

The Dusk of Digital Rights Management?

Towards a New Model of Content Distribution Control

I. Introduction

In the law of the ancient world neither the notion of copyright law as a system of legal norms existed nor the notion of work as non-material subject of author's rights were known. Even in societies where intellectual work and activities were highly developed although moral right of the author to his work was emphasized, it was generally believed that intellectual work should not be the source of income. Equally, in the Middle Ages both technical deficiencies and individual mark of created works gave little possibility to multiply their material forms.¹

Copyright statutes and related case law gradually reinforced the position of the author by granting him more rights both of personal and commercial character. However in traditional grasp of copyright law, a compromise between protection of private interests and protection of public interests was reached. It was possible thanks to, *inter alia* limiting the time of protection of author's economic rights and recognition of the possibility to use legally protected work within the scope of copyright exemptions, especially in cases when exercising author's monopoly would be impossible or not recommended. Hitherto prevailing compromise was however infringed on the one hand as a result of scientific and technological progress which enabled massive copying of digital works, and on the other, by possibility of arbitrary restricting copyright exemptions by technological means.²

First attempts to accommodate legal regulations to development of digital technologies were made at the end of the 1970s with reference to computer software. Since then, with the evolution of the Internet, the simplicity of copying digital works exposed their authors to infringement of different types of vested rights to their content. As a remedy enabling

¹ Stefan Grzybowski in: SYSTEM PRAWA PRYWATNEGO. PRAWO AUTORSKIE, Janusz Barta (ed.), Warszawa 2007, at 1-3; Andrzej Kopff, *Wpływ postępu techniki na prawo autorskie*, 48 ZESZYTY NAUKOWE UNIwersYTETU Jagiellońskiego. PRACE Z WYNAŁAZCZOŚCI I OCHRONY WŁASNOŚCI INTELEKTUALNEJ, at 11 (1988).

² Maciej Barczewski, *Postęp naukowo-techniczny – zagrożenie dla praw twórców?*, in: HARD CASES - FILOZOFIA PRAWA W PRAKTYCE, Jerzy Zajadło (ed.), (forthcoming 2008).

secure distribution of the data in digital environment technological solutions were proposed, that would protect files by encryption so that they could be accessed only after the entity desiring access has had its identity authenticated and its rights to that specific type of access verified.³ These solutions – generally referred to as Digital Rights Management (‘DRM’) systems – evolved from technological protection measures that would just impede unauthorized access or copying to sophisticated systems that would allow not only to distribute content to consumers in a controlled way, but also to define and manage particular actions an authorized recipient may take in regard to that content.⁴

Although for over 200 years discussion of copyright law could focus almost exclusively on copyright statutes and related case law, with popularization of Digital Rights Management technology took center stage.⁵ Thus the extent of copyright is no longer decided according to what the proper scope should be, but according to what the technology can do.⁶

Compared to traditional copyright law, DRM promises an unprecedented degree of control over the entire chain of distribution of information and the usage of digital content.⁷ It helps right holders generate different business models for the exploitation of works and reduce the transaction cost of content distribution. Technical protection measures (‘TPM’) contained in DRM systems are aimed at hindering unlawful copying of content and increasing its costs. In consequence they act as ‘speed bumps’, delaying but not fully preventing illegal diffusion.⁸ However it needs to be noted that DRM’s purpose is not access control alone, since it is also used to manage the provision of content to users and to identify their respective rights as well as digital works through Rights Management Information (‘RMI’).

Taking into account that above-mentioned technologies are aimed not at protecting the authors but ensuring profits for derivative right holders such as international music and

³ Bill Rosenblatt & Gail Dykstra, *Integrating Content Management with Digital Rights Management. Imperatives and Opportunities for Digital Content Lifecycles*, <<http://www.giantstepsmts.com>>, at 4-6.

⁴ Maciej Barczewski, *International Framework for Legal Protection Digital Rights Management Systems*, 5 EUR. INTELL. PROP. REV., at 165 (2005).

⁵ See Doug Lichtman, *Defusing DRM*, IP ACADEMIC ADVISORY COUNCIL BULLETIN 1.1, <<http://www.pff.org/issues-pubs/ip/bulletins/bulletin1.1DRM.pdf>>.

⁶ Séverine Dusollier, *Technology as an Imperative for Regulating Copyright: From the Public Exploitation to the Private Use of the Work*, 6 EUR. INTELL. PROP. REV., at 202 (2005).

⁷ Stefan Bechtold, *Digital Rights Management in the United States and Europe*, 52 AM. J. COMP. L., at 324 (2004).

⁸ INDICARE CONTENT PROVIDERS’ GUIDE TO DIGITAL RIGHTS MANAGEMENT, <<http://www.indicare.org/user-guide>>.

film corporations, using DRM solutions is the subject of much controversy, especially in organizations protecting consumer rights. On the one hand, DRM enables direct and effective execution of copyright, on the other however, it is mainly used to protect economic interests thus limiting or even preventing access to work necessary for the whole of society, as well as personal needs of individuals.

Futhermore DRM systems often impose limitations on using and access to content, which may or may not be protected by copyright law. In consequence it is raised that in practice, above-mentioned technologies are aimed not at effective management of copyright but at limiting the access to information for individuals for whom former regulations made such access possible. Accepting such an opinion opponents of Digital Rights Management often refer to it as Digital Restrictions Management.⁹

For over a decade the issue of electronic management of digital content and regulations connected with it has been discussed in various environments: political, scientific and business. This article tries to sum up the debate by pointing out the most important problems and expressing the recommendations which, in author's opinion, could in future help to ease the controversy concerning the use of Digital Rights Management.

In order to achieve this goal, in chapter entitled 'Past' the most important regulations which form framework for legal protection of technical protection measures and rights management information are discussed. Then in chapter 'Present' current problems and challenges involved in using and dissemination as well as legal protection of DRM systems are briefly discussed. Finally, in chapter 'Future' recommendations which, in author's opinion, could lead to the approval of above-mentioned technologies by consumers are presented.

II. Past

Assuming that copyright statutes and related case law constitute the fundamental layer of the protection, it can also be assumed that technical protection measures along with rights management information represent a second, technological layer of protection of

⁹ See e.g. The Free Software Foundation, <<http://www.fsf.org>>.

copyright holders.¹⁰ But although DRM systems are meant to provide a high level of technological security, they have been and will be hacked. As a consequence it was indispensable to create a third layer of protection – so called anti-circumvention laws. For that reason, in the early 1990s both in the United States of America and in the European Union right holders began to look to laws that would safeguard technical measures of protection of their works.

Early regulations concerning this matter prohibited putting into circulation of tools used to accomplish circumvention of technical measures protecting computer software (as in the EU Directive of 1991 on the legal protection of computer programs), digital music (as in the US Audio Home Recording Act of 1992) or satellite signal (as in the North American Free Trade Agreement). Soon after, due to the growing popularity of Internet as a global network of data distribution, the necessity of granting a uniform international protection of Digital Rights Management systems appeared.

The attempt to conclude a convention that would response to this challenge was made by the World Intellectual Property Organization ('WIPO'). As a result of its initiative, in December 1996 two treaties were adopted which set up universal bases for DRM protection. One of them was the WIPO Copyright Treaty ('WCT'), and the other – the WIPO Performances and Phonograms Treaty ('WPPT').

It must be noted that anti-circumvention regulations contained within these agreements were adopted without any noteworthy practical experience in the individual countries as to what the implications of such regulations are, and without having any secure forecasts as to what the importance of technological protection measures will be in the future. Hence the adoption of this set of laws demonstrated the enormous political will to shape the information society in its early phase¹¹, motivated arguably by desire to mandate internationally what could not have easily been achieved nationally, and thus reframe the later domestic implementation debate.¹²

¹⁰ See Jacques de Werra, *The Legal System of Technological Protection Measures under the WIPO Treaties, the Digital Millennium Copyright Act, the European Union Directives and other National Legislations (Australia, Japan)*, in: 189 REVUE INTERNATIONALE DU DROIT D'AUTEUR, at 66 – 213 (2001).

¹¹ Bechtold, *supra* note 7, at 338-339.

¹² Graeme B. Dinwoodie, *Foreign and International Influences on National Copyright Policy: A Surprisingly Rich Picture*, in: NEW DIRECTIONS IN COPYRIGHT, VOLUME 6, Cheltenham-Northampton 2007, Fiona Macmillan (ed.), at 295.

According to Art. 11 of the WCT and the Art. 18 of the WPPT, contracting states are obliged to provide legal protection and legal remedies against the circumvention of technological measures that are used by authors, performers or producers of phonograms in connection with the exercise of their rights and that restrict acts which are not authorised by them or permitted by law. *A contrario*, since the WIPO Treaties do not prohibit the circumvention of all technical measures but only of those which are implemented by right holders in connection with their protected rights, the provisions of the Treaties do not apply where a work is not protected (e.g. owing to an exemption)¹³ or where users are authorized by the authors or other right holders to engage in such an act.¹⁴

One has to point out that the proposed wording of these regulations differed significantly from the provisions finally accepted at the diplomatic conference¹⁵, as it focused primarily on the act of manufacturing or distributing devices used to accomplish circumvention. However, such an approach caused fears that this regulation might restrain fair use and affect various devices capable of valuable non-infringing uses. Therefore, as finally adopted, these provisions concentrate on the need for protection against the act of circumventing, rather than on the device used to accomplish circumvention.¹⁶

As for the protection of rights management information, Art. 12 of the WCT and Art. 19 of the WPPT require that contracting parties shall provide legal remedies against any acts leading to unauthorised removal or alteration of any electronic rights management information identifying a given work and its right holders. Any information about the terms and conditions of use of a work, along with any attached numbers or codes that represent such information, is also protected.

It is necessary to emphasize that protection granted by these regulations is effective only if the person committing the prohibited act has knowledge (or at least a reasonable basis for knowledge) that such an act will facilitate an act of copyright infringement. Moreover, the parties to the treaties undertook to provide protection from distribution or

¹³ Yves Gaubiac, *Remarks about the Internet in International Copyright Conventions*, in: THE INTERNET AND AUTHORS' RIGHTS, Frédéric Pollaud-Dulian (ed.), London 1999, at 116.

¹⁴ See Urs Gasser, *Legal Frameworks and Technological Protection of Digital Content: Moving Forward Towards a Best Practice Model*, 17 FORDHAM INTELL. PROP. MEDIA & ENT. L.J., at 48 (2006).

¹⁵ Basic Proposal for the Substantive Provisions of the Treaty on Certain Questions Concerning the Protection of Literary and Artistic Works to be Considered by the Diplomatic Conference (WIPO doc. CRNR/DC/4 of August 30, 1996).

¹⁶ Julie E. Cohen, *Some Reflections on Copyright Management Systems and Laws Designed to Protect Them*, 12 BERKELEY TECH. L.J., at 167-168 (1997).

public access of objects of law by those who are conscious that electronic rights management information has been removed or altered without authority.¹⁷

Soon after the adoption of the WIPO Treaties, the contracting parties commenced preparation of legislation aiming at adjustment of their national legal frameworks to the requirements imposed by the abovementioned agreements. In the United States this goal has been achieved, after intense public debate, by adoption of the Digital Millennium Copyright Act ('DMCA') in October 1998. As some commentators point out, a minimalist approach was adopted when implementing the WCT and the WPPT, based on the understanding that any provision of the Treaty that had already been implemented would not be addressed in new legislation.¹⁸ However, new regulations were considered to be required for the protection of technological measures as it was not adequately guaranteed by existing US law.

The DMCA anti-circumvention provisions were included in §1201 of the United States Code, while laws protecting rights management information were embodied in §1202. Whereas the latter regulations did not depart radically from stipulations of the WIPO Treaties, the anti-circumvention provisions were arranged along two dimensions. First, there is a distinction between technological protection measures that control access to a work (thus indirectly creating a new 'right of access to a work') and measures that protect rights of a copyright owner (allowing 'copyright control'). Secondly, they distinguish between the act of circumvention of technological protection measures and the act of manufacturing and distribution of devices used to accomplish circumvention.¹⁹ Both sorts of actions are prohibited in regard to access control technologies, however in relation to copyright control technologies only circumvention devices are deemed to be unlawful, regardless of whether they can or will be used for non-infringing uses. In this respect the DMCA significantly exceeded the minimum of protection set forth by the WIPO Treaties.²⁰

¹⁷ Barczewski, *supra* note 4, at 166.

¹⁸ See e.g. Nora Braun, *The Interface Between The Protection Of Technological Measures And The Exercise Of Exceptions To Copyright And Related Rights: Comparing The Situation In The United States And The European Community*, 11 EUR. INTELL. PROP. REV., at 496 (2003).

¹⁹ See Bechtold, *supra* note 7, at 332-333.

²⁰ The US courts have applied the anti-circumvention provisions of the DMCA in a number of cases, as for example: *RealNetworks, Inc. v. Streambox, Inc.*, 2000 WL 127311 (W.D. Wash. 2000), *U.S. v. Elcom Ltd.*, 203 F.Supp.2d 1111 (N.D. Cal. 2002), *321 Studios v. Metro Goldwyn Mayer Studios, Inc.*, 307 F.Supp.2d 1085 (N.D. Cal. 2004).

In the European Union regulations of WCT and WPPT are to be implemented according to the Directive on the harmonisation of certain aspects of copyright and related rights in the information society adopted on May 22, 2001 ('the Copyright Directive'). It was one of the most-lobbied directives in the history of the European Union, and requirements included in it went far beyond the requirements of the WIPO Treaties.²¹

Whereas Article 7 of the Copyright Directive granting protection to electronic rights management information is generally a repetition of corresponding articles of the WIPO Treaties, with the reservation that the scope of protection granted by the Directive is extended also to databases, the protection of technological measures has been determined more precisely and sometimes differently.

Firstly, following the regulations of WIPO Copyright Treaty, the Directive obliges Member States to provide adequate legal protection against the circumvention of any technological measures that are effective. However, in addition to the WIPO Treaty, it defines that a technological measure is 'effective' if the use of a protected content is controlled by the right holders through application of an access control or protection process.

It must be noted that in May 2007 the first European court interpreted the notion of 'effectiveness' of technological measures. The District Court in Helsinki ruled that Content Scrambling System (CSS) - the standard technological protection measure for movies distributed on DVDs - is 'ineffective'.²² Hence, according to the Finnish Court, any technological protection measure with widely available circumvention applications is not the subject of the protection granted by the anti-circumvention laws.

Such opinion is questionable as measures for circumvention of technical protection systems are available on the Internet with reference to most such technologies. In consequence reasoning preferred by the Court in Helsinki would render the anti-circumvention regulations meaningless. The US Court for the Northern District of California presented more far-sighted approach when it rejected the argument that CSS is ineffective

²¹ It must be noted that regulations concerning the protection of technological measures can be found also in The Computer Software Directive of 14 May 1991 in relation to the protection of computer programs, The Conditional Access Directive of 20 November 1998 in relation to conditional access services, as well as The E-Commerce Directive of 8 June 2000 in relation to service provider's liability for interfering with DRM systems. However, according to some commentators, the relationship between the anti-circumvention provisions of these directives is often unclear or even inconsistent – see Bechtold, *supra* note 7, at 337-338.

²² See Helsingin käräjäoikeus, case R 07/1004, 25.5.2007.

because circumvention methods and keys are widely available on the Internet, since ‘...this is equivalent to a claim that, since it is easy to find skeleton keys on the black market, a deadbolt is not an effective lock to a door’.²³

Secondly, the Copyright Directive raises the standard of the protection required by the WIPO by obliging the EU Member States to prohibit possession for commercial purposes and the provision of circumvention devices or services. It also suggests that national law may prohibit also the private possession of devices for circumvention.

The wording of Art. 6(3) of the Copyright Directive suggests that it does distinguish between access and copyright controls but - unlike the DMCA - grants equal treatment to both types of technology.²⁴ The Directive goes even further in this respect, requiring protection not only for the measures preventing copyright infringements, but also for technological measures preventing all activities not authorised by the right holder.

The Directive takes the position that the application of TPMs should not alter the balance that existed under default rules of copyright law with respect to the enjoyment of exceptions and limitations.²⁵ According to complex provisions of Art. 6(4) Member States are obliged to take appropriate measures towards benefiting from some of exceptions and limitations set out in Art. 5 of the Directive, such as privileges for libraries, researchers or and disabled persons. However, it is not clear why some exceptions have been selected for such preferential treatment while others have not.²⁶

The Copyright Directive also includes provisions on private copying, permitting an exception to be made for reproductions made by a ‘natural person for private use, and for ends that are neither directly nor indirectly commercial, on condition that the right holders receive fair compensation’. Such technological measures may be permitted to limit the number of private reproductions that might be made by invoking this exception.²⁷ If within a reasonable period of time no such voluntary measures have been taken, Member States may introduce necessary exceptions or limitations. However, in the case of private copying exception such subsidiary intervention of the legislator is not mandatory.

²³ See *321 Studios v. Metro Goldwyn Mayer Studios, Inc.*, 307 F.Supp.2d 1085 (N.D. Cal. 2004).

²⁴ Gasser, *supra* note 14, at 67.

²⁵ Jerome H. Reichman, Graeme B. Dinwoodie & Pamela Samuelson, *A Reverse Notice and Takedown Regime To Enable Public Interest Uses of Technically Protected Copyrighted Works*, Draft as of Aug. 12, 2007, at 49.

²⁶ See Séverine Dusollier, *Fair Use by Design in the European Copyright Directive of 2001: An Empty Promise*, <<http://www.cfp2002.org/fairuse/dusollier.pdf>> at 12; Bechtold, *supra* note 7, at 378.

Moreover, it has been indicated that ‘voluntary measures taken by right holders, including agreements between right holders and other parties concerned’ have priority over legislative actions. Recital 45 further suggests that the exceptions and limitations should not prevent the definition of contractual relations designed to ensure fair compensation for the right holders in so far as permitted by national law. Given the pre-eminence of contractual terms over the exceptions, one may come to the conclusion that there is a danger that such contractual relationships may permit content owners to require users to waive their rights to benefit from exceptions or limitations as a condition of access.²⁸

The danger of users’ rights being overridden contractually seems even more threatening because of the content of the fourth indent of Art.6(4), which says that the obligation to make an exception or a limitation available ‘shall not apply to works or other subject-matter made available to the public on agreed contractual terms in such a way that members of the public may access them from a place and at a time individually chosen by them’. Since this condition may apply to interactive on-demand services, it seems obvious that this provision has the potential to eliminate the exceptions to copyright and to create a factual case in which contract actually replaces copyright.²⁹ It must be noted that such regulation conflicts with fundamental aims of the Copyright Directive, such as harmonisation of national legislations, as well as mitigating the tension between copyright and new technologies.³⁰

It is noteworthy that besides above-mentioned regulations, circumvention of DRM systems is prohibited by Convention on Cybercrime of 2001, which was negotiated by the Council of Europe and to which many European countries as well as the U.S. and Japan are signatory countries.³¹ Furthermore, the United States has concluded several bilateral trade agreements, that include detailed provisions regarding the protection of technological measures, which may arguably go beyond the obligations under the WIPO Treaties. It is mainly the case of free trade agreements between the USA and Jordan (2000), Singapore, Chile (2003), Morocco, Bahrain and Australia (2004), as well as currently prepared

²⁷ Jeffrey P. Cunard, Keith Hill & Chris Barlas, *Current Developments in the Field of Digital Rights Management* (WIPO doc. SCCR/10/2 Rev. of May 4, 2004), at 74.

²⁸ Dan L. Burk & Julie E. Cohen, *Fair Use Infrastructure for Rights Management Systems*, 15 HARV. J. LAW AND TECH., at 69 (2001); Dusollier, *supra* note 26, at 10.

²⁹ Hector L. MacQueen, *Copyright and Internet*, in: LAW AND THE INTERNET. A FRAMEWORK FOR ELECTRONIC COMMERCE, Lilian Edwards & Charlotte Waelde (eds.), Oxford 2000, at 219–220.

³⁰ Barczewski, *supra* note 4, at 167.

agreements between the USA and Malaysia, Oman, Panama, Thailand and member states of South African Customs Union. It appears from these actions that including the issues of copyright and neighbouring rights – among them DRM systems – in trade-related agreements has become an important element of economic strategy of the United States of America.³²

Anti-circumvention provisions discussed above do not constitute whole catalogue of legal measures aimed at protection of DRM systems. Usually content providers oblige consumers to obey contractual requirements by entering into so-called shrinkwrap or clickwrap agreements.³³ In such contractually protected DRM system, consumers are required to enter into a contractual agreement either at the time they acquire some DRM-enabled hardware or software device or at the time they want to access an individual content within the DRM system.³⁴

Another example of using contractual agreements in order to protect electronic systems of content distribution are so called technology licence agreements. Due to them producers of DRM-enabled devices cooperating with DRM technology vendors are forbidden to produce software or devices enabling circumvention of their protection systems. Assuming that technology and anti-circumvention provisions constitute second and third layer of protection of a right holder, contractual agreements may be treated as a fourth, complementing tier of protection of his rights.

III. Present

With the new millenium technological systems capable of Digital Rights Management have become a popular measure of protection of interests of individuals in digital environment. Nevertheless, their application has been the subject of much controversy,

³¹ The Convention entered into force on 1 of July 2004.

³² One can also observe the tendency towards the inclusion of intellectual property issues in free trade agreements signed by the European Free Trade Association ('EFTA').

³³ See Richard Warner, *Shrinkwrap and Clickwrap Contracts: Autonomy, Contract-As-Consent, and Contract-As-Product*, in: *SELECTED PAPERS ON HIGH TECHNOLOGY LAW*, Maciej Barczewski, Michał Miłoś & Richard Warner (eds.), Chicago-Gdańsk 2006, at 141-160.

³⁴ Stefan Bechtold, *From Copyright to Information Law - Implications of Digital Rights Management*, in: *SECURITY AND PRIVACY IN DIGITAL RIGHTS MANAGEMENT*, Tomas Sander (ed.), Berlin 2002, at 217.

especially among consumer rights protection organizations, which results from the different nature of protection granted by traditional norms of copyright law and by technological protection measures.

Firstly, it concerns different subject and time of protection – copyright law defines what content it protects whereas DRM systems may protect any content which is made available digitally regardless its copyright protection status. Moreover, there is time limit for copyright (for example in Europe for 70 years *post mortem auctoris*), whereas using technological measures protected by anti-circumvention laws the content may be locked-up for theoretically unlimited amount of time.

Secondly, it is being pointed out that although according to exhaustion doctrine a right holder can no longer control the distribution, if a copy of the work has been lawfully put into circulation on a given territory, DRM systems don't allow the reselling of the acquired content, thereby providing right holders with the means to control commercial and non-commercial transactions of the acquired product, even if copyright law dictates otherwise.³⁵

Finally, the biggest challenge connected with different nature of protection granted by Digital Rights Management solutions seems to be the necessity for adapting copyright exemptions within the realm of the technology. It is extremely difficult due to a different approach to this issue in civil law states and common law states - while in *droit d'auteur* system such exemptions are relatively precisely defined in national laws, in Anglo-Saxon copyright system they are usually defined according to broad and flexible doctrine of fair use, corresponding to judicial determinations in a given case.

Achieving such a goal is obstructed further by significant ambiguities and differences in national laws concerning limitations and exceptions to copyright. For example in Europe, the Copyright Directive has as much as twenty-one exceptions, of which only the first – for temporary acts of reproduction - is compulsory, while others - universally recognized as most fundamental - are facultative.³⁶

Prima facie the problem of recognizing and preserving copyright exemptions by DRM systems seems to be technical in character - it amounts to creation of rights management

³⁵ See Deirdre Mulligan, Jennifer M. Urban et al., *Letter to CEN/ISSS (February 2003)*, <http://www.law.berkeley.edu/clinics/samuelsan/projects_papers/CENISSS_Letter_022103.pdf>.

code that would approximate both the results of and the dynamism of fair use jurisprudence.³⁷ However, according to the prevailing view, at the present moment it seems impossible for technical devices to effectively substitute for human decision-making in administering the limitations and exceptions to copyright³⁸, and attempts made in this respect – for instance the introduction of XrML language – do not reflect the whole spectrum of possible exceptions and limitations of copyright and related rights.

Another problem concerning copyright exemptions is that a number of court cases³⁹ demonstrate that they may not provide consumers with a legal standing to enforce their interests against the user of a DRM system, for example to make a private copy.⁴⁰ In consequence it is feared that DRM users in practice will be able to block copying of work for personal use. Such danger is real, all the more as conditions for copying work for personal use are defined in different ways in different states.

Moreover, it is necessary to note that potential losses caused by private copying of works in many states are compensated by the imposition of copyright levies. Such fees – being remnants of the analog age – are applied to digital devices and media without due account being given to growing functionality and popularity of DRM technologies. This is undeniably unfavorable for consumers, as it results in the price rise of technical equipment without regard to the way it is applied by the users. Moreover, users may be paying twice for the content if they pay for it through a DRM-enabled service and pay a levy on a device (e.g. iPod and iTunes).

Although in the United States levies on digital recorders and blank digital media are applied under the Audio Home Recording Act of 1992, the range of objects on which so called ‘royalties’ are imposed is relatively restricted and the elimination of these levies has

³⁶ See Marcella Favale, *Fair DRM: Can Digital Locks Be Persuaded To Respect Copyright Exceptions?*, <<http://manchesterlawandeconomics.googlepages.com/11-Favale.pdf>>, at 18.

³⁷ Burk & Cohen, *supra* note 28, at 56.

³⁸ See Timothy K. Armstrong, *Digital Rights Management and the Process of Fair Use*, 20 HARV. J. L. & TECH., at 54 (2006); Patricia Akester & Richard Akester, *Digital Rights Management in the 21st Century*, 3 EUR. INTELL. PROP. REV., at 161 (2006).

³⁹ For instance in France - Tribunal de grande instance de Paris 3^{ème} chambre, 2^{ème} section Jugement du 30 avril 2004, Stéphane P., UFC Que Choisir / société Films Alain Sarde et autres, <http://www.legalis.net/jurisprudence-decision.php3?id_article=722>.

⁴⁰ DIGITAL RIGHTS MANAGEMENT AND CONSUMER ACCEPTABILITY. A MULTI-DISCIPLINARY DISCUSSION OF CONSUMER CONCERNS AND EXPECTATIONS. STATE-OF-THE-ART REPORT, <http://www.indicare.org/tiki-download_file.php?fileId=60>, at 48-49.

not been the subject of any meaningful debate in recent times.⁴¹ However, a serious controversy over DRM and copyright levies grows in Europe, where the Copyright Directive permitted to introduce exceptions or limitations to copyright in respect of reproductions on any medium, on condition that the right holders receive fair compensation. Member States have been given *carte blanche* in the decision to provide remuneration to copyright holders. As a consequence, the relevant provisions of the Copyright Directive have been implemented differently by Member States.⁴² Despite the suggestion in the Directive, according to which together with DRM technology dissemination, copyright levies should be phased out, countries are putting more levies in place. Moreover, imposed levy schemes vary widely from one country to another, as far as their amount, calculation base or way of application is concerned.⁴³

Whereas the rationale for copyright levies disappears, the states should gradually eliminate them - at least in relation to media and devices connected with dissemination of content via DRM-enabled technologies. As far as the growing significance of DRM is concerned, charges imposed on digital technologies can be questioned, however their existence is still justified in relation to analogue devices and media, which the electronic management of rights does not concern, as e.g. tape-recorders.

There is no doubt that the technological override of copyright exemptions may lead to the technical prevention of access to content for people, for whom former regulations made such access possible, as for example scientists⁴⁴ or the disabled. In the latter case technological protection measures frequently make it impossible or difficult to use software or hardware, which enable visually impaired to access the content in the electronic form

⁴¹ Cunard *et al.*, *supra* note 27, at 109.

⁴² It should be noted, that as a part of its initiative to simplify and streamline European legislation EU authorities have started activities, which are supposed to lead to the reform of the levy system for private copying. Their aim is to ensure that the scope and the level of fair compensation established by Member States for acts of private copying takes account of the application of DRM technologies. As a consequence, the European Commission could be able to influence the change of Member States' policy in relation to coexistence of double system of collecting compensation, which is due to right holders. See European Commission's Work Programme, <http://ec.europa.eu/internal_market/copyright/levy_reform/index_en.htm>.

⁴³ Maciej Barczewski, *Legal Impediments to the Dissemination of Digital Rights Management Technologies*, in: SELECTED PAPERS ON HIGH TECHNOLOGY LAW, Maciej Barczewski, Michał Miłoś & Richard Warner (eds.) Chicago-Gdańsk 2006, at 16-17.

⁴⁴ They have a chilling effects on scientific research, especially in the field of software security - for example, in 2000 Princeton Professor Edward Felten and his collaborators withdrew from presenting their paper about weaknesses in a digital copyright management system because they were threatened to be sued for violating the anti-circumvention provisions of the DMCA.

(screen readers). As the result consumers with special needs face the threat of being hindered to access digital content.⁴⁵

According to some commentators such a conflict should be solved by producers of DRM technologies.⁴⁶ First, it would be advised to build assistive technology into readers and players for the protected material, or to make an attempt to develop a special 'disabled persons data format'. Then content vendors should ensure that the distributed bitstream can easily be stripped of DRM so that assistive technologies can access the content. Further, employed solutions must not create a burden on playback systems, since in many cases the hand held playback devices are slim implementations with limited processing power and memory.⁴⁷

It must be noted that DRM is risky for developing nations too. By releasing content using DRM, foreign right holders may attempt to trump local copyright law and exceptions through unfair contract terms. As a consequence they will prevent people in developing nations from accessing and using copyright works in ways that those nations' laws may allow, thus aggravating the cultural deficit that may already exist in those countries. DRM and anti-circumvention laws could also have a significant negative effect on the innovation agendas of developing nations, because developing nations depend on a technological and legal environment that fosters innovation.⁴⁸ For all of these reasons, while designing Digital Rights Management solutions, their creators must not forget that less developed countries face different challenges and obtain different benefits from the opportunities created by the Internet and new technologies. While the Internet serves mainly as a communication medium or a commercial marketplace for the United States and other developed countries, it provides for many less developed countries an important leapfrogging tool to catch up with their more developed counterparts.⁴⁹

A further significant drawback for Digital Rights Management is the lack of interoperability understood as the ability of accessing content via different delivery platforms. There is no doubt that the lack of thereof is one of the reasons of DRM systems' circumvention by users. Although some companies have reached agreements to support

⁴⁵ *Supra* note 8.

⁴⁶ Michael Geist, *DRM and Accessibility*, <http://www.michaelgeist.ca/wiki/DRM_and_Accessibility>.

⁴⁷ *Supra* note 40, at 32.

⁴⁸ *CIPPIC Comments regarding DRM and developing nations*, Ottawa 2005, <http://www.cippic.ca/en/news/documents/Letter_to_Mark_Jeffrey_Feb_26_2005.pdf>.

each other's DRM formats, a common interoperability is not available since most DRM implementations are based on 'island solutions' from a particular vendor, rather than widely adopted standards.⁵⁰ Moreover, leading DRM vendors can be encouraged to monopolistic practices⁵¹, as making access to offered contents only via their own technologic platform binds a consumer and increases potential sale incomes. An example that reflects such practices is the use of DRM by printer manufacturers in order to prevent third-party cartridges being used in their products.⁵²

As a consequence, enforcing interoperability between DRM-enabled services and devices in order to avoid vendor lock-in is considered more frequently by states' administrations. For example in August 2006 the French bill came into force⁵³, which set up a compulsory licensing scheme for DRM producers - a governmental regulatory body will decide on a case-by-case basis whether to force manufacturers to share essential information on their DRM to competitors. However, such principle of forced interoperability, although hedged with the duty of payment of corresponding compensation, seems to interfere too much in the sphere, which, up till now, has been regulated by market mechanisms. The market of on-line services seems to be still too immature for the state-imposed technological standards of content exchange.⁵⁴ It also must be noted that the US broadcast flag case has shown some of the actual problems of government-mandated standard setting.⁵⁵ Nonetheless above reservations do not exclude the significant role of state institutions, which at present should encourage interoperability among DRM vendors.

⁴⁹ Peter K. Yu, *Anticircumvention and Anti-Anticircumvention*, 84 DENV. U. L. REV., at 44 (2006).

⁵⁰ See Cunard *et al.*, *supra* note 27, at 105. It is also important to note that today, there are relatively a few major players on the on-line market who have developed widely used proprietary DRM system, like Apple (FairPlay), Microsoft (Windows Media DRM), Sony (ATRAC, SecuROM), Open Mobile Alliance (OMA DRM), Macrovision (SafeDisc) and Adobe (Adobe DRM).

⁵¹ See Timothy B. Lee, *Circumventing Competition: The Perverse Consequences of the Digital Millennium Copyright Act*, <<http://www.cato.org/pubs/pas/pa564.pdf>>.

⁵² See *Lexmark International, Inc. v. Static Control Components, Inc.*, 387 F.3d 522 (6th Cir. 2004). In his opinion Judge G. S. Merritt emphasized that 'we should make clear that in the future companies like Lexmark cannot use the DMCA in conjunction with copyright law to create monopolies of manufacturer goods for themselves'.

⁵³ *Loi no 2006-961 du 1^{er} août 2006 relative au droit d'auteur et aux droits voisins dans la société de l'information*, 178 JOURNAL OFFICIEL DE LA REPUBLIQUE FRANÇAISE 11529 (2006).

⁵⁴ Barczewski, *supra* note 43, at 19.

⁵⁵ See *American Library Association v. FCC*, 406 F.3d 689 (D.C. Cir. 2005).

IV. Future

The above-discussed issues indicate that the paradigm of strong techno-legal protection creates many important problems which make recognition of DRM technology as commonly accepted tool used for digital content distribution difficult. The best known failure of electronic system controlling the use of disseminated content was the case of Sony BMG record company who inserted on hundreds of thousands of their musical albums software which automatically installed itself on listener's personal computer without his knowledge and consent. Moreover, the software was concealed and monitored user's activities at the same time allowing unauthorised access to his computer. The incident caused damage to the reputation of Sony and confirmed fears that applying more and more restrictive technological protection measures of work may lead to serious abuses connected with privacy and security of recipients of protected content and it may also restrict the use of carriers of work.

In consequence recently conducted research shows that consumers take suspicious approach to technological protection measures and prefer purchasing content free of DRM, even if it is more expensive.⁵⁶ As a result, major media companies, like EMI or Universal, eagerly experiment with DRM-free downloads⁵⁷, and some of them – like Google Video – even close their DRM-driven services.⁵⁸ In this context does this mean that the dusk of Digital Rights Management is inevitable? Not necessarily, however the change in accepted paradigm of legal protection of such technologies as well as the change of business model of digital content distribution seem to be unavoidable.

As it has already been mentioned in this article, most DRM-related problems are connected with respecting commonly accepted limitations of copyright law thus maintaining the balance between protection of private interests of right holders and satisfying public need for the use of legally protected work.

In recent years representatives of doctrine of law have put forward several proposals aimed at enabling exercising of copyright exemptions within DRM systems. The most

⁵⁶ See *The 2007 Digital Music Survey*, <http://www.olswang.com/dms/digital_music_survey2007.pdf>.

⁵⁷ See Jeff Leeds, *Universal Music Will Sell Songs Without Copy Protection*, THE NEW YORK TIMES, August 10, 2007.

⁵⁸ As a consequence of the shutdown of the Google Video download-to-own/rent programs in August 2007 their users are no longer able to view videos they had earlier purchased or rented. For them it turned out to be another argument against Digital Rights Management.

discussed was the idea suggested by professors Dan L. Burk and Julie E. Cohen which hinged upon management of rights management keys by a trusted third party, who would release them to users applying for access to make fair use (key-escrow system).⁵⁹

However, as it has been pointed out by professor Timothy K. Armstrong, such remote authorization DRM system, in which a user must formally acquire some form of explicit authorization to engage in a particular use of the protected work, suffers from a simple flaw: it creates a burden of obtaining consent that has no parallel in the offline world.⁶⁰ Therefore he recommends to empower users to assert fair use rights over purchased content irrespective of the wishes of the right holder. According to this model, upon approval of the user's request, the licensing authority would issue the digital keys necessary to effectuate the requested use – either automatically (in respect to common and narrow exceptions to rights) or with an element of human decisionmaking (in respect to more vague or not yet foreseen cases of fair use). Nevertheless, if the licensing authority denied the request, or if the user judged the burden of applying to the license authority to be too great, he should still be able to assert a right to engage in a fair use of the protected content, provided that such an activity would be recorded in an audit trail.

For privacy reasons at each stage of the interaction between a user and a license-issuing authority, the parties would interact not directly, but through pseudonymous intermediaries.⁶¹ Moreover, any user-identifying information would be escrowed with a third party and revealed to the copyright holder only pursuant to a court order or upon a showing of proof of rights' infringement. To guarantee the third party impartiality, it should be publicly funded institution that would be statutorily insulated from both copyright infringement liability and subject to regulatory oversight for compliance with its escrow and privacy obligations.⁶²

A significant advantage of this approach is that it has a potential of encompassing divergences of Anglo-American and Eurocontinental approach to the fair use. While precisely defined and commonly accepted exceptions may *ex ante* be implemented within the framework of automatic licencing those which are defined in a more flexible way may be the

⁵⁹ Burk & Cohen, *supra* note 28, at 63.

⁶⁰ Armstrong, *supra* note 38, at 54.

⁶¹ *Id.* at 101-108.

⁶² Burk & Cohen, *supra* note 28, at 63.

subject of human decisionmaking.⁶³ And if the user does not want to engage in a permission-negotiating process that he can immediately exercise an exception on a condition that his activity is logged, and taking into account that he may be *ex post* obliged to pay appropriate fee.

The apparent flaw of this proposal is that, despite providing a high level of security, it still raises some privacy concerns. These apprehensions do not necessarily come from the storage of such personal information but more from the threat that they may be subject to a security breach. Worse yet, some companies view personal information obtained from customers as a corporate asset that can be sold during bankruptcy proceedings.⁶⁴ On the other hand, dangers connected with privacy protection should not be exaggerated – after all DRM is not a bigger threat to privacy than credit card statements. Moreover, in electronic banking there are tools which ensure high level of protection of private data such as the use of different identifiers for each merchant or the use of tokens that contain the information that is necessary for the transaction. Furthermore, other Privacy Enhancing Technologies (PETs), which help to increase the privacy of consumers by making the link between their real and electronic identities weaker, are becoming commonly available - for example, micropayment systems or coupons, which can be purchased in street shops anonymously and spent for online services.⁶⁵

Yet, the most evident problem with creating such a privacy preserving system of exercising exemptions is the creation of the infrastructure. Creating a network system which would deal both with queries concerning possibilities of exercising exceptions and limitations and recording activities beyond authorisation procedures connected with indexed content, while ensuring a proper level of anonymity, would require considerable funding and organisational efforts. It seems that the burden of creating and financial backing

⁶³ Where a factor of human decisionmaking is to be employed in the process of negotiating permission for the exercise of an exemption, so called procedure of a 'reverse notice and takedown', proposed by professors Jerome H. Reichman, Graeme B. Dinwoodie and Pamela Samuelson, could be effectively employed. According to their proposal, originating from the common law adjudication about ISP liability for wrongful acts of users, copyright owners could be given 14 days either to deny the limited circumvention request or to allow it by silence, without prejudice. In case of denial, the user group would be entitled to seek a declaratory judgment vindicating or denying its claim to circumvention for the purpose of the specified non-infringing uses. Therefore such a procedure seems to be well suited for exercising for example the exemption for research and security purposes. See Reichman *et al.*, *supra* note 25, at 41-42.

⁶⁴ Ann Cavoukian, *Privacy and Digital Rights Management (DRM): An Oxymoron?*, <<http://www.ipc.on.ca/docs/drm.pdf>>, at 5.

⁶⁵ See *supra* note 40, at 86.

of such infrastructure should be carried by subjects working in the framework of state administration or those which are subsidised by them.

It must be noted that relatively complicated technical or formal-procedural course of applying for use of protected content may appear to be an important impediment in common approval of Digital Rights Management. A man is instinctively trying to choose the shortest and simplest ways to reach his goals and so far experience confirms that simplicity and transparency are very important factors conditioning the market success of a technologically managed content.⁶⁶ Thus, economic reasoning shows that the reflection of consumer needs in the design of DRM systems is of pivotal importance and it must be aligned to consumer interest.⁶⁷ It can be even claimed that the best DRM technology actually remains unnoticed by users.⁶⁸

V. Concluding Remarks

Hereby article should be treated as an attempt of presenting some of the most important issues connected with functioning and legal protection of DRM systems which by no means covers the whole spectrum of problems concerning this subject. The debate on this is by nature an interdisciplinary discussion which involves not only law and technology but also economics and even sociology.

Analyzing these issues it is important to note that although the solution of the indicated problems could most likely lead to more considerable dissemination of DRM techniques, their approval by the consumers has the key meaning for their viability. From this point of view, the need to protect intellectual property should not impose an unnecessary burden on recipients of the digital content. In this context, it may turn out that resigning from the DRM model based on *ex ante* limitations and switching to the model in which the key role plays the possibility of free access to protected content limited only by *ex*

⁶⁶ For example complicated and over restrictive DRM systems used to protect audio CDs proved to be a market failure, while simple and relatively liberal system employed by Apple (iTunes) remains to be successful.

⁶⁷ Vural Ünlü, *Profitable piracy and content degradation. An alternative to strong content protection*, INDICARE MONITOR, <http://www.indicare.org/tiki-read_article.php?articleId=148>.

⁶⁸ See *supra* note 8.

post monitoring and potential necessity to pay proper remuneration could have a significant influence on DRM's market success.

On a more general level this would also require a shift in the traditional paradigm of copyright and the overall IP policy – functioning of DRM systems would greatly benefit from the acknowledging exceptions as consumer rights. Hence, the challenge of DRM is not only a technical challenge, but also a political challenge to previously socially-mediated bargains.⁶⁹

⁶⁹ See Christopher May, *DIGITAL RIGHTS MANAGEMENT: THE PROBLEM OF EXPANDING OWNERSHIP RIGHTS*, Oxford 2007, at 93.