interaction between technology and copyright law before the encounter between digital technology and the Internet. Part III analyzes the effects of the encounter between digital technology and the Internet. This encounter generated, first, a new line of cases overturning the *Sony-Betamax* test; second, the well-known legislative response of creating "digital copyright," more recently called "paracopyright;"[3] and, third, the adoption of technological protection for digital works which add further layers to the protection traditionally granted to creative works under copyright law. Part IV illustrates the judicial interpretations of the aforementioned layers of protection. Throughout the discussion, the Italian legal system will be used as an example of how a European member state has implemented and interpreted the digital

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[1] Niva Elkin-Koren, *Making Technology Visible: Liability of Internet Service Providers for Peer-to-Peer Traffic*, 9 N.Y.U. J. LEGIS. & PUB. POL'Y 15, 15-16 (2006).

[2] Organisation for Economic Co-operation and Development, *Participative Web: User-Created Content*, at 13, DSTI/ICCP/IE(2006)7/FINAL (Apr. 12, 2007) (*prepared by* Sacha Wunsch-Vincent & Graham Vickery), *available at* http://www.oecd.org/dataoecd/57/14/38393115.pdf.

[3] Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095, 1096 (2003).

copyright provisions. Part V moves on and explores the current scenario of online distribution. The distribution models depicted range from "proprietary distribution" to "open distribution," including models that present elements of both ("hybrids"). Additionally, the establishment of the World Wide Web 2.0 triggered further developments such as the spread of advertising-based distribution models through which both professional and amateur content is disseminated. The above requires the additional consideration of the phenomenon of user-generated content and how it is moving from a non-commercial context to become part of commercial distribution. Part VI concludes by illustrating how the relationship between technology and copyright law has been altered; first, by the encounter of digital technology and the Internet and, second, by the establishment of the World Wide Web 2.0.

II. THE INTERFACE BETWEEN TECHNOLOGY AND COPYRIGHT LAW

Copyright law has often exhibited a rather ambivalent attitude toward technology.[4] This can be attributed to the fact that technological progress threatens legal rights that up until that moment have previously always been granted to authors or, rather, to third-party assignees for the author (typically, any intermediary between authors and the market). On the other hand, technology increases the possibility of exploiting works, a fact from which right-holders stand to gain by multiplying the value of their exclusive rights.[5]

An example of this process can be witnessed in the events that accompanied the invention of reprographic technology (i.e., photocopiers, xerocopiers, and similar systems),[6] which seemed, on their initial introduction into the market, to herald the collapse of the publishing sector. This fear never materialized since the publishing sector and legislators included such technology

[4] *See, e.g.*, Jane C. Ginsburg, *Copyright and Control over New Technologies of Dissemination*, 101 COLUM. L. REV. 1613 (2001). See also Mario Fabiani, *La sfida delle nuove tecnologie ai diritti degli autori*, *in* 64 IL DIR. D'AUTORE 519, 532 (1993) for the Italian context.

[5] *See* Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 358-61 (1989) (discussing the relationship between technology and copyright). *See also* TARLETON GILLESPIE, WIRED SHUT: COPYRIGHT AND THE SHAPE OF DIGITAL CULTURE, 31–57 (MIT Press 2007); Uma Suthersanen, *Technology, Time and Market Forces: The Stakeholders in the KaZaa Era*, *in* THE INTELLECTUAL PROPERTY DEBATE: PERSPECTIVES FROM LAW, ECONOMICS AND POTENTIAL ECONOMY 230, 230 (Meir Pugatch ed., 2006); Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, (2002-03). *See, e.g.*, Paolo Auteri, *Il paradigma tradizionale del diritto d'autore e le nuove tecnologie*, *in* PROPRIETÀ DIGITALE: DIRITTI D'AUTORE, NUOVE TECNOLOGIE E SISTEMI DI DIGITAL RIGHTS MANAGEMENT 23 (Maria Lillà Montagnani & Maurizio Borghi eds, Egea, 2006) (discussing view among European scholars).

[6] See S. J. Liebowitz, *The Impact of Reprography on the Copyright System*, Consumer and Corporate Affairs Canada (1981), for an analysis of the economic effect of reprography, *available at* http://ssrn.com/abstract=250082. See also Paolo Spada, *Il regime giuridico della riproduzione fotostatica di opere protette e del contrassegno*, 7 RIV. DIR. PRIVATO 601 (2002), for a description of this phenomenon in the Italian context.

within the system of copyright law.[7] Reprographic technology led to the adoption of a fair remuneration for owners of reproduction rights, on the basis of an articulated set of agreements between all parties involved.[8] This determined a substantial increase in market dynamics and flows between three interest groups: libraries, archives, and copy centers; institutions for the collective administration of copyright and trade unions; and, finally, holders of reproduction rights on photocopied works (e.g., authors and publishers).

Without spending too much time on the case of reprographic technology, which is only an example and by now a little outdated, we will move on to consider the technology that, following the photocopier, was accused of heralding the end of the U.S. film industry: the video recorder.[9] In the 1980s the major Hollywood studios united in a campaign against Sony, the corporation that produced and commercialized Betamax technology.[10] Betamax enabled viewers, at their own leisure, to record television programs onto videotape, including films which had been at one time shown at the cinema. The challenge was that this new technology enabled copyright infringement. Because it was unable to sue every videorecorder owner personally, Universal Studios acted against Sony directly, claiming that it was indirectly responsible for these infringements and requesting that the production and commercialization of the videorecorder be stopped. [11]

The *Sony-Betamax* decision in 1984 is of primary importance (even though it deals with analog technology) in that it set the criteria for assessing innovative technology in relation to copyright law. This test, later known as the *Sony-Betamax* standard,[12] was ini-

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[7] *See* André Kerever, *La reprographie et les normes internationals en matiere de droit d'auteur*, *in* 46 IL DIR. D'AUTORE 330 (1975).

[8] *Id.* at 333. Specifically, the Author recalls how, during the negotiation of Washington, the mechanisms identified for striking a balance between rights of reproduction and reprography were collective agreement and levies. Under the former, the associations of right holders (publishers and authors) on the one hand, and the associations of consumers on the other, determine the rules to be followed (as to quantity and amount to be rewarded to right holders in order to authorize reprography). Under the latter (levy systems), a levy is paid by producers of photocopy machines or paper producers to the holder of reproduction rights as a compensation for the infringements committed through reprography. This is done because of the impossibility to detect and control infringing activities (so-called tributarization system).

[9] *See* Urs Gasser, Gartner G2 & The Berkman Center for Internet & Society at Harvard Law School, *Copyright and Digital Media in a Post-Napster World* (Jan. 2005), *available at* http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/2003-05.pdf.

[10] Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 421 (1984) [hereinafter *Sony-Betamax*].

[11] *Id.*

[12] The standard inferable from the *Sony-Betamax* decision is that technology having substantial non-infringing uses cannot be deemed to be against the law. *Sony-Betamax*, 464 U.S. at 442. Namely, in the above mentioned case, manufacturers of home video recording machines were not held liable for contributory copyright infringement for the potential uses by its purchasers, because the devices were sold for legitimate purposes and had substantial non-infringing uses. *See id.* at 456. In fact, personal use of the machines

tially disregarded by the courts in various P2P cases,[13] but was later revived at the trial court level in the *Grokster* case,[14] and recently rejected by the U.S. Supreme Court.[15] The criteria enunciated in *Sony-Betamax* affirmed the neutrality of the technology in relation to its end-use and determined that, whenever both lawful and unlawful uses are possible, the possibility that the unlawful uses may be superior to the lawful uses certainly does not determine the responsibility of the producer, and thereby it does not require that such technology be banned from the market.[16] In *Sony-Betamax,* it was even confirmed that the videorecorder made it possible for those who were unable to view a given program at the time of initial transmission to record it, something which constituted fair use of the work protected by copyright.[17] Specifically, the term "time-shifting" was introduced.[18] Moreover, the storage of the material recorded in one's own video library was included among permitted uses, provided that the recording was made for purely private viewing.[19]

Beyond the introduction of the fair use of time-shifting and of the re-affirmation of the private copy, the importance of the *Sony-Betamax* decision lies in the fact that it is the leading case in a long series of legal battles between copyright law and technology. *Sony-Betamax* spells out clearly that the exclusive right in question was not granted to block social progress (which also includes

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to record broadcast television programs for later viewing constituted fair use. *Id.* at 442-56.

[13] *See, e.g.*, In re Aimster Copyright Litig., 334 F.3d 643, 650 (7th Cir. 2003); A & M Records, Inc. v. Napster, Inc., 114 F. Supp. 2d 896, 911 (N.D. Cal. 2000); *aff'd in part, rev'd in part* 239 F.3d 1004, 1015 (9th Cir. 2001).

[14] Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 259 F. Supp. 2d 1029, 1033 (C.D. Cal. 2003), *aff'd,* 380 F.3d 1154 (9th Cir. 2004), *rev'd*, 545 U.S. 913 (2005).

[15] A wide body of literature compares the *Sony-Betamax* case to the P2P cases, including the *Grokster* case. *See, e.g.*, Paul P. Ganley, *Surviving* Grokster*: Innovation and the Future of Peer-To-Peer*, 28 EUR. INTELL. PROP. REV. 15, 16 (2006); Jessica Litman, *Copyright and Personal Copying:* Sony v. Universal Studios *Twenty-One Years Later: The Sony Paradox*, 55 CASE W. RES. L. REV. 917 (2005). See also *infra* notes 19-24, including the interpretation of the Supreme Court's decision in Pamela Samuelson, *Legally Speaking: Did* MGM *Really Win the* Grokster *Case?*, http://www.sims.berkeley.edu/~pam/papers/CACM%20SCT%20decides%20MGM.pdf (last visited Nov. 18, 2008).

[16] *Sony-Betamax*, 464 U.S. at 442.

[17] *Id.* at 418.

[18] The Supreme Court held that there is no likelihood that time-shifting would cause nonminimal harm to the potential market for, or the value of, respondents' copyrighted works. The VTR's are therefore capable of substantial noninfringing uses. Private, noncommercial time-shifting in the home satisfies this standard of noninfringing uses both because respondents have no right to prevent other copyright holders from authorizing such time-shifting for their programs, and because the District Court's findings reveal that even the unauthorized home time-shifting of respondents' programs is legitimate fair use.

Id.

[19] See Melville B. Nimmer, *Copyright Liability for Audio Home Recording: Dispelling the Betamax Myth*, 68 VA. L. REV. s

technological progress), but to promote the development of society.[20] In addition, the importance of the *Sony-Betamax* case lies in the fact that it demonstrates how a technology that initially seemed threatening may be transformed into an economic resource for right-holders who are capable of envisioning the economic uses represented by the production, commercialization, and hire of videocassettes and, subsequently, DVDs.

One of the first applications of the *Sony-Betamax* principle occurred in 1999, in a case concerning digital technology, between, the Recording Industry Association of America and Diamond Multimedia Systems.[21] The latter produced the Rio player, one of the first MP3 players, a device that allowed the playing, at any time desired, of music files that had been transferred to the device from the hard disk of one's own personal computer.[22] The U.S. Court of Appeals for the Ninth Circuit ruled that such copies should be considered personal copies of files that the user already possessed – having already purchased a music CD – and that the use was evidently not for commercial gain; therefore, it could be considered as fair use of "space-shifting."[23]

Therefore, as long as the digital process remained linked to material devices, such as the hard disk and the MP3 player, the attitude of copyright law regarding technology could evolve – as had already happened with reprographic technology and the videorecorder – and could lead to the inclusion of new technology into new forms of economic use of the work, thereby generating a novel source of economic gain for right- holders.

When digital technology met the Internet, however, this mechanism jammed.[24] It generated: first, a line of cases that turned the *Sony-Betamax* principle upside down (from *Napster* to *Grokster*); second, the adoption of legal provisions (the well-known legislative responses to the challenges that the Internet posed to copyright law);[25] and, third, the material adoption of technological

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[20] *Sony-Betamax*, 464 U.S. at 429.

[21] Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys., Inc., 180 F.3d 1072 (9th Cir. 1999).

[22] *Id.* at 1074.

[23] *See* Stephen W. Webb, RIAA v. Diamond Multimedia Systems*: The Recording Industry Attempts to Slow the MP3 Revolution – Taking Aim at the Jogger Friendly Diamond Rio*, 7 RICH. J.L. & TECH. 5 (2000). For a complete description of the case and a thorough analysis, see Uma Suthersanen, *Napster, DVD and All That: Developing a Coherent Copyright Grid for Internet Entertainment*, *in* 6 Y.B. OF COPYRIGHT AND MEDIA L. 208, at 215 (Eric Barendt & Alison Firth eds., Oxford Univ. Press 2002) for a discussion concerning space-shifting. *See also* Pamela Samuelson, *The Generativity of* Sony v. Universal*: The Intellectual Property Legacy of Justice Stevens*, 74 FORDHAM L. REV. 1831, 1866 (2005-06).

[24] *See* Robert E. Litan, *Law and Policy in the Age of the Internet*, 50 DUKE L.J. 1045 (2000-01) (discussing how the speed with which the Internet has spread in comparison with other technologies, such as telephone or broadcasting, is impressive).

[25] Namely, the WIPO Copyright Treaty, adopted in Geneva on December 20, 1996, [hereinafter WCT], *available at* http://www.wipo.int/export/sites/www/treaties/en/ip/wct/pdf/trtdocs_wo033.pdf and

systems for the protection of works which, at least in the initial stage, further complicated the situation.[26] The three points mentioned above will be discussed *infra* in Part III.

From the analysis of these phenomena one consideration can be anticipated: the effective danger that Digital Rights Management (DRM) systems[27] present when they become a tool for the private control of content. This danger is partially counterbalanced by the fact that – even following the meeting of digital technology and the Internet and notwithstanding the legislative reaction – the relationship between technology and copyright is slowly regenerating. Once again, it seems that an initially-feared technology is transforming into a stimulus for the market, and different means of economic use of works are proliferating.

III. WHEN DIGITAL TECHNOLOGY MEETS THE INTERNET

A. *The Aftermath of the Sony-Betamax Case: New Light on the Interface Between Technology and Copyright Law*

At first, the encounter of digital technology and the Internet led to the rejection of the *Sony-Betamax* principle. It was initially disregarded in the *Napster* case in 2001, which, following two years of controversy, found P2P technology liable for copyright infringement.[28]

The mechanism Napster had developed and offered is well known: it relied on the downloading of specific software and uploading an index of files available for shared use to Napster's server.[29] The files, however, remained stored on the hard drives of the individual users' computers.[30] In essence, when a user con-

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the WIPO Performances and Phonograms Treaty, adopted in Geneva on December 20, 1996, [hereinafter WPPT], *available at* http://www.wipo.int/treaties/en/ip/wppt/trtdocs_wo034.html, as well as their implementations within signatory states. *See infra* Part.B.1 and notes 53-56.

[26] Many technological systems can be adopted in order to prevent unauthorized access and copy of copyrighted works. The broad category under which such systems fall into is that of Digital Rights Management systems. For an initial overview of the technology comprised in the category see Digital Rights Management, http://en.wikipedia.org/wiki/Digital_rights_management#Technologies (last visited Dec. 9, 2008).

[27] A more official definition of DRM systems may be found in A Fact Sheet on Intellectual Property Rights and Digital Rights Management Systems, http://ec.europa.eu/information_society/doc/factsheets/020-ipr_drm-october04.pdf (last visited Dec. 9, 2008) ("DRMs are technologies that identify and describe digital content protected by IPRs. They can be used to enforce usage rules set by rightholders or prescribed by law for digital content. They can also facilitate legal copying and reuse of content by establishing a secure environment in which right-holders are remunerated for private copying, on-line content is paid for, and illegal copying is prevented.").

[28] Both the trial court and the court of appeals sanctioned Napster and accepted the plaintiff's claims in *A & M Records, Inc. v. Napster, Inc.*, 114 F. Supp. 2d 896, 911 (N.D. Cal. 2000); *aff'd in part, rev'd in part* 239 F.3d 1004, 1015 (9th Cir. 2001).

[29] *Napster*, 114 F.Supp 2d 896 at 901.

[30] *Id.* at 906.

nected to the Internet and requested a file from Napster's indexing system, the file was downloaded directly from the hard drive of origin to that of the person requesting it. It is evident that Napster could be used, not only for unlawful purposes, but also for lawful ones – lesser known performers could offer their music through Napster, and unprotected material could circulate freely without violating any exclusive right.[31] Nevertheless, the Court of Appeals found Napster responsible for vicarious and contributory liability in the violation of copyright law by its users.[32] In other words, Napster was held indirectly responsible, due to the impossibility of monitoring the individuals who carried out illegal downloads, and for being aware – or its ability to be aware – of the perpetration of such unlawful activities, since it made the software and indexing system available.

However, the decision in the *Napster* case has not slowed down technological progress. P2P networks have continued to develop and be perfected, thereby becoming increasingly more difficult to target. A centralized system, very similar to that of Napster, was adopted by Aimster.[33] Aimster, however, differed from Napster: apart from having adopted the necessary disclaimer, it also declared that it was not aware of the content exchanged because content was encrypted.[34] Nevertheless, on appeal, Judge Posner rejected the *Sony-Betamax* principle.[35] Judge Posner maintained that despite the possibility of lawful uses (for example, uses internal to firms), and notwithstanding the fact that Aimster could not read the content of files exchanged, Aimster could not be completely ignorant of the fact that its software was used to violate copyright law.[36]

In *Aimster*, just as in *Napster*, the court found it possible to identify an entity that contributed to the violation of copyright law by the technology it made available (the P2P software). By contrast, in the cases of completely decentralized systems that followed, the situation became more complicated. In decentralized systems, it is not possible to clearly identify an element, such as a central server, that functions as a third party with respect to the sharing that takes place through the users' computers and who could be held liable for users' copyright infringement. In decentralized systems, such as those produced after *Napster* and *Aimster*,

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[31] *Id.* at 912.
[32] *Id.* at 918.
[33] In re Aimster Copyright Litig., 334 F.3d 643, 650 (7th Cir. 2003).
[34] *See* Jeffrey R. Armstrong, Sony, Napster, *and* Aimster*: An Analysis of Dissimilar Application of the Copyright Law to Similar Technologies*, 13 DEPAUL-LCA J. ART & ENT. L. & POL'Y 1, 7-12 (2003) (discussing the differences, from the technological point of view, between the software adopted by Aimster and Napster).
[35] In re Aimster Copyright Litig., 334 F.3d 643 at 650.
[36] *Id.*

each connected computer acts as a server, forming a superhub.[37] Thus, when we come to the case of *KaZaa*,[38] producer of the software that Grokster and Morpheus used, the decentralized system was initially absolved from the copyright infringement challenge.[39] The technology examined was found to be capable, in a substantial manner, of lawful uses, just like the videorecorder in *Sony-Betamax*, independently of the use made of it by those who downloaded the software.[40] However, *KaZaa* was overturned by the U.S. Supreme Court.[41] The Court maintained that the software was produced and distributed with the specific aim of monetary gain from the violations of copyright law that the users committed.[42] In substance, much emphasis has been placed, as in *Aimster*, on the intention of the producer of such technologies,[43] an element which constitutes, in the opinion of some judges of the Supreme Court,[44] the main difference from the *Sony-Betamax* case.[45] Alongside those who maintain that there is a substantial difference between the activity in which Sony was involved (i.e., the production and commercialization of technological devices) and that of Grokster (which provides a service),[46] others maintain, on the contrary, that it is a similar situation and that the difference may be found in the subjective element.[47] While in the *Sony-Betamax* case the active induction to the violation of copyright law was lacking, in *Grokster* this was proven by more than one element: specifically, (i) the dissemination of advertising and promotional messages; (ii) the absence of filters that prevented Grokster from being aware of the content of files exchanged (unlike Aimster,

[37] *See* Bryan H. Choi, *The* Grokster *Dead-End*, 19 HARV. J. L. & TECH. 393, 397 (2005-06) (discussing the differences between centralized and decentralized systems).
[38] Metro-Goldwyn-Mayer Studios, Inc. v. Grokster Ltd., 380 F.3d 1154 (9th Cir. 2004), *rev'd*, 545 U.S. 913 (2005).
[39] Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 259 F. Supp. 2d 1029 (C.D. Cal. 2003), *aff'd*, 380 F.3d 1154 (9th Cir. 2004), *rev'd*, 545 U.S. 913 (2005).
[40] *Grokster*, 380 F.3d 1154 at 1161-62.
[41] Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 545 U.S. 913 (2005).
[42] *Id.* at 924.
[43] *See, e.g.*, Urs Gasser & John G. Palfrey, Jr., *Catch-As-Catch-Can: A Case Note on* Grokster 6 (The Berkman Ctr. for Internet & Soc'y, Research Publication (Oct. 2005)), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=869030 (discussing the relevance of the "inducement standard"). *See also* Paul Ganley, *Surviving Grokster: Innovation and the Future of Peer-To-Peer*, 28 E.I.P.R. 15, 16 (2006) (analyzing the "active inducement doctrine" as applied by the Supreme Court in *Grokster*).
[44] *MGM Studios*, 545 U.S. at 930.
[45] *See also* Samuelson, *Legally Speaking*, *supra* note 15 (providing an overview of the different opinions that the members of the Supreme Court had on the *Grokster* case).
[46] Jane Ginsburg, & Sam Ricketson, *Inducers and Authorisers: A Comparison of the U.S Supreme Court's* Grokster *Decision and the Australian Federal Court's* KaZaa *Ruling*, 4 (Melbourne Law School Legal Studies Research Paper Studies, Paper No. 144, Columbia Public Law Research Paper, Paper No. 06-105, Mar. 4 2006), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=888928. *See also* Gasser & Palfrey Jr., *supra* note 43, at 10 (discussing the inducement doctrine that the Supreme Court adopted in *Grokster*).
[47] For the different positions of the Supreme Court's judges see Gasser & Palfrey Jr., *supra* note 43, at 8-9.

which adopted such filters); as well as (iii) the possibility of receiving income from the sale of advertising on the website and from the transmission of promotional messages to users.[48] What one can surely deduce from *Grokster* is that the proposal to expand the specific case of indirect responsibility for violation of copyright to the cases of inducement seems, after having gone out the door, only to have flown back in through the window.[49] It is worth mentioning that the *Napster* decision also affected the way the Italian jurisdiction handled the P2P phenomenon. In fact, when the Italian legislature adopted Decree-Law no. 72 of March 22, 2004, it had to choose between sanctioning copyright infringements from which the infringer derived "non-personal gain" or "personal profit". It chose to enlarge copyright infringement to those cases in which there was mere personal profit.[50] In fact, it was stressed that consumers (such as those for whom Napster was responding indirectly) operated in an illegitimate manner and committed a violation of copyright by the simple fact that they saved money as a consequence of downloading the music. The Italian legislature followed the reasoning in *Napster* and extended the concept of economic gain so as to encompass personal profit.

B. *A Reply to the Challenges that the Meeting of Digital Technology and the Internet Poses to Copyright*

Second, the international community has adopted several provisions in response to the challenges of the meeting of digital technology and the Internet.[51] These challenges are not only represented by file-sharing, but also refer more generally to the possibility that every user may become a competitor of the traditional

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[48] *See* Diane L. Zimmerman, *Daddy, Are We There Yet? Lost in* Grokster-*land* Public Law & Legal Theory Research Paper Series, Working Paper No. 05-21, 2005, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=826064. *See also* James Griffin, *The 'Secret Path' of* Grokster *and* Corley*: Avoiding Liability for Copyright Infringement*, 10 J. COMPUTER, MEDIA, & TELECOMM. L.147 (2005) (arguing for the need to identify novel ways to exploit P2P technology, instead of preventing them from developing).

[49] *See* Mario Fabiani, *Il caso* M.G.M. *contro* Grokster*, Ovvero della responsabilità per l'altrui indebito utilizzo di opere protette*, 77 IL DIR. D'AUTORE at 14 (2006) (providing the Italian viewpoint on the *Grokster* case).

In July 2004, Senator Orrin Hatch proposed the adoption of the Inducement Infringement of Copyright Act, S. 2560, 108th Cong., aiming at the introduction of a new cause of action for "intentional inducement of infringement." *See* Senators Introduce Bill to Amend Copyright Act to Ban Inducement of Infringement, http://www.techlawjournal.com/topstories/2004/20040622.asp (last visited Dec. 24, 2008).

[50] Decree-Law No.72 of 22 Mar. 2004, modified by Law No. 128 of 21 May 2004, Gazz. Uff. of 22 May 2004 No. 119. However, the subsequent Law No. 43 of 31 Mar. 2005, Gazz. Uff. of 1 Apr. 2005 No. 75, modified, again, article 171(2)-*ter* of the Italian copyright law and brought it back to the previous wording "economic gain", which refers to those cases in which downloading is done for a concrete economic advantage and not just a mere personal saving.

[51] *See, e.g.*, THE FUTURE OF COPYRIGHT IN A DIGITAL ENVIRONMENT (P. Bernt Hugenholtz ed., 1996).

intermediaries between authors and the market.[52]

Such international agreements on digital or paracopyright provisions have been difficult to interpret and translate into internal acts and, once transposed, raise doubts in the phase of judicial interpretation. This latter difficulty is documented in a series of decisions identifying the line of interpretation developed within the U.S. legal system, the United States being the jurisdiction that has witnessed the most cases.

1. From the 1996 WIPO Treaties to the Italian Decree-Law no. 68/2003

The provisions on digital copyright constitute the implementation of the WIPO Treaties of 1996 (Copyright Treaty (WCT) and Performers and Phonograms Treaty (WPPT)),[53] ratified in the United States with the adoption of the Digital Millennium Copyright Act in 1998 (DMCA)[54] and, in the European Union, with the adoption of Directive 2001/29/EC on the harmonization of certain aspects of copyright and related rights in the information society.[55] The EC Directive was implemented in Italy with the adoption of the Decree Law No. 68 of April 9, 2003, which amended Law No. 633 of 1941 on the author's right.[56]

In substance, this discipline revolves around three main points: first, the extension of copyright to the digital environment; second, the legitimization of technological protection measures (TPMs) and of electronic information on digital works; and, third,

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[52] *See* Marco Ricolfi, *Gestione collettiva e gestione individuale in ambiente digitale*, *in* PROPRIETÀ DIGITALE: DIRITTI D'AUTORE, NUOVE TECNOLOGIE E SISTEMI DI DIGITAL RIGHTS MANAGEMENT 215, 215-17 (Maria Lillà Montagnani & Maurizio Borghi eds, Egea, 2006) (discussing that this is one of the cases defined as "short path")..

[53] *See* MIHALY FICSOR, THE LAW OF COPYRIGHT AND THE INTERNET (Oxford Univ. Press 2002) (providing a thorough depiction of the negotiations that led to the WIPO Treaties and their provisions).

[54] Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (Oct. 28, 1998) [hereinafter DMCA]. There is a wide body of literature on DMCA. For a skeptical position, see Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519, 520 (1999). For a less critical approach, see Jane C. Ginsburg, *Copyright Use and Excuse on the Internet*, 24 COLUM.-VLA J.L. & ARTS 1 (2000). *See also* Jane C. Ginsburg, *Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the U.S. Experience*, Columbia Public Law & Legal Theory Working Paper Group Research Paper No. 05-93, at 26-27 (2005), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=785945 (arguing that the recent interpretation of DMCA provisions enables the adoption of new business models for online distribution).

[55] European Parliament and Council Directive 2001/29, 2001 O.J. (L 167) 10–19 [hereinafter Directive]. *See generally* Maciej Barczewski, *International Framework for Legal Protection of Digital Rights Management Systems*, 27 EUR. INTELL. PROP. REV. 165 (2005) (describing the legal background at the Directive); Markus Fallenboeck, *On the Technical Protection of Copyright: The Digital Millennium Copyright Act, the European Community Copyright Directive and their Anticircumvention Provisions*, 7 INT'L J. COMM. LAW & POL'Y 1, 1 (2003), *available at* http://www.ijclp.net/ijclp_web-doc_4-7-2003.html (illustrating the Directive and the novel regime of exceptions).

[56] For a discussion of the Italian implementation of the Directive, see STEFANIA ERCOLANI, IL DIRITTO D'AUTORE E I DIRITTI CONNESSI 87-96 (Giappichelli 2004).

the regime of exceptions to which digital works are subject.

a. The Extension of Copyright from the Analog to the Digital Environment

The adoption of the WIPO Treaties has confirmed the extension of the exclusive rights, typical of copyright, to the digital environment. If anyone still questions the possibility that the Internet might be considered a "free port" as far as copyright is concerned, the current international, regional, and national legal frameworks remove any lingering doubts on the matter and spell out clearly that uploading a work to the Internet belongs exclusively to the right holder (under the "making available" right).[57]

The decision to include the "making available" right within the right of interactive public communication was the subject of wide debate during the drafting of the WIPO Treaties.[58] The problem was not so much represented by the answer to the question of whether uploading to the Internet might come under the faculty of the owner of copyright, but rather, whether the right to make a work available online might constitute a specification of one of the traditional rights of copyright (and, if so, which?) or whether this should be clarified in a new, autonomous right.[59] The question was then raised as to who could post on the Internet or give the consent to do so.[60] Uploading to the Internet, in fact, is not limited to the mere communication of the work, because to obtain such a result (the communication to the public) the reproduction of the work is also necessary. How can the situation be resolved in those cases in which different powers are not found in the same person? In the same way, posting to the Internet also incorporates the dissemination of the work and could, therefore, be covered within the exclusive right of diffusion.

The result of the debate was to leave freedom to the states in proceeding to the free categorization of the faculty under consideration, although such freedom (the umbrella solution) may have been transposed in the language of the two treaties in a slightly different way. Indeed, in the WCT, the "making available" right appears in article 8 under the right of communication to the public,[61] while in the WPPT it is given a specific provision, article 10.[62] The incorporation of these principles into national statutes has

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[57] *See, e.g.*, Jane C. Ginsburg, *The (New?) Right of Making Available to the Public*, *in* INTELLECTUAL PROPERTY IN THE NEW MILLENNIUM 234 (David Vaver & Lionel Bently eds., Cambridge Univ. Press 2004).

[58] For a thorough discussion of the "umbrella solution" see FICSOR, *supra* note 53, at 628-29.

[59] *Id.*

[60] *Id.*

[61] *Id.*

[62] *Id.*

not spurred modifications to the copyright statute, as far as the United States is concerned; within the European Union, however, it has led to the specification that the right of communication also comprises the right to make works available to the public so that each individual may access them at a time and place individually chosen.[63]

The Italian law on author's right provides an example of how the umbrella solution has been implemented. Article 16 of the Italian law on author's right acknowledges such expansion; along with other means of diffusion at distance (such as the telegraph, telephone, radio, television, satellite, and cable) and communication with particular conditions of access, the "making available" of a work to the public in a such way that any individual might access the material from a place and at a time individually predetermined.[64] The amended article 16(2) specifies, furthermore, that this right "is not exhausted with any act of communication of the public, therein included the proceedings of making available to the public"[65] (a clarification included, again, in the text of article 17 regarding the distribution right). The specification in article 17 is certainly not haphazard, but derives from the European article 3(3) of the Directive by virtue of which the "making available" right is not exhausted with the first introduction of a good into the market, rather, the right owner continues to be able to control all subsequent passages.[66] The aim is to avoid that once a copy has been made and after a work has been used online, the same is reproduced and distributed again, based on the conviction that the release of a copy equates to the placing in the market tangible copies of a work. On the contrary, the legislators, both at the European and national levels, have confirmed that distribution of intangible works, even once they have been "materialized" in the

[63] A reasonable solution could be that of defining the upload as the result of the three activities involved: first, a digital or digitized work needs to be reproduced to be posted; second, once posted, the work is communicated to the public; and third, the work is distributed every time it is visited by Internet users. This categorization does not even take into account that transmission over the Internet causes the unpacking of the digital work in several packets of 1500 bits, which, during the transmission process are reproduced many times (as temporary copies). This rough and technically incomplete notion shows how difficult it can be to stay within the traditional category of the copyright economic rights.

The inclusion of the "making available" right within the category of acts of communication to the public requires a wider notion of public to be adopted. Communication is no longer point-to-mass, but point-to-point. We have now moved from live performances (as in theatre), to performances in front of a public whose members are not physically gathered together in the same place (broadcasting), and to the constant availability of a work for Internet users who will access it at the time and from the place they prefer.

[64] Law No. 633 of Apr. 22, 1941 [hereinafter Italian Copyright Act], art. 16.

[65] This translation of the Italian author's right, as well as the others in this work, is made by the Author.

[66] For an earlier discussion on the exhaustion of the distribution right in case of online services, see Pamela Samuelson, *The Digital Agenda of the World Intellectual Property Organization: Principal Paper: The U.S. Digital Agenda at WIPO*, 37 VA. J. INT'L L. 369, 400 (1997)

copy permitted to the user, does not exhaust the exclusive right.[67]

b. The Adoption of TPMs and Electronic Information on the Rights Regime

The WIPO Treaties legitimize the recourse to systems of DRM, requiring the signatory states to introduce provisions that legalize the adoption of electronic information on the rights regime and TPMs.[68]

The DMCA and the Directive use different means of implementation regarding the TPMs. As far as the electronic information regime is concerned, both section 1202 of the DMCA and article 7 of the Directive define such electronic information as the "information supplied by rights holders that identify the work or protected material, the author or any other owner of rights, or any information about the terms and conditions of use of the work or of other material, and to whatever number or code might represent such information." Both section 1202 and article 7 are limited to prohibiting the removal, alteration, and dissemination of materials from which information has been removed or altered.

Considering the TPM discipline, the first two subsections of section 1201 of the DMCA provide for, respectively, prohibitions on the circumvention of TPMs that have an anti-access function, the production and sale of devices that allow such circumvention, and the ban on the production and sale of devices that favor the circumvention of anti-copy measures.[69] It can be anticipated here, however, that the European legislature does not seem to make the distinction between anti-access and anti-copy functions. The most accredited interpretation of section 1201 identifies, therefore, alongside the prohibition of "trafficking" of devices that permit the circumvention of technological anti-copy and anti-access measures, the subsistence of an absolute prohibition of the elusion of solely anti-access measures.[70] On the basis of the first prohibition, which is of an absolute nature, the devices regulating access cannot be tampered with, regardless of the fact that such activity may or may not lead to a violation of copyright law. As evidence of this, there is the adoption of a closed list of exceptions in substitu-

[67] For the overview of Article 3 of the Directive's implementation in Member States, see Guido Westkamp, The Implementation of Directive 2001/29/EC in the Member States, 7-10 (Feb. 2007), *available at* http://ec.europa.eu/internal_market/copyright/docs/studies/infosoc-study-annex_en.pdf.

[68] WCT, *supra* note 25, at arts. 11 & 12; WPPT, *supra* note 25, at arts. 18 & 19.

[69] Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519, 519 (1999).

[70] The word "trafficking" encompasses the activities forbidden pursuant to section 1201 of the DMCA and refers to the "manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof." 17 U.S.C § 1201(a)(2) (2008).

tion of fair use[71] to indicate those rare cases in which such activity of circumvention does not constitute unlawful activity, notwithstanding the presence of anti-access TPMs. However, in the case of devices regulating the copying of material, which is technologically protected, an absolute prohibition of the circumvention of the same has not been introduced, as much as the (relative) ban on the production, sale, detention, and so on, of devices aimed at eluding any technological protection applied in an anti-copy function (or functions other than that of anti-access).[72] In the absence of an absolute ban, such as that foreseen in subsection 1201(a)(1), it has been hypothesized that the activity of circumvention of anti-copy measures does not constitute – unlike that of the circumvention of anti-access – an activity which is, in itself, unlawful, but only in the case in which there are also violations to copyright law at the same time.[73] In the latter case, therefore, the circumvention will be justified in cases where the free uses of works protected by "traditional" copyright law (with reference, therefore, to the hypotheses contemplated in fair use) are admitted.[74]

Within the European Union. the transposal of the WIPO Treaties has not been as articulated, but is limited to article 6 of the Directive. This article requires that member states introduce adequate protection for TPMs that the author can adopt against abusive exploitation of works. Within the meaning of this article, member states must also provide adequate legal protection against the manufacture, importation, distribution, sale, rental, or the detention for commercial aims of equipment, products, or components with the prevalent aim of circumventing such measures.[75] Furthermore, the European legislature requests that adequate protection is provided both against the removal or alteration of all electronic information applied to works subject to protection of copyright, as well as against the use of a work from which this type of information has been removed by a person aware of, or presumed to be aware of, the illegitimacy of her behavior.[76]

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[71] The fair-use doctrine derives from section 107 of the U.S. Copyright Act of 1976, which authorizes the fair use of a copyrighted work for purposes of critique, comment, news reporting, research and teaching. 17 U.S.C. § 107 (2008). Such provision, however, is limited and some elements must be considered in order to make the use fair as required by law. *Id.* The limits consist of not only the purpose – which cannot be, in any case, commercial – but also the nature of the protected work, the amount and the entity of the use, and, finally, the effect of the use on the work's value or in the work's potential market. *Id.*

[72] *See* § 1201(b)(1)(A) (providing a ban for import, offer to the public, manufacture, or otherwise traffic in any technology enabling the circumvention of technological measures that effectively protect a right of a copyright). While § 1201(b) does not provide a ban of circumvention as such of technology effectively protecting rights of copyright holders,

[73] This, at least, is the interpretation that can be inferred by the most recent judicial interpretation of the DMCA. *See infra* Part.IV.A.1 and notes 151-160.

[74] *Id.*

[75] Directive, *supra* note 55, at art. 6.

[76] *Id.* at art.7.

Following the indications given in the Directive, the Italian law on author's right has been amended, and the newer versions of articles 102-*quarter* and 102-*quinquies* require, respectively, that authors have the right to apply technological measures to their works to prevent or limit unauthorized acts, and electronic information to identify the work or protected material by indicating, for example, the title, the year of publication, and license conditions.[77] At the same time, article 171-*ter* provides for the sanctioning of: (1) those who manufacture, import, distribute, sell, rent, release on any grounds, advertise for sale or rental, or keep for commercial purposes, equipment, products or components, or rather, provide services having the prevalent aim of eluding effective technological protection as in article 102-*quarter* or that have been principally designed with that aim in mind; (2) those who remove or alter the technological information, or use in any way, material from which any such electronic information has been removed; and (3) those who purchase or rent this type of equipment.[78]

c. Technologically Protected Works and Free Uses

The implementation of the international provisions has determined a modification to the system of exceptions, creating a regime for technologically protected works on the Internet that differs from that envisioned for traditional works, which is one of the most complex knots of digital copyright. Before mentioning which free uses are still admissible, it is important to point out that the provisions of the WIPO Treaties are rather generic on this point, and are limited to permitting potential modifications to the regime of exception regarding technologically protected digital works online.[79] Similarly, the agreed statements concerning article 10 of the WCT and article 16 of the WPPT allow for the possibility that countries adhering to the Treaties might contemplate, "limitations and exceptions adequate to the sector of digital networks,"[80] but do not impose the revision of these.[81] This is perhaps the point where the implementation of the United States and the European Union differ most widely.

The U.S. legal system has proceeded to introduce, in the place of fair use, a limited number of specific exceptions in case

[77] Italian Copyright Act, *supra* note 64, arts. 102-*quarter* & 102-*quinquies*.
[78] *Id.* at art. 171-*ter*.
[79] *See* WCT, *supra* note 25, at art. 10 ; WPPT, *supra* note 25, at art. 16.
[80] Barczewski, *supra* note 55, at 168-69.
[81] *See* Teresa Foged, *U.S. v. E.U. Anti Circumvention Legislation: Preserving the Public's Privileges in the Digital Age*, 24 EUR. INTELL. PROP. REV. 525, 530 (2002). *See also* Roberto Caso, *Il "Signore Degli Anelli" nel ciberspazio: controllo delle informazioni e Digital Rights Management*, *in* PROPRIETÀ DIGITALE 109, 149-55 (arguing that the Directive did go beyond what was required by the international provisions).

the TPMs might serve with an anti-access function (not, therefore, when they have an anti-copy function, a case that, as anticipated, remains subject to the traditional system of fair use).[82] In particular, access is permitted, notwithstanding the presence of measures of protection, to: (1) libraries, archives, and schools, so that material can be viewed and a decision can be made whether to purchase it; and (2) users, to check both the presence of technologies that collect and use unauthorized personal data and of material unsuitable for minors, as well as to test the safety of the software in use.[83] The elusion of anti-access measures (and anti-copy measures) is, however, always permitted for government agencies for investigative purposes or for aims relating to public security and to researchers for the purpose of reverse engineering and research in the field of cryptography.[84] The DMCA also foresaw that, in the first two years this provision became effective, the Copyright Office of the Congress Studies Office had the faculty to indicate other exceptions.[85] These have subsequently been identified in the lists of technologically-protected web sites and in literary works (including software) that are protected by measures which are malfunctioning, obsolete, and damaged.[86] The Congress also established a triennial rulemaking process under which the Librarian of Congress is directed to examine "the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research."[87] Such process has recently led to the exemption of six classes of protected works.[88]

Section 1201 offers a complex system, but one that is, in some respects, clearer than its European counterpart,[89] under which different cases of free uses are introduced according to the regime of protection adopted. First, when a work is not technologically protected it will benefit from the protection guaranteed by copyright and will be subject to fair use as set out within the scope of section 107 of the U.S. Copyright Act.[90] Second, when the right holder opts for the adoption of anti-access devices, the work will benefit, independently of its tangible or intangible nature, not only from

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[82] 17 U.S.C. § 1202(d), (e), (f), (g), (h), and (i) (2008).
[83] *Id.*
[84] As a matter of fact, the exploitation of the exception is subordinated to further requirements for any case, *see* Fallenboeck, *supra* note 55, at 26-31.
[85] § 1201(a)(1).
[86] Fallenboeck, *supra* note 55, at 21-26.
[87] § 1201(a)(1)(C)..
[88] *See* Copyright Office, Library of Congress, *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, 37 C.F.R. Part 2001 Docket No. RM 2005-11, at 8-22 (2006), *available at* http://www.copyright.gov/1201/docs/fedreg_notice.pdf.
[89] Directive, *supra* note 55, at art. 6.
[90] 17 U.S.C. § 107 (2008).

superior protection, but also from a restricted and exhaustive number of free uses.[91] Third, if devices exclusively have an anti-copy function, although protection is reinforced, the appropriate regime of fair use will be that of works not protected by technological measures.[92] However, even in these cases, with the work being technologically protected, the free uses that constitute fair use can be wholly enjoyed only thanks to the use of devices that permit their circumvention. Now the trafficking of all devices is prohibited, and therefore, the exploitation of the returns of these uses is devolved to the individual capacity of the beneficiaries to circumvent.[93]

Within the European Union, things have proceeded differently. Although the intention was that of harmonization, the Directive requires the obligatory introduction of a unique exception, related to acts of temporary, transitory, or accessory reproduction that may be an integral and essential part of a technological procedure.[94] The acts exempted under art. 5(1)(a) serve to permit the transmission on the Internet between third parties, with the intervention of an intermediary, or the legitimate use of works or other protected material.[95] Alongside this obligatory exception, the European legislature lists twenty-three facultative exceptions, thus permitting each member state to maintain in force the exceptions already foreseen in their own national legislation.[96] The facultative exceptions can be divided into three categories: (1) exceptions of public utility, such as those with a didactic, scientific, or research aim; (2) the private copy exception, further divided into,

[91] § 1201(d), (e), (f), (g), (h), (i), and (j).

[92] This is inferred *a contrario* by the fact that the uses permitted in § 1201(d), (e), (f), (g), (h), (i), and (j) only refer to works protected by anti-copying measures.

[93] Foged, *supra* note 81, at 531.

The example of the different legal regime to which a technologically protected work is subject to is shown in *Kelly v. Arriba Soft Corp.*, 77 F. Supp. 2d 1116, 1118 (C.D. Cal. 1999), *rev'd on other grounds*, 280 F.3d 934 (9th Cir. 2002). The court in *Kelly* found that posting of some thumbnail pictures without the author's consent was deemed fair use. *Id.* Had the same pictures been technologically protected through anti-access, the posting would have been copyright infringement. Matthew C. Staples, *Copyright: Digital Media:* Kelly v Arriba Soft Corp., 18 BERKELEY TECH. L.J. 69, 75 (2003). Had they been protected through anti-copying measures, the trafficking of devices apt at circumventing would have been copyright infringement, but a fair use of the pictures would have still been possible. *Id.* In this last case, then, fair use is allowed even though trafficking is infringement. As a result, he who is capable of circumventing, without acquiring the devices traded to do it, will be entitled to exploit the fair use. For a comment on this case, see *id.*

[94] Directive, *supra* note 55, at art. 5(1)(a).

[95] It is worth mentioning the interface between the compulsory exception under article 5(1) of the Directive and the regime of compulsory exceptions introduced under the directive on software and databases. Recital 20 of the Directive states that its provisions do not affect in any way the protection already afforded to software and databases. Directive, *supra* note 55, recital 20. As a result, for software and databases the exception under article 5(1) for temporary reproduction, essential for a technological process which enables the transmission between the parties via an intermediary or for the purpose of lawfully exploiting a work, continue to be copyright – or *sui generis* right – infringement when they involve software or databases. *Id.* at art. 5(1).

[96] Directive, *supra* note 55, at art. 5.

on the one hand, reproduction on paper or similar, and on the other, reproduction on any kind of carrier, made by an individual for private use which is not indirectly commercial; and (3) other exceptions, such as parody or news reporting.

Unlike what happened in the United States as far as technological measures for controlling access are concerned, the European legislature has not foreseen an autonomous set of exceptions for works technologically protected (different from that foreseen for traditional works). However, article 6(4) of the Directive requires that, in the absence of voluntary measures, "adequate measures" shall be taken by member states, so that the beneficiaries may benefit from such exception in relation to works that are technologically protected.[97] The principle of adequate measures is articulated depending on the category of exceptions under consideration. Regarding the exceptions of public policy in articles 5(2)(a), (c), (d) & (e) and 5(3)(a), (b), & (e), member states are obliged, in the absence of an agreement between the beneficiary of the exceptions and the right holder, to adopt adequate provisions to permit the free use of the works.[98] As far as private copies are concerned, article 5(2)(b) states that, in the absence of such agreement, member states are not obliged to adopt adequate provisions, as under the previous case, but have discretion in intervening in the adoption of such provisions.[99] For the third category of exceptions, for example, parody or news reporting,[100] no intervention, not even discretionary, is required from member states. In this articulated system, which makes intervention by the authorities more or less compulsory depending on the case, intervention of member states in order to allow the beneficiaries to benefit from exceptions is set up in such a way that, under the hypothesis in which technically protected works are made available to the public at a time and in a place individually predetermined (works, therefore, put on the Internet) *by virtue of a contractual agreement*, the intervention of member states to allow the beneficiaries to benefit from exceptions is not required, not even for the exceptions of public policy.[101]

The above standard implies a complex system whereby, once it has decided which exceptions to permit among those listed by

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[97] Directive, *supra* note 55, at art. 6(4). It is worth mentioning that the Directive replaces the wording "free uses" with "exceptions and limitation to copyright." *Id.* at art. 5. Although such change in the legislative wording, in this work the terms are used interchangeably.

[98] *Id.* at arts. 5(2)(a) - (e), 5(3)(a), 5(3)(b), & 5(3)(e).

[99] *Id.* at art. 5(2)(b).

[100] *See, e.g.*, *id.* at arts. 5(3)(f), 5(3)(g) & 5(3)(h).

[101] For a skeptical reading of article 6(4) of the Directive see, e.g., Brian W. Esler, *Protecting the Protection: A Trans-Atlantic Analysis of the Emerging Right to Technological Self-Help*, 43 IDEA 533, 600 (2003).

the European legislature (a decision which, in practice, has consisted in the reconfirmation of the exceptions already present within their own legal systems), each member state will need to, or at least could, adopt measures appropriate to the exercise of the exceptions. However, within the meaning of the fourth paragraph of article 6(4) of the Directive, no intervention is required for technologically protected works that are made available to the public *on the basis of contractual clauses* in compliance with which some of the public may access said works at a place and at a time individually chosen.[102]

Implementation by member states of the complex system depicted above was difficult. Within the Italian jurisdiction, for example, the entire chapter V of the law on author's right was reorganized in order to acknowledge the exceptions of article 5(1) and (2) of the Directive.[103] A further exception has been reformulated in article 55, which is outside of chapter V, regarding temporary reproductions broadcast by radio and television companies.[104] As far as the content of exceptions is concerned, the revised chapter V has not introduced substantial modifications beyond the introduction of the obligatory exceptions as in article 68-*bis* for "acts of temporary reproduction with no inherent economic importance such being transitory or accessory and an integral and essential part of a technological procedure, carried out with the unique scope of consenting the transmission in [I]nternet between third parties with the intervention of an intermediary, or a legitimate use of a work or other materials."[105]

In this panorama, article 71-*quinquies* of the law on author's right is particularly interesting in that it acknowledges the principle of adequate provisions of article 6(4) of the Directive. Given the absence of a specification of this principle by the European legislature, the national legislature calls for the removal of the TPMs on request of the authority concerned and with the aim of

[102] Directive, *supra* note 55, at art. 6(4) para. 4.
[103] Exceptions encompassed in article 5(2) of the Directive are implemented respectively in the following articles of Italian Copyright Act: 68(1) (reprography); 71-*sexies* (private copy of phonograms and videograms); 68(2) and 69(2) (reproductions by libraries, educational establishments, museums or archives); 55 (ephemeral recordings made by broadcasting organizations); and 71-*quater* (reproductions of broadcasts by social institutions). In a different way, out of the fourteen exceptions encompassed in article 5(3), the Italian Copyright Act implements seven: quotations, abridgments and partial reproduction for the purpose of criticism or review (article 70(1)); quotations abridgments and partial reproduction for purpose of research and teaching (article 70(1)); uses for people with disabilities (article 71-*bis*); articles on current issues (article 65(1) and (2)); public security (article 67); political speeches and public lectures (article 66); and use through dedicated terminals on the premises of libraries, educational establishments, museums or archives (article 71-*ter*).
[104] Italian Copyright Act, *supra* note 64, at art. 55.
[105] *Id.* at art. 68-*bis*.

public safety,[106] while a more elastic principle is adopted for all the other cases in which the adoption of adequate provisions is obligatory.[107] If a different solution has not been reached, also by means of the stipulation of appropriate agreements with the trade unions, between right holders and beneficiaries of those exceptions for which such an eventuality has been provided,[108] a procedure for reconciliation has been adopted before the permanent consultive committee established within the Parliament.[109] It is interesting to note that, for these free uses, the procedure can be launched not only following the failure of any private negotiations, but also on the initiative of associations of right owners and of beneficiaries of exceptions.[110] However, as imposed in article 6(4) of the Directive, article 71(3)-*quinquies* of the law on author's right introduces a different procedure for works and materials "made available to the public in such a way that each individual might have access to them in a place and time individually determined."[111] In the case that the works are on the Internet, it is not necessary that holders of copyright adopt the "ideal solution" as in the previously cited paragraph "when access takes place on the basis of contractual agreements," nor is recourse provided for, in the absence of contractual agreements, to reconciliation as in the following paragraph.[112]

From such a system, it appears that, within the category of works protected by TPMs, a different regime of protection is envisioned for digital works that are posted on the Internet and those that are available on carriers. The free uses of the aforementioned are substantially eliminated, except where they may be the result of an agreement between right holders and beneficiaries of exceptions, with prejudice, amongst others, to the activity of research bodies and educational institutions. If, however, the enjoyment of such benefit is agreed on the basis of contractual provisions, the wording "free use" seems to lose its meaning. The benefits, on the contrary, are still present within the meaning of article 71(1)(2)-*quinquies*, but assigned to private bargaining, and no longer predetermined by the legislature, as well as on payment

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[106] *Id.* at art. 71(1)-*quinquies*.
[107] *Id.* at art. 71(2)-*quinquies*.
[108] The principle of adequate measures is implemented in the following articles of the Italian Copyright Act: 71(2)-*quinquies*, which requires proper solutions to be adopted as far as the following exceptions are concerned: ephemeral reproductions (art. 55); private copy (art. 68(1)); copies made by libraries, educational institutions etc. (art. 68(2)); reproductions of videograms and phonograms by libraries, educational institutions etc. (art. 69(2)); illustration for teaching and scientific research (art. 70(1)); uses for people with disabilities (art. 71-*bis*); and reproductions of broadcasts by social institutions (art. 71-*quater*).
[109] Directive, *supra* note 55; Italian Copyright Act, *supra* note 64, at art. 190.
[110] Italian Copyright Act, *supra* note 64, at art. 71(4)-*quinquies*.
[111] *Id.* at art. 71(3)-*quinquies*.
[112] *Id.*

of a fair remuneration where foreseen.[113]

In the case of technologically protected works, a slightly different system has been implemented with regard to private copies of musical and audiovisual works. As a matter of fact, the national legislature, taking advantage of the discretionary nature of the principle of adequate provisions regarding private copies,[114] does not foresee any ideal solution that might permit the exercise of this exception by the beneficiaries. Article 71, subsections (2) and (4)-*quinquies* of the law on author's right are not, in fact, referred to in the case of private copies of technologically protected works).[115]

From this overview of current legislation, it shows how the intervention of the national legislature, and before that, the European legislature, has effectively led to a triple level of protection for technologically protected works posted on the Internet. To the typical protection of copyright, where the use of a work is subordinate to the authorization by the right holder, it has been added the technological protection that each DRM system includes.[116] The protection does not end here; to supplement these two levels there is the added legal protection of the technological measures themselves that derive from the introduction of sanctions both for the circumvention of TPMs, and for the production, sale, and distribution of technology that may allow the circumvention of such measures.

C. *Digital Rights Management Systems and the Online Distribution of Digital Content*

The third phenomenon that was generated by the encounter of digital technology and the Internet is the spread of DRM systems for the online distribution of digital works.

The response adopted at the legislative level, in the attempt to artificially re-establish the equilibrium between technology and copyright, not only pushes toward the adoption of a predetermined system of distribution, but also creates a regime of overprotection of online works that has the effect of limiting, rather than facilitating, the dissemination of such works. The problem, however, is not in the DRM technologies themselves, but rather in the provisions adopted that legitimize them. These provisions pass

[113] As to the phenomenon of contractualization of the exception regime, *see, e.g.*, Stefan Bechtold, *Digital Rights Management in the United States and Europe*, 52 AM. J. COMP. L. 323, 355 (2004); Andrea Ottolia & Dan Wielsch, Mapping th*e Information Environment: Legal Aspects of Modularization and Digitalization*, 6 YALE J.L. & TECH. 174, 248 (2003-04).

[114] Directive, *supra* note 55, at art. 6(4) para. 2.

[115] For an analysis of private copy, see Paolo Spada, *Copia privata ed opere sotto chiave*, 6 RIV. DIR. IND. 590 (2002).

[116] On the relationship between technological measures of protection and DRM systems, see Caso, *supra* note 81, at 110.

the total control over the use of original works to the right holders, thereby copyright law does not seem entitled anymore to determine what uses of creative works must be allowed in order to strike a balance between private and public interest.

At this point, it is helpful to enter into more technical details about what exactly is a DRM system. An understanding of how they work allows the identification of which online distribution systems of digital content adopt this type of technology. It is thus possible to note that these systems, however much as they may be criticized, have led to notable steps forward in other areas, such as the field of cryptography, thus contributing to technological progress.

1. The Architecture of DRM Systems

DRM systems include the wide category of systems used to distribute digital content online, which, at the same time, offer protection from likely copyright infringements.[117] To the multitude of functions carried out by a DRM system there corresponds a similar number of technological components which come together in different ways according to the distribution model chosen by the right holder for that digital content. However, all DRM systems seem to share a basic architecture made up of three fundamental elements: a content server, a license server, and a client, the functions of which are briefly illustrated in the following paragraphs.[118]

a. The IT system of Content Producers/Distributors

The level of content producers/distributors consists of: (1) the digital content distributed; (2) information regarding content; and (3) software (known as DRM packagers) that assemble content and information in encrypted files. Content is organized in a database (content repository) just as the information pertaining to them is filed in the information database. This information is also defined as metadata, and it is second-degree information in that it supplies information regarding the data held in the content repository (for example, author of the content, means of access, and possible limitations). Content and metadata are assembled by relevant encryption software, called DRM packagers, that extract the digital content from the repository, unite it with the related information, and encrypt it according to the technology chosen by

[117] The correct word is "system" and not "software," since a DRM technology is a complex combination of software programs, each having a different function.

[118] This description of the layers is derived from WILLIAM ROSENBLATT, WILLIAM TRIPPE & S. MOONEY, DIGITAL RIGHTS MANAGEMENT. BUSINESS AND TECHNOLOGY 79-100 (M&T Books 2002). *See also* Stefan Bechtold, *The Present and Future of Digital Rights Management – Musings on Emerging Legal Problems*, *in* DIGITAL RIGHTS MANAGEMENT TECHNOLOGICAL, ECONOMIC, LEGAL AND POLITICAL ASPECTS 597, 600 (Eberhard Becker, et al., eds. Springer 2003), *available at* http://ssrn.com/abstract=466401.

the content owner (or by whoever manages distribution, in the case of outsourcing). It is, however, necessary to ensure that the DRM packagers carry out this function (uniting the content and information in a secure file) when distribution occurs by the purchaser carrying out a download of digital content. In contrast, for distribution by means of streaming, content is not delivered together with information to the end user, who instead receives only the information. In this case, the most important function is that carried out by the license server (which comes in the second layer of architecture).

b. The IT System of License Managers

The IT system of license managers can be either the producer/distributor of the content, or a third party such as an institution involved in collective management of rights, or the entity that offers outsourcing services (license server or computer that manages the licenses for digital content). The IT system that manages the licenses consists of a principal software, a DRM license generator, and three groups of information loaded on a different server which houses the content repository database and the information (or, in case it is on the same server, with which it communicates by codes and communication protocols).

A first group of information (rights) is made up of metadata relating to the license for use of all the content packages that the DRM packager has created (or can create on request, in the case of distribution by means of streaming). A second bundle of information regards the encryption keys with which, once the purchaser has been identified, the IT system decodes the required content and allows content to be used by the purchaser once recognized as legitimate. Essentially, the content packager transfers the tools to decode the content to the IT system. A third batch of information pertains to the identity of the purchasers. As the identities are created at the next level, they are conserved in this third database. To each content package created by the DRM packager, there corresponds a set of information in the rights database and a key for decoding in the encryption keys database that the DRM license generator puts together and sends to the next level, having verified the identity of the user/purchaser.

c. The Client System

The main software at this level is the DRM controller, which allows the purchaser to interact with the content server and the license server. At this level, there is the application software, which allows the final use of content by the purchaser (rendering application, as for example, the media player or music player), and the

software that allows the mechanism for user identification (in the case which the user is already present in the filed identities), or that permits user registration in the identities. The DRM controller assumes particular relevance in that it manages the process from the beginning (i.e., from the request to use content by a user known or in the registration phase) to the end (the use of content). A financial transaction will have taken place at some point, the precise time of which may vary depending on the model of distribution involved. For example, it will take place at the beginning in the case of a subscription, or before a single access to content takes place, in the case of a download against payment.

2. The Functioning of DRM Systems

In order to fully understand how the levels that make up a DRM system interact with each other, it is necessary to describe their functioning, which is usually activated by a user/purchaser's request to access content. The basic way of functioning, however, can be subject to numerous variations depending on both the timing of the financial transaction and the way with which the use of content is made, which can involve the delivery of content, or only the viewing of such, that is, streaming).

Generally, however, one can identify a user/purchaser that downloads a content package (that is, the encrypted content and the metadata relating to it) whether from the Internet, an email, or a CD-ROM, and decides to use it. Similarly,, the ways it may be used are numerous and may differ depending on the type of content; it may request to open a media player or to simply click on a file. In doing so, the entity in question activates the DRM controller (already present in the client).

The first activity of the DRM controller consists of (1) collecting the identity of the purchaser (and eventually creating a new profile whenever one does not already exist), and (2) collecting the license conditions for the particular content (in substance this means to read the metadata of the content package). Having carried out this operation, the DRM controller starts a dialog with the license server, sending it a request which contains the identity and the metadata containing all the information regarding the specific content, which allows the content to be identified.

At the license server level, the DRM license generator receives the request, which first authenticates the identity of the user/purchaser (or inputs the new one), second extracts from rights the conditions of use (or license) related to that digital content, and, third, extracts from the encryption keys the key for decryption. The DRM license generator receives all this information (regarding the identity, license conditions, and keys for decrypt-

ing) in a single file, which in turn is encrypted and sent to the DRM controller.

At this point, the DRM controller checks that the rendering application is in turn authorized and decrypts the file for the user/purchaser, who can then view the content. In the case that the content is accessed in streaming mode, the interaction between the DRM controller and DRM license generator remains identical, while the composition of the content package changes in that it is not assembled in advance, as in the case of downloading, but is assembled on request and in "packets." In substance, a movie is divided into many packets and when the purchaser/user makes the request and the DRM controller and the DRM license generator have made the necessary checks, there follows the creation of the packets and the viewing of these by the purchaser/user.

3. The Likely Evolution of DRM Systems

The many dimensions affected by the adoption of DRM systems are well-known today: from privacy to private control of information and protection of consumers, through upstream market competition between standards and downstream competition between accessories complementary to the primary technology.[119] The reaction of the academic world and civil society to the commoditization of information has not gone unnoticed.[120] The consequences that the legislative choice *pro* DRM systems has generated is outside the scope of this article, but it is important to highlight the prospects for its likely evolution that are currently underway. In this context, it seems that we are witnessing, along with a rethinking of DRM at both the legislative and the interpretative level, a shift in the attention from the effects that the adoption of DRM generates, (in particular that of the "contractualization" of the exceptions typical of copyright and of the alteration of the balance between private and public interest) to the newer business models that the adoption of DRM systems generate, along

[119] *See, e.g.*, Julie E. Cohen, Lochner *in Cyberspace: The New Economic Orthodoxy of "Rights Management,"* 97 MICH. L. REV. 463, 468 (1998); Julie E. Cohen, *Normal Discipline in the Age of Crisis*, Georgetown University Law Center Public Law and Legal Theory Research Paper No. 572486 (2004), *available at* http://ssrn.com/abstract=572486; Margaret Jane Radin, *Regulation by Contract, Regulation by Machine*, 10 (2004), http://ssrn.com/abstract=534042. On the topic of privacy, see generally Julie E. Cohen, *DRM and Privacy*, 18 BERKELEY TECH. L.J. 575, 577-80 (2003). The issue of privacy is addressed from the perspective of users' rights in Andrea Ottolia, *Preserving Users' Rights in DRM: Dealing with "Juridical Particularism" in the Information Society*, 35 IIC 491 (2004). On the competition law aspects, see also Paola Magnani & Maria Lillà Montagnani, *Digital Rights Management Systems and Competition – What Developments Within the Much Debated Interface Between Intellectual Property and Competition Law?*, 39 IIC 83 (2008).

[120] On the commodification of copyright, see Julie E. Cohen, *Copyright, Commodification, and Culture: Locating the Public Domain*, *in* THE FUTURE OF THE PUBLIC DOMAIN 121 (Lucie Guibault & P.Bernt Hugenholtz eds. 2006).

with models of online distributions that are alternative to the DRM-based distribution.

The first wave of criticism that digital copyright provoked seems to have led to the assessment of these provisions, dictated by the confused and sometimes incoherent way in which they had been transposed. The difficulties of application that were aroused are well exemplified in the cases analyzed in the following part with regard to the distortions that a faulty interpretation can cause. One has, in substance, seen the consequences, perhaps not initially considered, that paracopyright generates in fields of particular importance such as that of research, innovation, freedom of expression, and competition. At the legislative level, this has been made tangible in the U.S. proposals for bills with titles like Digital Media Consumer's Rights Act,[121] Consumer Technology Bill of Rights;[122] and Consumer, Schools, and Libraries Digital Rights Management Awareness Act,[123] none of which, however, have yet been transformed into law.[124]

Within the European Union, such attempts have concerned specific issues, such as cross-licensing and interoperability between DRM systems, and have resulted in the adoption of soft law at the European level and the establishment of an interoperability authority in France.[125] Though not legislative, a further initiative that is nonetheless worth mentioning is the proposal of a reverse notice and take-down mechanism which could provide a viable solution in both the U.S. and the E.U. jurisdictions.[126] Under such a mechanism, users would be able to give copyright owners notice of their desire to make public the use of technically protected copyrighted works, and rights holders would have the responsibility to take down or otherwise enable these lawful uses.[127]

On the other hand, attention has also shifted to the architecture of DRM systems to verify the possibility of developing systems that might include sophisticated mechanisms capable of simulta-

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[121] H.R. 1201, 109th Cong., 1st Sess. (2005).
[122] H.R.J. Res. 116, 107th Cong. 1st Sess. (2002), S.J. Res. 51, 107th Cong., 1st Sess. (2002).
[123] S. 1621, 108th Cong., 1st Sess. (2003).
[124] On the contrary, several proposals have been made to strengthen exclusive rights that authors or right holders have on creative contents. For a survey of such proposals, see Gasser, *supra* note 9, at 38-42.
[125] *See* European Commission, Recommendation on collective cross-border management of copyright and related rights for legitimate online music services no. 737/2008 of 18 May 2005, O.J. L 276/54; and the previous Commission Staff Working Document, Study on a Community Initiative on the Cross-Border Collective Management of Copyright, 7 July 2005, http://ec.europa.eu/internal_market/copyright/docs/management/study-collectivemgmt_en.pdf.
[126] Jerome H. Reichman, Graeme B. Dinwoodie, & Pamela Samuelson, *A Reverse Notice and Takedown Regime to Enable Public Interest Uses of Technically Protected Copyrighted Works*, 22 BERKELEY TECH. L.J. 981 (2007).
[127] *Id.*

neously respecting privacy and allowing access for permitted uses.[128] This is notwithstanding that it was maintained, in the initial phase of the adoption of DRM, that technology would never be capable of recognizing the beneficiary of an exception or fair use. Moreover, in the case of fair use, there is the further complexity due to the dynamic dimension that this general clause presents, which makes such uses even more difficult to identify *ex ante* than exceptions as set in the Directive.

Finally, the ongoing establishment of different DRM-based distribution systems, together with efforts to raise consciousness of these issues by the academic world and civil society, has led to the realization that DRM systems, however much preferred they are at the legislative level, are – and have to be – in competition with other models of online distribution. This requires constant remodelling on the basis of the needs manifested by those who use on both sides, i.e., those who make content available and those who use it.

IV. JUDICIAL INTERPRETATIONS OF PARACOPYRIGHT

A. *The First Interpretations of the DMCA*

The legislative provisions on digital copyright have raised many issues regarding both interpretation and application. In particular, the U.S. cases that constituted the first judicial interpretations of these provisions have led to numerous questions on the extent of the ban on trafficking and about the creation of a new right alongside those already granted to the right holder: the right to regulate access to digital content.[129] These cases, for the most part, concerned the film industry and, within this context, the subject matter at issue was software for the decryption (DeCSS) of TPMs that was adopted by the major film companies for the distribution of audiovisual products in digital format (DVDs). In these cases, there was the sanctioning of both active

[128] Among the first scholars who have considered the coexistence of DRM systems with different architectures include Bechtold, *supra* note 118, at 603; Bechtold, *supra* note 113, at 364 (theorizing a model capable of reconciling DRM systems and copyright law). *See also* Timothy K. Armstrong, *Digital Rights Management and the Process of Fair Use*, 20 HARV. J. L. & TECH. 49, 53 (2006) (arguing for a system for the "implementation of fair use protections in DRM mechanisms" that "unlock[s] the process of fair use, while still providing copyright owners with technological protections against infringers." Armstrong believes it is possible "by altering the design philosophy of DRM technology to focus more on the processes by which fair uses occur and less on attempting to replicate the substantive law of fair use in machine-administrable form"). Other notable initiatives are mentioned in the following documents: *Safenet*, *Recommendation for DRM Usage* (2006), http://www.safenet-inc.com/library/10/Recommendations_for_DRM_Usage.pdf; and EGLG, *Copyright Law and Consumer Protection* (2005), http://www.ivir.nl/publications/other/copyrightlawconsumerprotection.pdf.

[129] *See, e.g.*, Jane C. Ginsburg, *From Having Copies to Experiencing Works: The Development of an Access Right in U.S. Copyright Law*, 50 J. COPYRIGHT SOC'Y U.S.A. 113 (2003).

behaviors (regarding the creation and production of technology to decode protected content) and more passive behaviors, such as the mere indication of websites, as well as the adoptions on one's website, of links to other sites from which decrypting technology could be downloaded.

It is interesting to note how, analogously to the cases looked at previously, the battle conducted by Universal Studios was not concentrated against those who, in using the software in question circumvented the technological protection and enjoyed the decrypted content. Rather, it was against those who produced, and made available in various ways, the software to carry out such operations, even by means of a hyperlink. However, in these decisions, the *Sony-Betamax* case, though invoked, was not applied, due to a more rigid interpretation of the standard or to the dissimilarity of the factual situations underpinning the *Sony-Betamax* decision and the case under analysis.[130]

The first case involved, *RealNetworks v. Streambox*,[131] does not concern the DeCSS technology, but the possibility to transform files distributed by RealNetworks in its proprietary format (usable, therefore, only by RealPlayer) into other formats compatible with players produced by other companies. This was achieved by means of specific software produced by Streambox.[132] The defendant offered two particular applications: Streambox VCR and Ripper. The Streambox VCR, which functioned like RealPlayer and circumvented the TPMs of RealNetworks' files, made it possible to use audio and video content thus formatted, even without having purchased the RealPlayer (which permitted use only in *streaming* mode).[133] Ripper was, on the other hand, able to transform RealNetworks' files into other formats.[134] The court did not express any doubts about the unlawfulness of the first software within the meaning of subsections 1202(a)(1) and (2) of the DMCA, or about the inapplicability of the fair use doctrine.[135] The question that was raised was whether the second software might present substantial lawful uses.[136] In particular, given the possibility of transforming files into formats that differed from those of RealNetworks', the court held that Ripper presented significant com-

[130] Samuelson, *supra* note 23, at 1858-62 (arguing that in the cases related to the DeCSS technology, the *Sony-Betamax* criterium was not applied in that the introduction of DMCA supplanted the safe harbor that was introduced by Judge Stevenson for those technologies capable of substantial non-infringing uses).
[131] RealNetworks, Inc. v. Streambox, Inc., 2000 WL 127311 (W.D. Wash. Jan. 18, 2000).
[132] *Id.* at 4.
[133] *Id.* at 4-5.
[134] *Id.* at 5-6.
[135] Giving little value to the claim that Streambox's software would have offered the possibility to benefit from the fair use of time-shifting, which is not available for audiovisual materials that are technologically protected). *Id.*
[136] *Id.* at 10.

mercial uses, and, as such, it was conforming to section 1202(b) of the DMCA.[137] Working on the equation of "substantial permissible uses" to the "significant commercial uses," the *Sony-Betamax* principle was reintroduced and was not disregarded but rather interpreted in a more restrictive manner.[138] The last point concerned the effectiveness of TPMs, put in doubt by the fact that Streambox had managed to elude them. However, the court held that the effectiveness of the protection should not coincide with the material impossibility to elude them, but rather, with the function of prevention for which they are adopted.[139]

The cases relating to DeCSS technology are more problematic than the Streambox case, as they stressed, even more clearly, the paradox that a strict interpretation of the DMCA may create. In *Universal City Studios v. Reimerdes*[140] and *Universal Studios v. Corley*[141] the defendants were prohibited from uploading software for decrypting CSS protection measures (used to protect DVDs) to their websites. In the same way, links that Reimerdes had indicated in its site to webpages containing this kind of software were considered to be in violation of the anti-trafficking provisions.[142] In particular, in the first of the cases mentioned, it was held that, although it was possible that DeCSS software could be used to elude protection measures and to make use of protected content in a hypothetical situation that might come under fair use, the DMCA provides for the fact that the mere circumvention of TPMs constitutes violation of copyright.[143] Furthermore, in the case in question, fair use, specifically the private copy, remained possible, as the films were always available in an analog version.[144] In both cases, the courts did not admit the defense based on the amendment and on the freedom of expression, which would also encompass the software, since it can be considered language.[145] Based on these arguments, which are of less interest to us here, the uploading of software to a website would correspond to the publication of a "speech," something that could not be inhibited within the meaning of the DMCA. However, the courts held that even though software is a means of expression, it could be subject

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[137] *Id.*
[138] Neil W. Netanel, *From the Dead Sea Scrolls to the Digital Millennium Act: Recent Developments in Copyright Law*, 9 TEX. INTELL. PROP. L. J. 19, 21 (2000).
[139] The effectiveness of the technological measures of protection in Streambox and Corley are discussed in Michel J. Madison, *Right of Access and the Shape of the Internet*, 44 B.C. L. REV. 433, 478 (2003) (providing a thorough analysis of such cases).
[140] Universal City Studios v. Reimerdes, 111 F. Supp. 2d 294 (S.D.N.Y. 2000).
[141] Universal Studios v. Corley, 273 F.3d 429 (2d Cir. 2001). For a detailed analysis of this case, see Albert Sieber, *The Constitutionality of the DMCA Explored:* Universal City Studios, Inc. v. Corley *&* United States v. Elcom Ltd., 18 BERKELEY TECH. L.J. 7, 14 (2003).
[142] *Reimerdes*, 111 F. Supp. 2d at 316-17.
[143] *Id.* at 321-22.
[144] *Id.* at 337.
[145] *Id.* at 326.

to limitations imposed not in relation to content (and therefore did not limit the freedom of expression of the individual who had written the software), yet dictated by equally important interests such as the safeguarding of copyright.[146]

Lastly, in *United States v. Elcom Ltd.*,[147] the defendant and one of its employees, Dimitry Sklyarov, were sanctioned for having produced and commercialized software that enabled the removal of the technological protection applied to books in electronic format (e-books) by Adobe System. Similarly, in this case, *Elcom* tried to follow, with little success, the route of the unconstitutionality of the DMCA.[148] It was held, in fact, that even though freedom of expression is a constitutional right, limitations that can be applied within the meaning of the DMCA are content-neutral and do not limit the freedom of expression of those who write and commercialize software.[149] Again, *Elcom* highlights the articulate interpretations that the first decisions made in the application of the DMCA. Indeed, the court found that the DMCA does not eliminate fair use since the ban on the production and dissemination of anti-copy technology is not absolute, unlike the ban on the production and commercialization of technology to elude access, which is banned.[150] Therefore, from the point of view of the court, the possibility of fair use remained in the case of the elusion of anti-copy measures; it was simply made more difficult, as well as limited, by the adoption of TPMs.

1. Recent Interpretations of the DMCA

Although a strong current of public opinion is critical of the excessive protection that has been granted to digital works, and despite the still difficult interpretation of the DMCA provisions, a rethinking of these provisions with the aim of bringing back the original function for which they were adopted, nevertheless, seems to be underway. In essence, one is witnessing the jurisprudential attempt to prevent the DMCA, intended to limit violations of copyright, from being used to distort competition when applied not so much to digital content as to works of a technical-functional nature, such as hardware and software platforms.

Amongst the last line of DMCA cases, it is worth mentioning *Chamberlain Group v. Skylink Technologies, Inc.*,[151] where the defen-

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[146] *Id.* at 327. *See also* Ginsburg, *supra* note 57, at 5.
[147] United States v. Elcom Ltd., 203 F. Supp. 2d 1111 (N.C. Cal. 2002). A descriptive analysis of the case is presented in Sieber, *supra* note 141, at 25.
[148] *Elcom*, 203 F. Supp. 2d at 1125.
[149] *Id.* at 1127.
[150] *Id.* at 1132.
[151] Chamberlain Group v. Skylink Tech., Inc., 381 F.3d 1178 (Fed. Cir. 2004). For a first comment on the case, see Zohar Efroni, *Towards a Doctrine of "Fair Access" in Copyright: The Federal Circuit's Accord*, 46 IDEA 99, 99 (2005).

dant was accused of violating Chamberlain's copyright on the software that regulates the opening mechanism for the electric gates it produces. In fact, Skylink's universal remote control can open the latest generation of Chamberlain gates, which were developed to be activated only by means of the owner's own remote control device, thanks to a DRM system with TPMs. Chamberlain complained, therefore, that the production and sale of the remote control systems constituted a violation of the DMCA, in particular, of the ban on trafficking of technologies that have the scope of eluding the technological protection that the right holder placed in the software of its own opening system.[152] The circumvention of this system of protection was, according to the plaintiff, the only significant use of the universal remote control devices produced by Skylink.[153] Among the various arguments put forth by the Federal Circuit, the most important was that the elusion of TPMs would implicate the responsibility of the person who carries out such acts only if the elusion activity was aimed at committing a violation of copyright on the work protected.[154] So, in the case of encrypted DVDs, once protection had been circumvented, a violation of copyright on the work was committed (consisting in the unauthorized reproduction of the work),[155] whereas in the case of electronic opening systems, once technological protection has been eluded, one does not witness the violation of Chamberlain's copyright on the opening software. Of equal importance is the statement, to which reference was made, that the DMCA must be used to limit piracy and not to limit market competition in the

[152] In further detail, this product line is equipped with a special safety system, guaranteed by the use of a specific software, copyrighted and built in to the units receiving signals from the remote control, and activates the door after receiving the signal transmitted by the selfsame remote control. *Chamberlain*, 381 F.3d at 1183-1185. The peculiarity of the garage openers' "GO" is that they are equipped with a rolling system according to which the reception system is provided with a vast memory of opening signals. *Id.* When a remote control is activated, this unit never sends the same signal, but always a different one in order to avert the risk that the signal be recorded by wrongdoers planning to open the garage doors without the owner's consent (this would be possible if the signal were always the same). *Id.* Once all code combinations stored in the unit memory have been used, the reception software performs the "unpacking" and "reassembling" operations of the various codes, in order to be able to use the rolling system again. *Id.* Skylink, instead, produced universal electronic remote controls which were able to open a variable number of electronic garage doors, according to the model. *Id.* Amongst the models produced, Model 39 was able to open, amongst others, also the latest generation of opening devices manufactured by Chamberlain. *Id.*

[153] *Id.* at 1186.

[154] *Id.* at 1203-04.

[155] The distinction between DRM systems protecting entertainment content, and DRM systems protecting functional works – and the assertion that in the latter case copyright infringement could not be alleged – has been recently criticized. *See* Burk, *supra* note 3. Burk argues that even in the traditional cases of circumvention of DRM systems protecting entertainment content, copyright infringement should not take place. *Id.* Even in those cases, in fact, the circumvented DRM systems are not adopted to indeed protect the entertainment contents, rather to limit compatibility between different formats of the same content, or between a specific format and its appliances.

business of accessories.[156] Consequently, the scope of copyright protection must not be extended in an improper manner and, above all, these provisions must not be used to avoid the application of antitrust law.

In *Lexmark*, the Court of Appeals for the Sixth Circuit retracted the injunction imposed against the respondent for having produced and commercialized microchips that rendered non-proprietary cartridges compatible with Lexmark printers.[157] The line of reasoning set out by the Court of Appeals was further articulated: starting from the doubt surrounding the protectability as copyright subject matter of the software that Lexmark installed in the printer by reason of its length, the court maintained that where the software was protected by copyright, the duplication made by the respondent would have the unique scope of producing a key that permitted compatibility between third-party products and the printer and, in as much, would not infringe the exclusive right.[158] Unlawful activity is, indeed, that which has the scope of circumventing technological protection (or favoring circumvention) and not those activities that have the aim of extending compatibility between products.[159]

Lastly, in *Storage Tech*, the Court of Appeals for the Federal Circuit again confirmed the freedom of the respondent to correct the Storage Tech software to make its use possible by legitimate purchasers.[160] *Chamberlain* established that the DMCA cannot be used with the scope of damaging consumers and limiting competition in a market linked to that of the protected work, which, in the case in question, was the market for repair and maintenance services. Therefore, according to the court's line of reasoning, not only did the respondent already benefit from fair use that allowed him to repair or carry out maintenance to the protected software, but he also complied with the DMCA's prohibition on the elusion of TPMs.[161]

In order to affirm that one is faced with a DMCA infringement, it seems necessary that there be a connection between access and content, a connection constituted by the fact that the elusion of technological protection is that which in reality allows for the violation of copyright. Following circumvention, if no violation of copyright laws is committed (because a work that is technologically protected does not benefit from copyright protection,

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[156] *Id.* at 1201.
[157] Lexmark Int'l., Inc. v. Static Control Components, Inc., 387 F.3d 522 (6th Cir. 2004).
[158] *Id.* at 542.
[159] *Id.* at 549.
[160] Storage Tech. Corp. v. Custom Hardware Eng'g & Consulting Inc, 421 F.3d 1307 (Fed. Cir. 2005).
[161] *Id.* at 1319.

because it belongs to the public domain, or because the use that one intends constitutes fair use), then a teleological interpretation of DMCA requires that one not recognize any unlawful act, not even when faced with the elusion of efficient TPMs.[162]

B. *Directive 2001/29/EC*

As aforementioned, in the European Union, the WIPO Treaties have been implemented through regional legislation with the adoption of the Directive, the interpretation and implementation of which still raises many doubts. The European Union provides a procedure to inquire into the problems that arise from the application of a directive in member states whenever the European provisions are vague (and the national law merely reproduces the community wording). The possibility of referral to the European Court of Justice ("ECJ") has not yet been used with regard to the Directive, as has been done, for example, in relation to Directive 96/9/EC on database protection, which is an equally awkward piece of legislation. Since the referral mechanism has not been exploited, there is no European case law on the issue of DRM systems or TPMs. However, a few cases have been raised and decided by national courts.[163] In the following paragraph, therefore, the Italian cases applying the abovementioned Italian implementation of the Directive are analyzed.

1. A Glance at the Italian Paracopyright Cases

The Italian courts of Trento and Bolzano have dealt with the issue of DRM systems and TPMs. Interestingly enough, these decisions mirror the U.S. decisions analyzed above, at least for the assessment of competition in the after-market that the authorities carried out.

The first line of decisions involved the Sony Playstation and the manufacture and commercialization of chip technologies capable of enlarging the Playstation's uses by the owners.[164] In 2003,

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[162] This is confirmed by the provision establishing that reverse engineering is authorized under fair use, even in the case in which anti-access technological measures are adopted. *See* Samuelson, *supra* note 23, at 1860.

[163] For a survey of the national cases, see Commission of the European Communities, Report to the Council, the European Parliament and the Economic and Social Committee on the application of Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society (2007), *available at* http://www.europarl.europa.eu/meetdocs/2004_2009/documents/sec/com_sec(2007)1556_/COM_SEC(2007)1556_en.pdf.

[164] Trib. Bolzano, sez. pen., 20 dec. 2005, n. 20/12/2005, *available at* http://www.jus.unitn.it/users/caso/DRM/Giurisprudenza/It/Sentenza%20Bolzano%2020_12_05.htm;Trib. Bolzano, sez. pen., 28 jan. 2005, n. 138/05, *available at* http://www.jus.unitn.it/users/caso/DRM/Giurisprudenza/It/Sentenza%20Bolzano%2031_03_05.htm; and Trib. Bolzano, 31 dec. 2003, *available at* http://www.jus.unitn.it/users/caso/DRM/Giurisprudenza/It/TribBz03.html (a summary in English of the decision is available at

the Court of Bolzano rejected Sony's challenges in favor of the defendant who was accused of having marketed chips capable of enabling Sony's Playstations to be used with games acquired outside the European market.[165] The court held that article 171-*ter* l.a., which prohibits dealing in circumvention devices under article 6(2) of the Directive, does not apply to such chips, which, on the contrary, were offered to restore the consoles' original functionality by removing the technological restrictions. The decision asserted that the use of the restrictions was not to enable the protection of copyright but to foster monopolistic standardization.[166] The court implied that this was disproportionably detrimental to consumers.[167] Furthermore, the court held that the use of such restrictive technology conflicts with the (physical) property in the game consoles, and the chip enables the owner to better exploit her device to the extent of using it as a computer.[168] The judgment did not specifically assess the legislative wording, but predominantly conducted a rather wide-ranging balancing of interests, which made it a highly controversial decision.[169]

The opposite outcome was reached within the same court by a different judge in 2005.[170] The reasoning in that case was grounded on the fact that the production and commercialization of the chips did not aim to enable lawful uses; rather, such technologies were used to make the Sony Playstation 2 compatible with pirated games or games imported from different geographical markets.[171] However, a few months later the same court did not follow the previous decision but instead brought up the principles stated in the decision adopted in 2003.[172] Again, the court maintained that trafficking chips enabling the device for further uses and widening its compatibility with non-proprietary games did not constitute infringement of the Italian author's right law since the preeminent use of this technology is not to infringe copyright.[173]

The second line of decisions that raised concern for the legal reasoning underpinning the court's outcome has been adopted by the Court of Trento and deals with the "Splitty" systems used to enable more than one television to receive the programs transmit-

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http://ipjustice.org/media/release20040112_en.shtml).
[165] Trib. Bolzano, 31 dec. 2003, *supra* note 164, at 5 (version on file with the author).
[166] *Id.* at 4.
[167] *Id.*
[168] *Id.* at 5.
[169] *See* Marco Ricolfi, *Videogiochi che passione! Consoles proprietarie, mod-chips e norme antielusione nella prima giurisprudenza italiana*, Giur. It. 1454 (2002).
[170] Trib. Bolzano, sez. pen., 28 gennaio. 2005, n. 138/05, at 8-9 (version on file with the author).
[171] *Id.* at 7.
[172] Trib. Bolzano, sez. pen., 20 dicembre. 2005, n. 20/12/2005, at 5-6 (version on file with the author).
[173] *Id.* at 6-7.

ted by a satellite broadcaster, called Sky.[174] While Sky contractually requires that its transmissions be conveyed through its smart card to a unique decoder, which enables the connected television to show them, the Splitty system determines that more than one television connected to the same decoder can show programs broadcast by Sky.[175] Even in this case, the court of Trento rejected Sky's claims on the grounds that the Splitty systems were capable of lawful uses (such as being adopted when a collective contract between a condominium's members and Sky is signed).[176]

V. THE MARKET OF ONLINE DISTRIBUTION

In spite of DRM systems being the model of online distribution chosen *ex ante* by the legislature in the implementation of the more generic WIPO Treaties, with regard to the market of online distribution, we are currently witnessing a twofold phenomenon. On one hand, there is a proliferation of DRM systems or rather, their adoption in business models that present different degrees of openness towards the "purchasers" of the content. Although this has not yet resulted in a system that is capable, as some have theorized,[177] of taking into consideration public domain and fair use, it does say something about the fact that market forces and competitive pressure may shape online distribution even more than the law.

On the other hand, there is also a flourishing of distribution systems that are not DRM-based and instead simply rely on the law as it has always been for copyrighted works. Even in the case of such systems, the license may present various degrees of openness towards the users, for example, according to the price paid. The users' compliance does not rely on technology but on the law that confers on the right holder the exclusive right, and, in addition on the agreement under which the latter permits other parties to access and use a protected work. In the following sections, a categorization of such systems is sought.

A. *"Proprietary Distribution" Versus "Open Distribution"*

A first categorization of the current distribution systems requires the terms "proprietary" and "open distribution" to be defined. In this context, proprietary distribution encompasses two

[174] Trib. Trento, 3 maggio 2004, Foro It. 2004, II, 375. Subsequently this decision was made void for a formal defect by the Italian Corte di Cassazione (Court of Last Appeal in civil and criminal matters) (Cass., sez. III, 12 ottobre 2004, Foro It. I 2005, II, 260) and referred to a lower court to have the case assessed in the merits. However, such a decision has never been followed.
[175] Trib. Trento, 3 maggio 2004, at 378.
[176] *Id.* at 379.
[177] *See* Armstrong, *supra* note 128, at 99-107.

different cases which may, but do not always, coincide. The first is distribution relying on the default copyright rule of "all rights reserved," which, though being the traditional licensing model in the analog realm, does not take into account the digital environment's specificities. Second is distribution models based on a proprietary DRM technology, where the distributor also owns the exclusive rights on the final DRM solution and implements a business strategy which tries to segment the market. The DRM system adopted makes the distributed content visible only through the devices encompassing the compatible rendering application (this is the well-known iTunes strategy). Although a proprietary DRM-based distribution tends to apply a proprietary licensing scheme, this is not necessarily the case. Digital Media Shops ("DMS") on one side, and superdistribution on the other, exemplify the various licensing regimes that DRM systems can implement.

Open distribution refers first to those systems which, regardless of being DRM-based, implement a licensing regime more flexible and adjustable to the Internet's specificities (such as the copyleft licenses), and second to those models of distribution which, even though DRM-based, adopt open-standard solutions. By doing this, the compatibility is enlarged instead of limited. These two cases, too, tend to overlap. However, as we will see, this is not a rigid rule.

Besides open and proprietary distribution systems as defined above, the technological feature (either proprietary or open) and the licensing regime (either proprietary or open) are differently combined and give rise to several models that are herein named "hybrids" of online distribution.

Proprietary DRM	PROPRIETARY DISTRIBUTION *DMS*	Propr. DRM HYBRID Open licensing
Non-proprietary DRM	Non-propr. DRM HYBRID Propr. licensing	OPEN DISTRIBUTION *Superdistribution*
	Proprietary licensing	Open licensing

Figure 1: From proprietary distribution to open distribution

1. Digital Media Shops

The distribution model of DMSs replicates on the Internet the typical methods of distribution adopted offline. The differences lie in the fact that on a DMS site the users purchase digital content, instead of content on a carrier, and that such content is

technologically protected. This implies that, unlike the case of the purchase of works in tangible version, online distribution presents a more diffused presence and enhanced control to the content owner on the uses permitted to the licensees. As a matter of fact, the DRM technology may *ex ante* prevent any use not authorized by the right holder who is entitled by law to restrict the scope of the permitted uses.

When the DMS adopts a proprietary DRM technology, thereby limiting the compatibility between formats and devices and licensing the digital content under an "all rights reserved" regime, the system implemented constitutes a model of proprietary distribution from both the technological and licensing perspectives. However, over the years, DMSs have varied their offer to encompass elements of open distribution at both the technological and licensing levels. It is well known, for example, that iTunes's policy towards the users has been increasingly friendly, in order to augment the uses permitted on the file acquired[178] to the extent of going outside the boundaries of strict proprietary distribution by currently distributing content that is DRM-free.[179]

With this in mind, we can analyze the typical means of DRM-supported distribution implemented by DMSs, which were initially limited to subscription and à-la-carte downloads and have been recently augmented with the introduction of music "to rent."

a. Downloads on Payment

The success of DMSs arose from the spread of à-la-carte download services. As is widely known, the success of iTunes is linked to the offer of pay-per-download music files, whereas the previous DMSs, Pressplay and MusicNet, made services available only by subscription. Moreover, iTunes was the first to offer a wide selection of single musical works, including major popular hits. It should be mentioned though, that the iTunes business is – or at least was initially – selling iPod players.[180] Connect followed

[178] For a description of the distribution model initially implemented by iTunes, see Berkman Center for Internet and Society at Harvard Law School, *iTunes: How Copyright, Contract, and Technology Shape the Business of Digital Media – A Case Study* 8-12 (2004), http://cyber.law.harvard.edu/media/uploads/81/iTunesWhitePaper0604.pdf (prepared by the Digital Media Project team).

[179] Michael A. Einhorn, *Gorillas in our Midst: Searching for King Kong in the Music Jungle*, 55 J. COPYRIGHT SOC'Y 145, 155 (2007), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1030886.

[180] *Id.* at 10. See also Berkman Center, *supra* note 178, at 45,

> The increased protection that Apple's DRM is able to enjoy as a consequence of the DMCA and the EUCD [Directive] implementations allows today for the deployment of a market strategy based on excluding competition through restricted interoperability. Assuming for the moment that iTunes Store's main purpose is to generate profits in iPod sales (even if operating at a loss), restricting interoperability is a sound business decision. In making this decision, Apple has to balance the trade-off between the possible increase in

the iTunes example,[181] having also been designed to increase the sales of players and USB pens produced by Sony.[182]

Both of these DMSs use proprietary DRMs that impede compatibility with devices that are not from the same producer. However, DMSs that do not try to link their service to a specific proprietary device but implement business models that enlarge it by using a DRM technology, which is shared and implemented by several producers of devices, also populate the scenario.

b. Subscription

Examples of subscription systems are those implemented by Napster 2.0 and Rhapsody, which permit access to the entire catalog upon payment of a monthly sum. However, the use that can

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> profits derived from expanding the iTunes Store's consumer base, and removing the strategic advantage the iPod has by way of its exclusive relationship to the iTunes service. Making iTMS songs exclusively compatible with iPod allows for the generation of noticeable entry barriers in the market of portable players and some barriers in the market of music downloading services (iTMS competitors).

[181] It is worth verifying under which conditions Connect, which was much less well known than iTunes, enabled the use of the files acquired on its website. In the following parts of the EULA the permitted uses are listed:

> 3.1.3 Playing and Transferring CONNECT Content. Once you download CONNECT Content to a Registered PC, you may play or view that CONNECT Content an unlimited number of times on that Registered PC. You may also transfer the CONNECT Content from your CONNECT Account to your Registered Portable Devices that are within your applicable Permissible Device Number for an applicable Permissible Transfer Number of times. You may not transfer, copy or export CONNECT Content from one device to another, or to any media of any kind without maintaining the applicable digital rights management solution. . .
>
> 3.2.2 Streams. You may play an unlimited number of streams of Streamed Content on your Registered PC. You may not capture, copy or download any Streamed Content. . . . .
>
> 3.2.3 Burning CONNECT Content to CD. You may "burn" up to seven (7) Redbook (uncompressed) CDs of any unique playlist and you may "burn" up to five (5) ATRAC CDs of any single track . . . All CDs must be recorded to either blank recordable CD-R compact discs or blank recordable CD-RW compact disc, (i.e., a physical, non-interactive record configuration . . .). *Once you have burned CONNECT Content to a CD, you agree not to copy, distribute, or transfer the track from that CD to any other media or device. Once you have transferred CONNECT Content to a Registered Portable Device, you agree not to copy, distribute, or transfer it from that Registered Portable Device to any other media or device.* . . .
>
> 7.5 Restriction on Use Related to the Service. . . You may not attempt (or support others' attempts) to circumvent, reverse engineer, decrypt, decompile, disassemble, or otherwise alter, tamper or interfere with any aspect of the Service. You may not distribute exchange, modify, sell or re-sell, or transmit to any other person any part of the Service, including, but not limited to, any text, images, audio or video, for any business, commercial or public purpose. *You agree not to copy, sell, distribute or otherwise transfer CONNECT Content from your Registered PC or Registered Portable Device to any unregistered audio record or playback device.*

Connect Music Store, Terms of Service, http://musicstore.connect.com/custom/promos/tos.html (emphasis added) (last visited Nov. 20, 2008).

[182] The Connect service is currently closed. Connect Music Store, http://musicstore.connect.com/index.html (last visited Nov. 20, 2008). However, the website still allows users to authorize new devices and computers to play back their purchased ATRAC content. *Id.*

be made of the downloaded files is extremely limited, at least until further fees are paid to be able to transfer the file to a portable player, to copy it onto a CD, or to save a copy on the hard disk where it was initially downloaded, after the subscription expires.[183]

In the field of cinematographic works and video, Starz was prompt to offer the possibility to download recent films directly onto computers, once the user paid a monthly subscription up-front. The user "is granted a personal, non-exclusive, non-assignable and non-transferable limited license to use the site and access content, that allows one, nevertheless, to download the film onto three different PCs".[184] Starz, too, uses a proprietary DRM technology: that of Real Network, a company which occupies a leading role in the online distribution of films. In the realm of music, the leading role belongs to Microsoft's and Apple's DRM systems.

c. Rented Music

Napster launched one of the first rented music services, "Napster To Go", based on a subscription (i.e., payment of a monthly sum against which the user can download as many pieces of music as desired), but defined it as "music for rent" since it offers the user the possibility to use the files downloaded and transfer them to a compatible player as long as the subscription is valid.[185] The software, Janus, checks the validity of the subscription

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[183] Description of Subscription Service, *available at* http://www.napster.com/terms.html, provides,

> *Usage Rules – Additions*. A "Stream" is a Track that you play directly from and while you are logged on to the Service. You may play as many Streams as you like while your subscription is current. You may not attempt (or encourage others) to capture, copy, or download a streamed Track. Napster will count the number of times that you stream each Track for royalty accounting and analysis purposes. A "Download" is a Track that you may save to the hard drive of your personal computer and play back as many times as you want for so long as your subscription is current. You may make an unlimited number of Downloads while your subscription is current. You may copy each Download to up to two additional personal computers that you own (i.e. a total of 3 copies). If you wish to burn Downloads to CDs or transfer them to compatible portable devices (other than using the "Napster To Go" Service described below) you will need to pay for them as Purchased Tracks. You may not share Downloads with anyone else. Napster automatically renews your rights to all of your Downloads at the beginning of each Subscription Month (as defined below) so long as your subscription remains current. This means that in order to play any Download after the end of a Subscription Month (as defined below), you must log on to the Service so that Napster can renew your rights for those Tracks. The Client will count the number of times that you play a Download, including while you are offline, for royalty accounting and analysis purposes . . . .

[184] Starz, http://www.starz.com (last visited Nov. 20, 2008).

[185] The description of the terms of use of the "Napster To Go" service is available on the website. Napster, Terms and Conditions, June 30, 2006, http://www.napster.com/terms.html,

> If you register for the "Napster To Go" tier, you will be able to transfer your Downloads an unlimited amount of times to up to a maximum of three (3) compatible portable devices for as long as your "Napster To Go" membership is

in relation to the files downloaded and, when the subscription expires, cancels the files. It is likely that Microsoft invented this solution to promote the continued use of its own DRM technology, not only in Media Player but also in compatible players (including those of Samsung, Toshiba, Dell, Creative, and all those which use the Windows XP operating system).[186]

2. Superdistribution

The superdistribution model has been developed with the aim of using P2P networks for the legitimate exchange of authorized content.[187] In other words, within the same networks that permit the sharing of digital content in violation of copyright, some encrypted content is introduced and sharing is permitted on the conditions established by the rights holder. The incentive provided for users of the P2P networks to exchange authorized content differs depending on the "P2P store" chosen, but it generally is some form of recompense (either monetary or often in the form of a point-collection system) whereby credit is earned whenever authorized files, rather than illegal files, are shared. The P2P stores are the typical expression of this form of distribution and, in one sense, make use of the advantages and the capillary nature of the P2P networks, but in another sense, by the adoption of DRM systems, they also limit piracy on the Internet.

One of the first examples of superdistribution was Altnet, initially developed to permit the embedding of encrypted files in the KaZaA and Grokster networks, where users of these networks found these files identified with an icon to indicate that the file was from Altnet – this certified the circulation in a legal way – and allowed the use of these files on payment of a sum determined by the content holder.[188] In substance, Altnet incentivized the exchange of legal files on P2P networks (no longer in Grokster)[189] at

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> current. For royalty accounting and analysis purposes, Napster will track the Downloads that you so transfer and the number of times that you play Downloads on such devices. Napster also automatically renews your rights to any Downloads stored on your portable devices at the beginning of each Subscription Month. Thus, in order to continue to play such Downloads on that portable device, you will need to dock your portable device (i.e., connect to the PC) and log onto Napster at the beginning of each Subscription Month.

[186] The players compatible with Napster's DRM (which is Microsoft's) are listed on its website. Napster, Compatible MP3 Players and Phones, http://www.napster.com/compatible_devices.html (last visited Oct. 16, 2008).

[187] The term "superdistribution" applied to creative works means a phenomenon of "multitiered distribution that starts with the owner of the content and enables entities at each step to redistribute content under their own business terms." Bill Rosenblatt, *Learning from P2P: Evolution of Business Models for Online Content*, INDICARE (Dec. 10, 2004), http://www.indicare.org/tiki-read_article.php?articleId=61.

[188] William W. Fisher, Urs Gasser, Derek Slater, Meg Smith & John Palfrey, *Comments on the OECD Working Party on Information Economy Draft Report "Digital Broadband Content: Music"*, Berkman Center for Internet & Society at Harvard Law School 6 (Jan. 10, 2005).

[189] Grokster's website was closed after the "United States Supreme Court unanimously con-

the price and according to the license methods decided by the content holder. Users who shared these files accumulated points that could then be used to claim prizes.[190]

Another example of superdistribution is Weed which, at least initially, had a diffusion that was even more widespread than Altnet.[191] Indeed, while Altnet circulated only on the KaZaA and Grokster networks, files from Weed could circulate freely in almost any file-sharing network. Again here, the encrypted file could be decrypted only following payment and could be used only under the conditions imposed by the content owner.[192] Generally, the file could be initially played a number of times without paying any fee; subsequently, payment would be required, after which the file could be transferred, for example, to a limited number of players and one to three computers. In other words, the system of download on payment was applied to the P2P networks. At the same time, it allowed a person to exchange files and to become a distributor (of the files purchased) based on a mechanism reminiscent of viral marketing, which subsequently allowed the distribution of what had been paid for between the author or music label and whoever has put the file into the peer-to-peer network. While the first right holder continued to receive a percentage of the sum paid for each download (whether carried out a la carte or within a file-sharing network), whoever uploaded the file to the Internet received his own percentage for a number of downloads not exceeding three. After that it would be the next purchaser who proceeded to the sharing who would participate in the distribution of earnings, together with the first right holder and Weed, which always received a fixed percentage for each download carried out.[193]

Some DMSs, such as Napster, have also started to offer, alongside their traditional services, the sharing of acquired files with other subscribers of the same service,[194] just as sites dedicated

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firmed that using this service to trade copyrighted material is illegal . . . [*t*]here are legal services for downloading music and movies. This service is not one of them." Grokster, http://www.grokster.com (last visited Oct. 16, 2008). Instead, as far as KaZaA is concerned, it has been converted into an ad-supported peer-to-peer network. KaZaA homepage, http://www.kazaa.com/us/index.htm (last visited Nov. 20, 2008).

[190] Fisher, *supra* note 188, at 6.

[191] *See* Weed, http://www.weedshare.net (last visited Nov. 20, 2008).

[192] Fisher, *supra* note 188, at 6.

[193] When you buy a file, money is shared with a few different people: the artist or rightsholder, the people who helped share the file, and the Weed service. Specifically, the artist always receives 50% of each sale, and the rest goes to those who helped distribute the file. You get 20%, the person who shared the file with you gets 10%, and the person who shared the file with that person gets 5% of the sale price. Weed receives the final 15% for service and software maintenance costs.

QueryElf, http://www.queryelf.com/view_more/89492/How-big-are-Weed-files.html (last visited Dec. 1, 2008).

[194] "Napster Share" is offered to registered users who are willing to upload their files

to superdistribution have added services for downloads on payment of subscription.[195]

3. The "Hybrids" of Online Distribution

It is so far clear that a characteristic feature of the market for online distribution is the simultaneous coexistence of different systems of distribution, only some of which are mentioned here, within which it is difficult to draw a line between proprietary and open distribution as previously defined. On the contrary, there has been a multiplication of mixed methods of distribution in which, in a way, protection technologies typical of DRM systems are applied to content distributed with copyleft licenses to obtain the respect of the license conditions defined by the content holder.[196] In another way, however, right holders – who have traditionally used typically proprietary license systems – are starting to move towards licensing systems, abandoning the "all rights reserved" default rule, adopting both schemes in parallel, or adopting a mix of the two.

For example, the British Broadcasting Corporation initially launched "BBC Open Source" for the release, with open licenses, of all its software for the distribution of digital audio and video content.[197] Subsequently, in an April 2005, partnership with the British Film Institute, Channel 4, and Open University, BBC opened its archives, rendering them accessible on the conditions indicated in the Creative Archive License.[198] This license grants the

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> in the legalized peer-to-peer network governed by Napster. "[Y]ou can earn money while you share your favorite Napster music. Simply sign-up as a Napster affiliate, add a NapsterLink or Napster ad banner to your web page, social networking page or blog and wait for your check. If someone is directed to Napster from your NapsterLink or Napster Ad banner you will receive: 5% of all song and album purchases made by that user for the first 3 months of their membership. The more they buy the more money you make. $10 if that person signs up for a Napster or Napster To Go subscription within 3 months of registering. Participation in the affiliate program is free.

Napster, FAQ, http://www.napster.com/faq/usingnapsterlinks.html (last visited Oct. 22, 2008).

[195] Wippit, http://www.wippit.com/default.aspx (last visited Oct. 16, 2008).

[196] Copyleft is a form of licensing and may be used to modify copyrights for works such as computer software, documents, music, and art. In general, copyright law allows an author to prohibit others from reproducing, adapting, or distributing copies of the author's work. In contrast, an author may, through a copyleft licensing scheme, give every person who receives a copy of a work permission to reproduce, adapt or distribute the work as long as any resulting copies or adaptations are also bound by the same copyleft licensing scheme.

Wikipedia, Copyleft, http://en.wikipedia.org/wiki/Copyleft (last visited Dec. 25, 2008)

[197] Among the "freed" software programs, Dirac is a state of the art video codec that provides general-purpose video compression and decompression tools, capable of supporting a variety of players on different platforms. BBC, Open Source, Dirac, http://www.bbc.co.uk/opensource/projects/dirac/ (last visited Oct. 17, 2008).

[198] PR: Creative Archive Licence Group launches – BBC, Channel 4, British Film Institute and OU issue call to action for the Creative Archive Licence, http://creativearchive.bbc.co.uk/mt/mt-tb.cgi?137 (last visited Dec. 10, 2008).

opportunity to use and to distribute content saved in BBC's archives, provided that the use made is only for non-commercial purposes, that no advantage is gained from the institutional origin of the material, and that the works obtained under license, as for derivative works, are distributed under the same conditions.[199] Notwithstanding the adoption of an open license, BBC has nonetheless decided to limit the use of such content exclusively to the United Kingdom. This is made possible by the adoption of a DRM system that permits the geographic localization of the user's IP address and the embedding of a bar code that makes it possible to keep track of the material distributed.[200] Such technology is non-proprietary in that all computers geographically authorized can access the content. In a similar manner the "Interactive Media Player" service, also offered by BBC, allows British users who pay the TV license fee to download programs that they have not been able to view for up to a week after their transmission by using P2P software. This is made possible by a DRM system that destroys content when the predetermined time for viewing the programs has elapsed.[201]

B. *The Emergence of Advertising-Supported Models for Online Distribution*

The distribution models so far analyzed are based on DRM technology which can be a very flexible tool to implement proprietary, open and mixed licensing regimes and realize proprietary, open and mixed distribution systems as previously defined. It is known that, notwithstanding the preference shown by legislatures and intermediaries, over the years the adoption of DRM

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[199] *Id.*

[200] The archive content released here under the Creative Archive Licence will use limited DRM (Digital Rights Management), but not at the cost of user creativity. For instance, to help us identify our source material, during our pilot we will be trialling a patented Video Watermarking technology where a virtual barcode will be embedded into the video clips. This invisible stamp can be read through video editing and format changes so that any video sequence can be traced back to its source. This will not interfere with legitimate users, but it will assist the BBC in the event that any use is made of the material in breach of the licence terms.

BBC Creative Archive, Frequently Asked Questions, http://creativearchive.bbc.co.uk/archives/faqs/ (last visited Oct. 17, 2008). Similarly, "[t]he BBC is using a technology called GEO-IP filtering to ensure that archive content sourced directly from these BBC sites will only be available to UK citizens." *Id.*

[201] The initiative aims at providing all users with "the chance to catch up on BBC TV and radio programmes they may have missed for up to seven days after they have been broadcast, using the internet to legally download programmes to their home computers." BBC Creative Archive, Frequently Asked Questions, http://creativearchive.bbc.co.uk/archives/faqs/ (last visited Oct. 17, 2008). The content so distributed is automatically cancelled: "[s]even days after the programme broadcast date the programme file expires (using digital rights management software) and users will no longer be able to watch it. Digital Rights Management (DRM) also prevents users emailing the files to other computer users or sharing it." *Id.*

technology has progressively decreased, to the extent of declaring its demise in favor of more user-friendly alternative distribution systems. Among models that are not DRM-based, but are generating revenues, we find, first, businesses that reject the *ex ante* protection offered by the technology and simply rely on the *ex post* protection available under copyright law; and, second, businesses that offer content for free as they survive on advertising sales.

As to the first category of DRM-free models for online distribution, the licensing regime can be both proprietary and open. The model adopted by eMusic is the most successful example of non DRM-based distribution which, on the one hand, relies on the traditional protection that the law affords to creative works and, on the other, adopts a proprietary licensing regime.[202] Another example of non-technologically implemented distribution is Magnatune.[203] This firm presents not only the innovative feature of adopting the Creative Commons licenses,[204] but also an innovative price setting mechanism. Magnatune's business model is quite articulated and targets both people who listen to music in the background while they do other work (e.g., office workers) and fans of music. While the former will sub-license the music for commercial purposes (i.e., for trade shows, advertising and web sites), and will pay depending on length and type of use, the latter will download music at the price determined by the buyer from a recommended range.[205] Magnatune has recently introduced a new service named "downloadable membership" which enables members (purchasers) to listen to and download everything on the Magnatune web

[202] eMusic, http://www.emusic.com (last visited Oct. 17, 2008). In the "terms of use" of eMusic, the following conditions are specified:

> 8.1 Only you may access the Service using your IDs, unless otherwise agreed to in writing by eMusic. The content available through the Service is the property of eMusic or its licensors and is protected by copyright, database right and other intellectual property laws. All software used on the eMusic Site is owned or licensed by eMusic and is protected by copyright laws. Content received through the Service may be used, viewed and played for your personal, non-commercial use only. You agree not to reproduce, retransmit, distribute, disseminate, sell, broadcast, perform, make available to third parties or circulate the content received through the Service to anyone or to exploit any such content for commercial or noncommercial purposes without the express prior written consent of eMusic.

Id.

[203] Magnatune, http://www.magnatune.com (last visited Nov. 20, 2008).

[204] Creative Commons was founded in 2001 with the generous support of the Center for the Public Domain. It is led by a Board of Directors that includes cyberlaw and intellectual property experts James Boyle, Michael Carroll, Molly Shaffer Van Houweling, and Lawrence Lessig, MIT computer science professor Hal Abelson, lawyer-turned-documentary filmmaker-turned-cyberlaw expert Eric Saltzman, renowned documentary filmmaker Davis Guggenheim, noted Japanese entrepreneur Joi Ito, and public domain web publisher Eric Eldred.

Creative Commons, History, http://wiki.creativecommons.org/History (last visited Oct. 17, 2008).

[205] For example, albums can be downloaded by Magnatune's website at a price ranging from $5 to $18: the buyer will determine the exact amount that he is willing to pay. Magnatune, http://magnatune.com/info/model (last visited Dec 10, 2008).

site, without any commercials.[206]

The second category of alternative models of DRM-free online distribution is based on advertising sales. This model was initially neglected for fear that revenues generated by the advertising would not equal the sales of music files, especially when this could take place through the adoption of a DRM system, which would permit control of the distributed works. Although DRM technology has not been a failure in controlling digital works online, it is nonetheless true that the degree of control that it offers is lower than expected. This aspect, coupled with the spread of unlawful P2P networks (where music is indeed available for free), has encouraged the adoption of distribution models which disseminate the music for free (to compete with P2P networks), but produce revenues from advertising.

Among the first websites to use this mechanism is Mjuice, which sold banner and virtual room for commercials on its webpages.[207] Internet Underground Music Archive, instead, tried to make the commercials in the files offered streaming.[208] None of these businesses, however, reached the success that We7 seems to be achieving.[209] The service, launched in May 2007, initially had only 30 tracks available to users, and recently has reached over 3 million downloads, over 100,000 subscribers and secured licenses for music from some of the world's leading artists, record labels, and distributors.[210] The website was co-founded by Peter Gabriel (ex-Genesis front man and digital pioneer) and permits the streaming and downloading of music for free with an advertisement or the purchase without an advertisement.[211] This distribution model is enabled by MediaGraft technology, which fixes advertisements to the beginning of each track streamed or downloaded for free. More than that, the advertisements target

[206] You get to listen to everything on the Magnatune web site, without any comercials, and anything you want to download you can do so as if you had paid for it.

> You get all the download formats that you normally would if you bought the album individually (ie, for $8). We offer MP3 and WAV files, and a variety of other formats as well. All without copy protection (DRM).
>
> You can also download a PDF of the album artwork.

Magnatune, Download Membership FAQ, http://magnatune.com/info/faq_download#downget (last visited Dec. 10, 2008).

[207] Mjuice, A Digital Magazine, http://www.mjuice.com (last visited Nov. 20, 2008).

[208] The Internet Underground Music Archive is no longer available. For an archived version of the site, please see http://web.archive.org/web/*/http://www.iuma.com (last visited Nov. 20, 2008).

[209] We7 Homepage, http://www.we7.com (last visited Nov. 20, 2008).

[210] We7 Expands Ad-Supported Music Delivery Service (Apr. 28, 2008), http://www.indiemusictech.com/music_marketing_for_indie/2008/04/we7-expands-ad.html (last visited Dec. 10, 2008).

[211] We7, How it works, http://www.we7.com/#/about/how-it-works (last visited Dec. 10, 2008).

the users and realize a system of off-web advertising. This new media broadcasting method targets customers and grafts the brand audio message onto music tracks that people choose. Every time they listen to their favorite track, that brand message plays. The We7 service allows users to remove the advertisements from their downloads after four weeks.[212] The revenue generated from these advertisements goes to artists, labels, and other rights owners. This non-DRM distribution system relies on the traditional copyright licensing regime. In the terms and conditions for the service, users acknowledge and agree that they have no right to provide any files obtained through the We7 service to any other party or through any other means, save as otherwise provided through the We7 sharing service,[213] and that they may only make copies of any file obtained through the service for their own personal use.

1. The Phenomenon of User-Generated Content

Ad-supported business models are the link between distribution as traditionally defined (a content producer distributing professional content to users) and the new phenomenon of user-generated content ("UGC").[214] Facebook,[215] MySpace,[216] Friendster,[217] and Xanga[218] rely upon UGC to attract and obtain revenue primarily from the sale of online display advertising. They also accumulate user information which may be valuable for targeted marketing purposes.[219] This phenomenon ought to be analyzed from the perspective of both the business model that they enable and the contents that are posted and disseminated.

From the perspective of the business model, social networks' members are both "content providers" and "customers" of the website since their exposure to advertising, while using the platform, produces revenue for the firm. In fact, in 2007 MySpace was

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[212] *Id.*
[213] We7, Terms and Conditions http://www.we7.com/#/legal/ (last visited Nov. 20, 2008).
[214] For a definition of UGC, see Greg Lastowka, *User-Generated Content & Virtual World*, 10 VAND. J. ENT. & TECH. L. (*forthcoming* 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1094048.
[215] Facebook Homepage, http://www.facebook.com (last visited Nov. 20, 2008)
[216] MySpace Homepage, http://www.myspace.com (last visited Nov. 20, 2008).
[217] Friendster Homepage, http://www.friendster.com (last visited Nov. 20, 2008).
[218] Xanga Homepage, http://www.xanga.com (last visited Nov. 20, 2008).
[219] Michael Trusov, Randolph E. Bucklin & Koen Pauwels, *Effects of Word-of-Mouth versus Traditional Marketing: Findings from an Internet Social Networking Site* (Working Paper Series, Apr. 24, 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1129351. More generally, it is deemed that on the Internet, the changed way of exploiting content has produced a mechanism of surveillance that is unknown in relation to off-line exploitation of content. *See* Lastowka, *supra* note 214, at 3, (stating "the surveillance can be understood as content (data about collective and individual behavior patterns) which is in turn appropriated and monetized by those who own the technologies that capture and contain the data").

the fifth most popular web domain (behind Google, Yahoo, MSN, and AOL) in total number of individual pages and now serves 8% of all advertisements on the Internet.[220] None of the users uploading their content on MySpace are charged for use or subscription, as they mainly exchange electronic cards and newsletters that make advertising space available to commercial sponsors, who refer people to their websites.[221]

Facebook, too, has developed a very innovative ad-based business model which offers better opportunities than other social networking sites because of its deep penetration within a series of micro communities (e.g., college campuses). This implies that if a local advertiser wants to target a particular college campus, Facebook is the best way to get the advertiser's message to that audience.[222] The Facebook "social ads" are not only a very specific tool to target customers but can also leverage the power of "Facebook News Feed" by serving relevant stories about friends engaging with the advertised business. Moreover, Facebook has been developing further tools, such as "invitations" which constitutes one of the most powerful viral channels available on the platform, besides profile box, mini feed, news feed, and notifications.[223]

Other innovative business models based on advertisement sales are under development. For example, content owners could follow the BBC's example and use windowing to establish a common video archive that could be financed largely by advertising or sponsorship. The BBC's initiative of windowing on television enables its customers to view and exchange files of a show for one entire month after the over-the-air broadcast of the work.[224]

Similarly innovative, but yet to be proven worthwhile in practice, is the business model adopted by video sharing sites, such as YouTube. Such businesses rely on a combination of sponsored links and more innovative forms of video advertising. Google, for example, could insert advertisements into the beginning of each

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[220] Yinka Adegoke, *MySpace to Sell Music from Nearly 3 Million Bands*, BOSTON.COM BUSINESS, Sept. 1, 2006, http://www.boston.com/business/technology/articles/2006/09/02/myspace_to_sell_music_from_nearly_3_million_bands/ (last visited Dec. 1, 2008); Dan Smith, *Online Social Networks & Communities are Here to Stay*, KNOW MORE MEDIA, Sept. 22, 2006, http://www.knowmoremedia.com/2006/09/online_social_networks_communi.html.

[221] MySpace Homepage, http://www.myspace.com (last visited Nov. 20, 2008).

[222] Nisan Gabbay, *Facebook Case Study: Offline Behavior Drives Online Usage*, STARTUP REVIEW, Nov. 5, 2006, http://www.startup-review.com/blog/facebook-case-study-offline-behavior-drives-online-usage.php.

[223] Justin Smith, *The Facebook Marketing Bible: 24 Ways to Market your Brand, Company, Product, or Service inside Facebook* (Dec. 9, 2007), http://www.insidefacebook.com/2007/12/09/inside-facebook-marketing-bible-24-ways-to-market-your-brand-company-product-or-service-in-facebook/.

[224] John Borland, *BBC's Model for Broadcast*, CNETNEWS.COM, Apr. 13, 2005, http://news.com.com/Me+TV+NASCAR+pulls+away+in+content/2009-1041_3-5646080-2.html.

YouTube video sequence so as to exploit the potential that viral marketing can have on a platform where sponsored content can be diffused.[225] This is already done by various websites that implemented schemes for monetizing their services. Break and Metacafe offer traditional banners, as well as in-video advertising options and sample custom campaigns.[226] At the same time, they pay the Internet users who upload videos according to certain qualitative criteria, with the aim of attracting more visitors with a service of quality and so differentiate themselves from the other players in the market, who index a vast amount of content of little interest.[227] This is meant to have positive effects on the amount of advertising attracted as well.

Ad-supported models of business are likely to be the most popular choice in the future since online advertising will surpass traditional advertising, if not replace it entirely.[228] Some believe that in the near future Internet advertising will grow at a faster pace than any other category of advertising. Spending on Internet advertising is expected to increase from $ 8.6 billion dollars in 2007 to $ 27.2 billion dollars in 2011.[229] This trend should continue as the demand for broadband increases and the Internet delivers rich content and advertising to a wider base of users worldwide.

From the perspective of the content disseminated, all Internet users are aware of the amount of content created and posted by amateurs that is available every day. A recent survey of 2000 Internet users aged from thirteen to seventy-five confirmed that more than one-half of them create content by editing their own photos, videos, or music, and nearly half create music, videos, photos, blogs, and websites for others to see and hear.[230] Since distributing content online has become a very easy thing to do, one-third of those interviewed said that they consider themselves "broadcasters".[231] Although not posting content, almost 70% of those interviewed said that they "access" content created by other

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[225] David Mabillot, *User Generated Content: Web 2.0 Taking the Video Sector by Storm*, 65 COMMUNICATIONS & STRATEGIES 39, 42 (2007), *available at* http://ssrn.com/abstract=1008860.

[226] Break, http://info.break.com/static/live/v1/pages/advertise.html (last visited Oct. 17, 2008).

[227] Such as Youtube and all the above mentioned platforms which do not make any qualitative selection of the uploaded content.

[228] For data on the 2007 investments in online advertising divided by categories, see Laurie Peterson, *Internet Ad Spending Set to Overtake All Other Media by 2011: VSS*, MEDIA POST PUBLICATIONS (Aug. 7, 2007), http://publications.mediapost.com/index.cfm?fuseaction=Articles.san&s=65282&Nid=33013&p=352811.

[229] *Id.*

[230] Opinion, *User-Generated and Watched Content*, L.A. TIMES, Jan. 14, 2008, *available at* http://www.latimes.com/news/opinion/la-ed-content14jan14,0,3327482.story.

[231] *Id.*

Internet users to the extent that, for many people, computers are more of an entertainment device than television.[232]

Yet, in terms of legal challenges, the nature of the Internet and the ease with which content on the Internet can be reproduced and distributed makes all online content, including UGC, particularly susceptible to copyright infringement. This feature of UGC should not disadvantage innovative business models, however, as is stressed in the Recommendation of the OECD Council on Broadband Development.[233]

Among the first examples of UGC are fan fiction and spoofs that developed before the Internet establishment, yet have been growing seamlessly since. As in the case of "Henry Potter", people write fan fiction to enrich the tale with further stories that will not and cannot be written by the author.[234] Spoof, instead, is a special kind of parody that consists of a "humorous take on an established idea, cultural movement, television program, movie, play, book, or the like."[235]

These derivative works raise the question as to whether they are acceptable uses permitted by the respective jurisdiction or an unlawful infringement of the creator's exclusive rights. In this context, infringements arise whenever someone who is not the copyright holder or a licensee exercises the exclusive right, such as adapting the work to create a derivative work, for commercial or non commercial purpose, without authorization, or where the use does not fall within a fair use. The issue is, thus, whether and how to adapt the parameters of certain copyright-free uses, such as fair use or exceptions, when citations and compilations are increasingly prevalent and easy, as they are in a multimedia environment where mixes of text, video, graphics and the like may be blurry. As with any other use being made of a copyrighted work, if no exemption can be invoked, the creator of derivative UGC should obtain permission from the original author in order to create a lawful UGC.

Currently, there is a certain degree of legal uncertainty on both sides of the creator of the original work as well as of the crea-

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[232] *Id.*

[233] Organisation de Coopération et de Développement Economiques, OECD (2004), *Recommendation of the Council on Broadband Development*, C(2003)259/FINAL (Feb. 24, 2004), *available at* www.oecd.org/dataoecd/31/38/29892925.pdf (recommending the implementation of regulatory frameworks that balance the interests of suppliers and users, in areas such as the protection of intellectual property rights and DRM, without stifling market innovation in the Internet).

[234] Urs Gasser & Silke Ernst, *From Shakespeare to DJ Danger Mouse: A Quick Look at Copyright and User Creativity in the Digital Age*, Berkman Center for Internet & Society Research Publication No. 2006-05, 11-12 (2006), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=909223 (mentioning further examples of participative culture).

[235] *Id.* at 7.

tor of the derivative work. While this legal uncertainty may lead to the creation of fewer derivative works, it also has advantages, namely that courts maintain some degree of flexibility in case they happen to decide on whether a use is a permissible exception. Such uncertainty is also determined by the fact that UGC was initially developed for non-commercial purposes, whereas it is currently being adopted into commercial business models and some users also start to be rewarded for their creativity. This implies the further question of how much weight must be given to the commercial context in which the UGC exists. Outside the cases in which users are economically remunerated for their creations, in most of the cases it is the platform offering the UGC service that acquires revenues from advertising sales, as users are the "only" customers and content providers at the same time.

Given that a lack of legal certainty is one of the features of the UGC phenomenon, some scholars have asserted that, in the absence of judicial decisions on the whole phenomenon, "informal copyright practices" can be established.[236] The creation of UGC relies on practices that are authorized neither by formal copyright law nor by formal copyright licenses, and whose legality falls, therefore, within a gray area of copyright law.

VI. CONCLUSION

The aim of this Article was to depict the evolution and the state of online distribution and to assess the extent that such developments altered the relationship between copyright law and technology.

The analysis of the market of online distribution shows that a complete picture of this sector is difficult to depict, and a proper categorization of the business models adopted therein will always tend to be incomplete because of the dynamism of the digital environment. This holds even truer if we consider the pace of technological development.

However, even in such a fluid environment, one may envision a trend in online distribution. Such a trend goes from full proprietary distribution (at both levels of technology and licensing regime) to progressive abandonment of proprietary DRM-based distribution and, further on, towards the coexistence of several business models, many of which are not DRM-based but advertising-based.

There is another shift that is worth mentioning in relation to the nature of the content distributed. More than ever, content generated by users has been growing in importance and apprecia-

[236] Edward Lee, *Warming Up User-Generated Content,* 5 U. ILL. L. REV. (forthcoming 2008), *available* at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1116671.

tion by Internet users. While the coexistence of amateur and professional content has always been one the features of the digital environment, what is amateur and what is real business has never been as blurred as they are today. This is the result of the spread of UGC platforms which, through the sale of advertising, make amateur content a real business. Once again, this confirms that on the Internet, drawing lines is almost impossible. Given this, it is interesting to examine how we have reached such a state and to highlight how the relationship between copyright law and technology as we know it has been altered.

Both the legislators and the courts in their interpretation of the law have sought to solve the problems between digital technology, the Internet, and copyright by proposing an *ex ante* model of distribution which was proprietary from both the technological and licensing perspectives. This model was not capable of accommodating the Internet's complexities and encompassing all the possibilities that the technological progress offers.

The second attempt to put into context the effects generated by this encounter was made by the so-called "private ordering."[237] This implied the flourishing of first open distribution models, and then hybrid distribution businesses. In spite of this, not even private ordering can encompass the complexity of World Wide Web 2.0, and we currently witness the rise of distribution models that differ from both the open and proprietary distribution models defined above. The alternative models herein considered can differ widely but they all have in common the fact of being advertising-based. Within this emerging category, an ad-based system that distributes professional content, such as We7, is innovative in relation to the system for generating revenues that has been implemented (the selling of online advertising). On the other hand, an ad-based model that generates revenues through the exploitation of UGC presents an additional element of innovation as it combines formal copyright and informal copyright practices. As a matter of fact, UGC platforms extract revenues from the selling of advertising without offering professional content or by offering a limited supply. Thus, in the case of UGC platforms, "consumers" (to whom the advertisements are directed) and users (who provide the content) coincide more than ever.

This is not the main feature of the phenomenon, though. Consideration must be given to the nature of the UGC which is posted and disseminated through these platforms. Contents, in fact, can be "pure" or "mixed." While the former does not raise any copyright issues, since the users are fully entitled to post their

[237] Niva Elkin-Koren, *What Contracts Can't Do: The Limits of Private Ordering in Facilitating a Creative Commons*, 74 FORDHAM L. REV. 375, 375 (2005).

own creations, the latter may pose, as has been mentioned above, the question of possible copyright infringements since users mix up contents of different sources in order to create derivative works. However, in the absence of any provision or judicial decision that bans such practices, informal copyright practices can be deemed accepted within the copyright realm. UGC practices are outside the reality of formal copyright law which usually underpins online distribution, either proprietary or open. They set up a third way along which informal practices are incorporated into formal copyright as they provide content to one of the business models of online distribution.

As a result of this development, the present relationship between copyright law and technology appears enriched by a new element. It is not the traditional dual relationship anymore; new technologies challenge copyright law, which reacts by including within the legal framework the new exploitation tool. The encounter of digital technology and the Internet makes the dynamic between technology and copyright law much more complex. It triggers a cycle whereby technology enables new practices which are not encompassed within the law, but are not excluded by the law either. Such practices can affect copyright law by shaping it at the level of either legal provisions and controversies or practices that are located in gray areas. As for the UGCs, the ban has not taken place because the right holders prefer waiting to evaluate whether such practices generate benefits. By contrast, this was not the case of P2P, as courts expressly affirmed their unlawfulness in accordance with formal copyright law.

The importance of informal copyright practices in the market of online distribution is self-evident. In the first place, one has to consider the debate over DRM and the DMCA. Although the DMCA opted for a DRM-based distribution model, users have responded so poorly as to induce the major distributors to consider abandoning the DRM systems, or at least adopting a more friendly use of them.[238]

Second, the flourishing of UGC is likely to confirm the importance of the informal copyright practices in influencing the development of copyright law. Even though informal practices cannot tell us what the law should be, once widespread acceptance is achieved, they can provide workable solutions for the time being.[239] This holds even truer when such practices are encompassed into online distribution models such as the ad-based ones. We have, on the one hand, an evolving practice, the acceptance of which can make it emerge from the gray area, and, on the other

[238] Lee, *supra* note 236, at 70.
[239] *Id.*

hand, a business model based on informal practices and implemented by the same right holders who could potentially challenge the lawfulness of such practices.