

Technological measures to prevent the illegal uses of intellectual property rights

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TECHNOLOGICAL MEASURES TO PREVENT THE ILLEGAL USES OF INTELLECTUAL PROPERTY RIGHTS

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TECHNOLOGICAL MEASURES TO PREVENT THE ILLEGAL USES OF INTELLECTUAL PROPERTY RIGHTS

Abstract

Advances in the Internet and digital information have allowed easier and faster access to information to persons on a worldwide scale. This development in technology has many advantages for society. Nevertheless, these advances also present a problem for ensuring that copyright in respect of various works are protected.



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**TECHNOLOGICAL MEASURES TO PREVENT THE ILLEGAL USES OF
INTELLECTUAL PROPERTY RIGHTS**

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INTRODUCTON

Advances in the Internet and digital information have allowed easier and faster access to information to persons on a worldwide scale. This development in technology has many advantages for society. Nevertheless, these advances also present a problem for ensuring that copyright in respect of various works are protected.

Works available on a material medium previously ensured that copyright holders were able to exercise a great degree of control in regard to the use and reproduction of their works; instances of infringement were more easily identifiable and prevented. The conversion of publications and other copyright subject matter into electronic or digital format, allows reproduction, modification, and transmission without the copyright holder's awareness or consent to occur with ease.

In order to address these problems the international legal community has developed novel legislation.¹ In addition, the employment of technological protection measures (TPMs) to curb the aforementioned problems has increased in usage and importance.

The principal legal framework that will be considered within this Report² includes the WIPO Copyright Treaty (WCT) and WIPO Performances and Phonograms Treaty (WPPT)³ which were implemented in the European Union (EU) by way of Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society (EUCD). These WIPO Treaties and the EUCD require that provision be made for the protection and illegal circumvention of technological protection measures that serve to prevent electronic copyright infringement. However, TPMs have been controversial in terms of its usage within the industry and in some cases, it is argued, potentially infringe fundamental human rights.

Accordingly, the implementation of the EUCD, within various Member States has been challenging. This Report will consider the transposition of the EUCD within Germany, France, Spain and UK as well looking at the Swiss approach. In addition, this Report will consider the difficulties and controversies surrounding TPMs, the

¹ Penalties attached to copyright infringement have also increased in order to act as a deterrent.

² European Intellectual Property Institutes Network Report, (hereafter referred to as the EIPIN 'Report').

³ WCT and WPPT are collectively referred to as the WIPO Treaties.

requirements for TPM protection and the problems associated with Digital Rights Management systems (DRMs). Finally, this Report will offer proposals in regard to addressing some of the problems highlighted herein.

PART 1

TECHNICAL PROTECTION MEASURES

1.1 Technical Protection Measures - Definitions and Examples

There are three major types of technological protection measures, (i) access control mechanisms, (ii) watermarking and foot printing, and (iii) active protection measures. In terms of access control, users are assigned a personal login identification and password, required to access the information. Watermarking and foot printing records the actions of users, the owners of the system can then use the data collected. Active protection measures can be used to actually prevent access or copying, through enforcement of usage rules set by the rights holders.⁴

Technological protection measures, like those described above, are combined with other mechanisms to form digital rights management systems (DRMs). These tend to involve use of a server maintained by the DRMs provider. Upon payment by users, the DRMs software decrypts the content and permits use in accordance with the terms of the licence. Part of the protection that DRMs provides is to allow service providers or rights holders to monitor use by the end user in order to ensure compliance with the terms of the licence.⁵

⁴ Westkamp, G (2007), 'The Implementation of Directive 2001/29/EC in the Member States' Queen Mary Intellectual Property Research Institute, 13.

⁵ Westkamp (n 4) 4.

PART 2
LEGAL FRAMEWORK

2.1 International Intellectual Property Law
2.1.1 WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT)

Advances in information technology have necessitated a more sophisticated level of intellectual property rights protection. Accordingly, The World Intellectual Property Organisation (WIPO) Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) were adopted by the WIPO member states to address these developments in technology by way of copyright protection and exemption laws. The protection of copyright and related and neighbouring rights has been extended by the Treaties in order to account for economic, social, cultural and technological developments.

The WCT addresses technological measures and intellectual property rights issues. In particular, the WCT prohibits circumvention of technological measures for the protection of works and the unauthorised modification of rights management information.⁶ Furthermore, the WPPT extends the protection of rights relating to performers and producers of phonograms to reflect technological developments.⁷

Being a party to the WCT and the WPPT, the European Union was obliged to implement its provisions into Community law. Several European Union Directives,

⁶ Articles 11 and 12 respectively of the WIPO Copyright Treaty (WCT).

⁷ The WCT and WPPT require countries to provide a framework of basic rights, allowing creators to control and/or be compensated for the various ways in which their creations are used and enjoyed by others. The Treaties ensure that the owners of those rights will continue to be adequately and effectively protected when their works are disseminated through new technologies and communications systems including the Internet. Accordingly, existing rights continue to apply in the digital environment and create new online rights. To maintain a fair balance of interests between the owners of rights and the general public, the Treaties further clarify that countries have reasonable flexibility in establishing exceptions or limitations to the digital rights in appropriate circumstances. Countries can grant exceptions for uses deemed to be in the public interest such as for non-profit educational and research purposes. The Treaties also require countries to provide not only the rights themselves, but also technological measures that are intended to protection of the works.

including Directive 2001/29/EC were enacted to implement the provisions of the WCT and the WPPT.⁸

2.2 European Union Intellectual Property Law

2.2.1 Brief Outline of Directive 2001/29/EC - The European Copyright Directive (EUCD)

Directive 2001/29/EC (EUCD) is intended to implement the obligations contained in the WCT and WPPT into Community law. The EUCD is not directly applicable as a source of Community law and Member States must accordingly transpose the EUCD provisions into their own national law. Member States have been accorded significant freedom to transpose the EUCD obligations according to minimum standards.

The EUCD aims to harmonise Community law in respect of copyright and neighbouring rights. Articles 2, 3 and 4 define the reproduction right, the making available to the public right, and the distribution right respectively.⁹ Article 5(1) prescribes that Member States introduce into national legislation a limitation or exception to the reproduction right¹⁰ in regard to specific temporary acts of copying.¹¹ Member states may implement or maintain any other exception or limitation to the reproduction right as listed in Article 5(2).¹² In addition, Article 5(3) provides Member States with discretion to implement further exceptions or limitations in both the reproduction and communication to the public right in addition to the list of exceptions or limitations listed

⁸ In particular, Directive 91/250/EC (legal protection of computer programs), Directive 96/9/EC (legal protection for databases) and Directive 2001/29/EC (information society issues including anti-circumvention of technical protection measures) have served to transpose the main international obligations arising from the WCT and the WPPT into European Community law.

⁹ Article 2, EUCD obliges Member States to introduce a broad reproduction right into national legislation which provides protection to rights holder in regard to direct and indirect as well as both the temporary or permanent making of reproductions by any means, in whole or in part. This right is granted to both authors and owners of neighbouring rights. Article 3, EUCD obliges Member States to introduce the right of communication to the public of works and the right of making available other subject matter. This right is also granted to both authors and owners of neighbouring rights. Article 4, EUCD obliges Member States to provide a distribution right to authors of copyrighted works. The application and scope of that right is defined therein.

¹⁰ Article 2, EUCD.

¹¹ Westkamp (n 4) 11.

¹² *Ibid.*

under Article 5(2).¹³ The Berne Convention *Three-Step-Test* to determine whether the exceptions and limitations provided for in terms of Article 5(1), (2), (3) and (4) is used to take into account the legitimate interests of the right holder, this is contained in Article 5(5).

Article 6(3) defines technological protection measures¹⁴ as any technology, device or component that, in the normal course of its operation, is designed to prevent or restrict acts of circumvention.¹⁵ Article 6(1) obliges Member States to provide adequate legal protection against the circumvention of any effective technological protection measure.¹⁶ Article 6 (4) requires that Member States take appropriate measures to ensure that the beneficiary of the exclusions or limitations in Article 5 have legal access to the protected work or subject matter, this is required in cases where the right holders fail to make voluntary exceptions or limitations. However, Art 6 (5) still permits right holders to adopt adequate measures in regard to the number of reproductions permitted by way of the exceptions or limitations contained in Article 5. Article 7 requires that Member States provide adequate legal protection against any person knowingly performing, without authority, specific rights-management information violations.

¹³ *Ibid.* Article 5(1), EUCD provides Member States with an obligatory limitation for transposition, whereas Articles 5 (2), (3) and (4), EUCD provide exceptions or limitations which Member States may apply.

¹⁴ Under Article 6(3), EUCD the object of protection is not explicitly defined. The provision merely states that technological protection measures should protect against acts not authorised by right holders, and is designed to prevent circumvention. Furthermore, the terminology “designed” does not strictly refer to a prevention of copyright infringement, and does not clarify the exact scope of the right as regards the interface between TPM’s and copyright protection.

¹⁵ Westkamp (n 4) 52.

¹⁶ Westkamp (n 4) 53. Member States are permitted to transpose the obligation to prohibit the circumvention of technological protection measures by way of an exclusive right annexed to the economic rights in copyright law, or alternatively as a positive right based upon civil tort law and/or criminal law.

PART 3

EUROPEAN IMPLEMENTATION OF DIRECTIVE 2001/29/EC

3.1 Germany (DE)

The German transposition of the EUCD was completed in 2003.¹⁷ The German Act, the *Gesetz zur Regelung des Urheberrechts in der Informationsgesellschaft* of 10 September 2003,¹⁸ implemented the mandatory provisions contained in the EUCD, the WCT and the WPPT. The non-mandatory provisions including the limitations contained in the EUCD have also been implemented by the *Zweites Gesetz zur Regelung des Urheberrechts in der Informationsgesellschaft* of 26 October 2007.¹⁹

Some important features of the 2007 legislation include modifications to the private copying levy scheme and copyright contract law, as well as the introduction of provisions relating to licensing of unknown future uses.²⁰ The most important limitations contained in the 2003 legislation concern private uses and some sector specific limitations.²¹ Most limitations are subject to fair compensation.²² Some non-mandatory limitations have been implemented in the 2003 legislation. The Berne three step test has not been implemented in German law as it was deemed to address the legislator only.²³ It is however recognised as an instrument of interpretation in the judicature.²⁴

Germany implemented²⁵ the EUCD²⁶ TPMs provisions with only minor deviations.²⁷ The 2003 legislation prohibits circumvention of TPMs and liability attaches thereto.²⁸ However, since the German transposition almost literally copies definitions of

¹⁷ Westkamp (n 4) 221.

¹⁸ BGBl. I 2003, p. 1774 ff.

¹⁹ BGBl. I 2007, p. 2513 ff.

²⁰ Westkamp (n 4) 221. The reproduction right is contained in §16(1) of the 2003 legislation, the right of communication to the public has been implemented in terms of §19a of the 2003 legislation and the distribution right is contained in terms of §17 of the 2003 legislation.

²¹ Westkamp (n 4) 222.

²² *Ibid.*

²³ Westkamp (n 4) 223.

²⁴ *Ibid.*

²⁵ §§ 95a, 95b of the 2003 legislation.

²⁶ Article 6(1) and (2), EUCD.

²⁷ Westkamp (n 4) 231.

²⁸ *Ibid.* The 2003 legislation concerns the interaction between technological protection measures and limitations.

critical terms contained in the EUCD, it fails to clarify what has to be considered 'effective' technological protection measure.²⁹ It has been suggested that only those measures, which hinder average users from circumvention, are effective measures, while other commentators have argued that any technology is covered as long as a circumvention activity must be undertaken in order to bypass the control system.³⁰

It is argued that the German transposition of the EUCD has been somewhat non-controversial. Germany has given good effect to both the mandatory and non-mandatory provisions contained within the EUCD. It is argued that the German legislation in this regard will undergo a more stringent test in terms of court action based upon fundamental human rights challenges. A recommendable feature of the German transposition concerns the insertion of obligations of right owners to sufficiently and clearly mark products to which TPMs have been applied.³¹ In terms of German law, the aforementioned provision is based upon principles of consumer protection and unfair competition, in that disguised TPMs are misleading.³² Unless such indication is applied, a purchased copy is deemed to be a faulty product in terms of the law.³³

3.2 France (FR)

The EUCD was adopted in France in June 2006. The conflict between fundamental human rights, in particular the right for the respect for privacy, and DRMs is prevalent. The music and other copyright industries have been concerned with online file sharing and have demanded stringent sanctions prohibiting the occurrence of such.

In France the private copying exception is a source of confusion, understood by users as a private right. Accordingly, the EUCD was felt by many as an unjust attack on this private right. Under French law however, an exception cannot be equivalent to a private right and one should be mindful of this distinction.

²⁹ Gasser, U, and Girsberger, M (2004), "Transposing the Copyright Directive: Legal Protection of Technological Measures in EU- Member States. A Genie Stuck in the Bottle?" The Berkman Center for Internet & Society at Harvard Law School, 13.

³⁰ *Ibid.*

³¹ Westkamp (n 4) 231.

³² *Ibid.*

³³ *Ibid.*

The EUCD was the basis of widespread criticism within France. Fair compensation for private copying is levied on the sale of blank tapes or CD's. However the fact the private copying right was limited by way of the EUCD failed to account of the aforementioned levy. Consequently under French law, Article L331-6 of the *Le code de la propriété intellectuelle* (CPI) a requirement to safeguard the interests of the beneficiaries of the exceptions was introduced. A new Regulation Authority was created which was provided with competence to adjudicate conflict situations between copyright exceptions and technological measures.

For the above reasons the transposition of the EUCD was intended to reassure DRMs opponents. The definition of technological measures was simply copied from the EUCD into Article L.331-5 of the CPI. French legislators also added that a protocol, a format, a method of encryption, scrambling or any other transformation of the object of the protection is not in itself a technological measure protected by the law. Accordingly, under French law, a technological measure which is not based on the protection of a copyrighted work is illegal. Furthermore, French legislators also included the need for interoperability of those measures and the Authority of Regulation is mandated to ensure interoperability in that regard.³⁴ Concerning acts of circumvention French law preserves simple private circumvention uses. Circumvention is illegal only when it is carried out using a circumventing device.

In respect to the aforementioned, it is argued that French law does not deem DRMs to be the perfect solution to combat counterfeiting. Under French law, the usage of DRMs are limited and controlled.³⁵

3.3 Spain (ES)

During the presentation of the Draft law in November 2002, the Spanish Government included a brief explanatory document on the proposed changes. According to this

³⁴ This Authority can act, for example, if the provider of the technological measure refuses to cooperate and give relevant technical documentation.

³⁵ A new report ordered by the government and delivered by D. Olivennes (Director of the FNAC) in November 2007 proposes a more “traditional” in legal context pre-emptive approach: each Internet user for instance, is given three warnings to comply with existing legal provisions. In case of non-compliance, the relevant Internet service provider reserves the right to suspend the provision of the service.

explanation it was stated that due to the complex and technical nature of the sections concerning legal protection of “technical protection measures”, the new Spanish law of intellectual property tries to reproduce the European Copyright Directive as faithfully as possible.

Furthermore, the Draft goes on to state that it is insufficient to merely legally protect “technical protection measures” but that it is also necessary to create provisions that protect the work against devices, services or any auxiliary act that can lead to the circumvention of protection measures. The Draft includes a considerable reform and increase in power of the Commission for Intellectual Property. The aim of the reform is to make the Commission a key organization when it comes to resolution of intellectual property conflicts.

the Spanish Government has, however, been unable to create a national policy related to “technical protection measures” and has failed to account for related areas such as computer security or interoperability. The reformulated Spanish text (TRLPI 1/1996 or LPI 1996) describes situations where a work or other copyright subject matter is exempted from the reproduction right.³⁶ The Draft law in terms of sections 6 to 14 presents the changes and additions to the limitations and exceptions included in the law of intellectual property of 1996.³⁷

The final result is that the suggested modifications to the reformulated text of intellectual property (LPI 1/1996) mainly include some exemptions that the Directive allows, these include some extra limitations. In terms of technical protection measures, the Draft aims to reproduce the Directive as faithfully as possible. The Spanish proposal does not deal with over-protective technological protection measures or any other related aspects such as interoperability, implications for the research community or security issues.

The amended section 174 establishes a penalty of 6000€ per day to those who prevent recognized beneficiaries taking advantage of exemptions using technical

³⁶ Sections 31 - 41*bis*.

³⁷ Royal Institute of Technology (KTH), "The new Spanish Law of Intellectual Property and the "technical protection measures."" accessed at <http://www.it46.se/docs/articles/escuderoa-eucd-r1.2.pdf>.

protection measures. The Minister of Education, Culture and Sport, upon a proposal of Commission of Intellectual Property, can legally apply this penalty.

The Spanish Draft does not propose any concrete penalties for infringing copyright or circumventing controls. In that respect, the Draft in sections 64 and 65 adds two new articles to the LPI 1996 (sections 173 and 174) that refer to the limits of property rights and technological measures.³⁸

Section 173 establishes the Commission on Intellectual Property as the legal body to intervene in cases of property rights conflicts and technological protection measures. The Minister of Education, Culture and Sport, upon a proposal of Commission of Intellectual Property, can legally impose sanctions and penalties.

3.4 Switzerland (CH)

Discussing the implementation of the EUCD in Switzerland is somewhat of a moot point since Switzerland is not part of the EU.³⁹ However, Switzerland ratified⁴⁰ the WCT as well as the WPPT, which served as a starting point for the EUCD.

As a signatory, Switzerland is obliged to transpose the WIPO treaties into national legislation. Furthermore, in the interest of the harmonization of Swiss and EU law the Swiss legislation has to conform at the same time to the EUCD to guarantee the same scope of protection as granted in the EU. In this respect, the implementation of the WIPO treaties and the alignment with the EU law is equivalent to the implementation of the EU Directive in one of its Member States.

The current Swiss Copyright Act⁴¹ dates from the year 1992 and does not meet modern requirements in the information society. Hence, a lengthy process was initiated in 2004 in order to amend the Swiss Copyright Act. The revision had its blessing of the

³⁸ *Ibid.*2-5

³⁹ On May 22, 2001 the European Union (EU) issued the Directive 2001/29/EC on the harmonization of certain aspects of copyright and related rights in the information society.

⁴⁰ December 29, 1997.

⁴¹ *Bundesgesetz über das Urheberrecht und verwandte Schutzrechte* (URG) vom 9. Oktober 1992.

Council of States in December 2006.⁴² However, the new Copyright Act is not yet in force, since most new laws are honed in a lengthy process whereby a consensus is sought among all different interest groups. Accordingly, the draft of the Copyright Act has been passed to the cantons (territorial subdivisions in Switzerland), political parties and interest groups as part of the consultation procedure. The deadline of this procedure ended on the 31st of January 2008,⁴³ and the entry into force of the final approval of the two WIPO treaties and of the revised Copyright Act is scheduled for the 1st of July 2008.⁴⁴

Similar to the discussions surrounding the EU Directive, the anti-circumvention provisions were the most hotly debated issues in the new Swiss Copyright Act. This was partly due to the technological novelty, but also as a result of opposing interests of the parties involved. In accordance with the WIPO treaties⁴⁵ “adequate legal protection and effective legal remedies against circumvention of effective technological measures” was implemented.⁴⁶ However, Article 94a(4) of the revised Swiss Copyright Act states that the prohibition on acts of circumvention does not apply in cases where the use of the work is permitted statutorily.⁴⁷ In other words, even though circumvention is generally prohibited, it will not have any civil or criminal consequences when applied to protected works whose use are permitted under the Copyright Act. For example, the Swiss Copyright Act contains a private use exemption⁴⁸, this allows copyrighted works to be used for private use defined as a personal use or sharing among close relatives and

⁴² *Botschaft zum Bundesbeschluss über die Genehmigung von zwei Abkommen der Weltorganisation für geistiges Eigentum und zur Änderung des Urheberrechtsgesetzes, Der Bundesrat, 10. März 2006.*

⁴³ For the outcome of the consultation procedure, see: <http://www.ige.ch/d/jurinfo/j10302.shtm>.

⁴⁴ <http://www.ige.ch/d/jurinfo/j103.shtm>.

⁴⁵ Article 11 WCT, Article 18 WPPT: *Obligations concerning Technological Measures*. Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.

⁴⁶ Article 39a(1) URG: *Schutz technischer Massnahmen*. Wirksame technische Massnahmen zum Schutz von Werken und anderen Schutzobjekten dürfen nicht umgangen werden.

⁴⁷ Article 39a(4) URG: *Schutz technischer Massnahmen*. Das Umgehungsverbot kann gegenüber denjenigen Personen nicht geltend gemacht werden, welche die Umgehung ausschliesslich zum Zweck einer gesetzlich erlaubten Verwendung vornehmen.

⁴⁸ Article 19 URG: *Verwendung zum Eigengebrauch*.

friends⁴⁹ (notable exemptions include computer programs, which do not fall under the private use clause)⁵⁰. This position differs from that of the EUCD, where an absolute prohibition is mandated. Interestingly, the Swiss law does not differentiate between copies made from legitimate originals or illegal copies. In other words, the download of music and audio-visual works from peer-to-peer (P2P) networks can fall under the private use clause. However, only the copying is exempted not the act of making the protected works available to the public (uploading). Hence, the private use exemption, although potentially antagonistic to the idea of copyright law, is of limited consequence since most P2P systems require the user to upload in order to download a file.

3.5 United Kingdom (UK)

The UK implemented the EUCD by transposing it into the Copyright, Designs and Patents Acts 1988, through a statutory instrument, the Copyright and Related Rights Regulations 2003 and Regulations 2006. The aforementioned Regulations entered into force in October 2003.⁵¹

The UK implementation of the EUCD and in particular Article 6 has been somewhat less controversial than in other Member States. Article 6(1) was implemented in a way which meant it only applied to copyright works. Article 6 (2) was implemented as an offence, but in the UK's case a strict use in the course of business use must be shown, and this is more restrictive than use for any commercial purpose.⁵² The UK's interpretation of article 6(4) is true to the EUCD, however there have been doubts as to the UK's method for providing this (and what provisions the drafters of the EUCD had in mind for the Member States to introduce to protect legal copying activities).

The implementation of the copyright exceptions was slightly less compliant. Since the UK already had a number of exceptions, they did not introduce any more, but some of the existing exceptions were adapted. In particular the research and private study

⁴⁹ Article 19(1) URG *Verwendung zum Eigengebrauch*. Veröffentlichte Werke dürfen zum Eigengebrauch verwendet werden. Als Eigengebrauch gilt: a. jede Werkverwendung im persönlichen Bereich und im Kreis von Personen, die unter sich eng verbunden sind, wie Verwandte oder Freunde.

⁵⁰ Article 19(4) URG: Dieser Artikel findet keine Anwendung auf Computerprogramme.

⁵¹ Hart, M and Holmes, S (2004), 'Implementation of the copyright Directive in the United Kingdom', *European Intellectual Property Review* (254-257), 1.

⁵² Westkamp (n 4) 49.

exception was restricted to non-commercial purposes and the criticism or review exception now only applies where the work has been made available to the public. The UK still contains provisions for a fair use requirement for several exceptions, which is not provided for in the Directive. In addition the UK has not implemented the three step test, claiming that their exception provisions are drafted in such a way as to take this into account. Finally, there is no ‘private copying’ limitation, this is more rigid than the implementation in many of the others countries, this means there is no defence to illegal file sharing, either the making available or the downloading.⁵³

PART 4

IMPLEMENTING TECHNICAL PROTECTION MEASURES

4.1 Problems in Enforcement and Limitations to Copyright Protection

Limitations to copyright protection exist and the use of technological protection measures may prevent people taking advantage of these limitations. The American Digital Millennium Copyright Act (DMCA)⁵⁴ predates the EU CD. It can be observed that during this time many disadvantages of DRMs have been identified.⁵⁵

The DMCA outlawed the manufacture and provision of tools, including software and information that could help another to bypass digital locks that control use of CDs, DVDs and eBooks.⁵⁶ After the implementation of this DMCA legislation, complaints were lodged by US citizens over their inability to carry out legitimate consumer circumvention activities. It is argued that the EU Member States should pay heed to the corresponding American difficulties.

An example of an American case in which software capable of being used for legitimate activities was deemed to be illegal can be seen in the Elcomsoft⁵⁷ case. Elcomsoft attempted to provide software capable of reading Adobe eBooks, which

⁵³ Hart, M and Holmes, S (n 49) 4.

⁵⁴ Digital Millennium Copyright Act of 1998, 17 U.S.C. 120.

⁵⁵ R D. Gross, 'Circumvention Prohibitions Reconsidered: Why America's Mistake is Europe's Future?' (2003) IP Justice accessed at http://ipjustice.org/media/release20031105_en.shtml.

⁵⁶ King, B 'Corporate Paws Grab for Desktop,' Wired News (2002).

⁵⁷ *Adobe Software v. Elcomsoft & Dmitry Sklyarov eBook Reader*.

software also had many lawful uses (for example reading eBooks on other computers, printing a page for a school report). Although many lawful uses of the software existed, a lengthy trial ensued with Elcomsoft only being acquitted years later.⁵⁸

Exceptions to copyright are provided for in the EUCD. However, broad anti-circumvention rules will have negative consequences for the exercise of these rights and could hinder the manufacture and dissemination of devices with legitimate uses, and obstruct other legitimate uses.⁵⁹ Initially anti-circumvention technology was considered to be too primitive to allow distinction between illegal and legal circumvention. In the EUCD Art 6(4) and recital 51 provide for the protection of legal uses. Severe problems in the EUCD still exist. In particular, the EUCD does not give users any authority to perform acts of circumvention themselves and there have been difficulties in implementing this section of the EUCD.⁶⁰ In the UK case of *Sony v Ball*,⁶¹ Sony Playstation consoles were designed to only work with authorised games, which were from the region of purchase. Ball was involved in the design, manufacture, sale and installation of an electronic chip. This chip could be attached to the Sony console allowing DVDs to be played which did not contain the necessary authorisation code, and thus allowing games from other regions to be played. The court held that the chip recorded a temporary copy of the data which was infringing and Ball had breached Sony's rights. The question to be considered was whether software which allows one to use a game purchased in a different region could in fact be deemed to be copyright infringement? It is argued that such a situation should not be considered an instance of copyright infringement.

Another consideration, particularly in the UK, comes from the substantial parts test. In the UK the level of creativity required for copyright protection is low standard, however infringement of copyright in works with low levels of creativity does not occur until a 'substantial part' of the work has been taken. The access control afforded by

⁵⁸ Waldmeir, P 'Russian Group Cleared in Digital Test Case' *Financial Times*, (2002).

⁵⁹ Westkamp, G 'Transient copying and public communications the creeping evolution of use and access rights in European Copyright Law' *Washington International Law Review* (2004).

⁶⁰ Hart, M 'The copyright in the Information Society Directive: an Overview' *European Intellectual Property Review*, (2002) 58-64.

⁶¹ *Kabushiki Kaisha Sony Computer Entertainment Inc. and Others v Ball and Others* [2004] EWHC 1738.

TPMs may serve to prevent the legal or authorised taking of a small or insubstantial part of a work.⁶²

4.2 Difficulties in Responding to Piracy Evolution

The problems associated with the protection of copyright are exacerbated by the evolution of piracy. As TPMs evolve so do methods that circumvent them. These include methods which act directly on the TPMs as well as methods such as file sharing that allow publication of copyright material without circumventing the TPMs.⁶³ Some of the most commonly used TPMs, such as 'Macrovision', 'CSS', 'SCMS', and 'SDMI' have been circumvented.⁶⁴

The *Johansen*⁶⁵ case is an example of the usage of methods to circumvent DRMs involving DVD encryption. Dvddecrypter.com was a very popular tool for decrypting DVDs. This was shut down at the beginning of June 2005, and its developer gave up development due to pressure from a large unnamed company. The DCC also pointed out that DRMs are vulnerable in the long term.⁶⁶

File sharing technologies are also evolving. The original 'Napster' site was an illegal technology that carried out pirate activities. This site used a centralised server onto which files could be uploaded and shared. The owner of the server was discovered and the site shut down. However this technology evolved, in this case into P2P sites. Here the network's participants provided the resources in place of a centralised server. Attempts have been made to try and target this type of piracy. A recent example can be seen in the *Grokster*⁶⁷ case, where it was ruled that the file sharing network had a responsibility to monitor files that are uploaded otherwise the network itself is committing a secondary infringement. 'BitTorrent' demonstrates a further evolution and accounts for thirty five

⁶² Westkamp, G (n 59).

⁶³ Kerr, I, et al 'Technical Protection Measures: Part 1,' Canadian Heritage (2002).

⁶⁴ Sookman, B 'Technological protection measures (TPMs) and copyright protection: the case for TPMs,' Computer and Telecommunications Law Review 11(5), (2005) 143-159.

⁶⁵ *Universal Studios et al v 2600 Magazine* 111F.Supp.2d 294 (2nd Cir. 2001). Available at http://www.eff.org/IP/Video/MPAA_DVD_cases/20011128_ny_appeal_decision.html.

⁶⁶ Sookman, B (n 64) 143-159. The DCC noted that: "The average person might be unable to mount even a rudimentary attack, and even talented crackers' might fail. But just one successful attack can be incorporated into software that will permit even an amateur to succeed."

⁶⁷ *MGM Studios, Inc. v. Grokster, Ltd.* 545 U.S. 913 (2005).

percent of all Internet traffic and fifty five percent of file-sharing traffic according to CacheLogic web analysis. The particular problem with BitTorrent is the more people exchange data on BitTorrent, the quicker the data flows. Although these types of technologies can be used to distribute legal content it does also enable copyright infringement to occur on a large scale.⁶⁸

4.3 Problems with Digital Rights Management Systems

There are major consumer concerns relating to DRMs. The international Federation of Reproductive Rights Organisations (IFRPO) has described an ideal DRM as:

"[O]ne which is capable of 'detecting, preventing, and counting a wide range of operations, including open, print, export, copying, modifying, excerpting and so on' resulting in a 'captured record of what the user actually [does]."⁶⁹

This requires storage of large amounts of user information giving rise to concerns over privacy issues. An example is seen in Microsoft's 'Windows Media Player', where Microsoft embedded a globally unique identifier to track users, and record their movements.

The information stored by DRMs can be used for user profiling to facilitate, in particular, targeted advertising. For example, DRMs associated with music downloading sites could record preferences for a particular music group; this information could be used in advertising, by sending details on new album releases by this band. The DRM owner can use the information gained for their own benefit, or sell it to others.⁷⁰

⁶⁸ Sookman, B (n 64) 143-159.

⁶⁹ Ganley, P 'Access to the individual: digital rights management systems and the intersection of informational and decisional privacy interests' *Journal of Law and Information Technology*. 10(3) (2002) 241-293, Akester, P 'Digital rights management in the 21st century' *European Intellectual law rev.* 28(3) (2006) 159-168 and Bygrave, L 'The technologisation of copyright: implications for privacy and related interests' *Intellectual Property Review* 24(2) (2002) 51-57.

⁷⁰ Ganley, P (n 69) 241.

PART 5
POLICY CONCERNS

5.1 Consumer's Rights and Technical Protection Measure

A good example of the inconsistency between technical measure and consumer protection is the *Sony rootkit*⁷¹ case. In 2005, Sony BMG included a copy prevention measure in its compact disks. The software was automatically installed on windows without the consent of the user or his awareness.⁷² It was demonstrated that Sony could, with this rootkit; control the music you listen to and that using a removal tool to erase Sony protection could cause the computer to crash. These TPMs harm consumer private rights, including respect for private life and property rights by damaging the computer. After several class action suits against Sony, the electronics giant was convicted with monetary damages apportioned to end-users.⁷³

The consequences of this case were felt not only by Sony BMG, but also on the compact disk industry in general and even on antivirus companies who were not able to detect the rootkit and who remained silent after the first information about the scandal was released.

TPMs are often unpopular to consumers as they restrict consumer use and in light of the *Sony* case, TPMs appears very threatening even to consumers who have no intention of circumventing TPMs or infringing copyright. Although public opinion concerning TPMs has been negatively aggravated in light of the aforementioned high

⁷¹ The specialised press attacked hardly Sony BMG and knocked violently the corporate image of the company. Besides, a reaction of the artists produced and distributed under the "Sony - BMG" label, was also foreseeable, since the overall situation directly caused a great dissatisfaction of the fan base. More over it has to be underlined that even the Bush Administration was scandalised by this case and http://blogs.washingtonpost.com/securityfix/2005/11/the_bush_admini.html according to a journalist of the Washington Post, the Department of Homeland Security's assistant secretary for policy, Stewart Baker, made "a remark clearly aimed directly at Sony and other labels": "It's very important to remember that it's your intellectual property - it's not your computer. And in the pursuit of protection of intellectual property, it's important not to defeat or undermine the security measures that people need to adopt in these days".

⁷² Rootkit software is very hard to find and remove. The software in the *Sony* case was used to hide its presence in the system of a copy prevention measure. In general, rootkits are used by hackers to conceal viruses.

⁷³ Krebs, B 'DHS Official Weighs In on Sony' (2005) accessed in: http://blog.washingtonpost.com/securityfix/2005/11/dhs_official_weighs_in_on_sony.html.

profile international case law, there still exists the feeling that corporations intend to abuse consumer rights. In particularly Thomas Hesse notoriously stated that:

"Most people don't even know what a rootkit is, so why should they care about it?"⁷⁴,

this statement, it is argued, is indicative of industry's view towards end-users.

5.2 Competition and Technical Measures

Competition concerns can originate from DRMs with regards to compatibility between systems (for example, operating systems and DRM content).⁷⁵ 'Microsoft's Windows Rights Management' system is an example of a competition concern. In this case, information protected is only accessible if the protected information is created in a 'Microsoft' product and accessed by a Microsoft product. This causes problems for 'Linux' and 'Macintosh' users, and creates an added incentive for users to purchase Microsoft products.⁷⁶ Further competition concerns associated with DRMs exist including the free movement of goods within the EU. The DRMs used by 'iTunes' allowed citizens to only access tracks from the 'iTunes' site from their country. This allowed them to price tracks differently in different countries.⁷⁷

The protection of copyright is important and has economic effects. It is generally accepted that the cost of production of novel works is high, whereas the costs involved in

⁷⁴ Schneier, B 'Sony's DRM Rootkit: The Real Story,' (2005) accessed in: http://www.schneier.com/blog/archives/2005/11/sonys_drm_rootk.html.

⁷⁵ Stromdale, C 'The problems with DRM,' Entertainment Law Review. 17(1) (2006) 1-6.

⁷⁶ This is demonstrated in the Microsoft-Time Warner, Content Guard acquisition case. In 2004, Microsoft and Time Warner tried to acquire the American company Content Guard. Content Guard specialised in the development of technology and products for rights management of digital content. The European Commission was very sceptic about this deal. Indeed according to EU regulators, this acquisition would mean Microsoft would have the ability to use DRM as a gatekeeper technology, because Microsoft will control which software can be used on computer operating system. Controlling and imposing specific DRM standards might affect fair competition in the music distribution business and consequently exclude third party operating systems such as GNU/Linux from establishing their presence in the market, in addition this will threaten the goal of interoperability (see below). It would be a huge advantage given to Microsoft and software conceived for windows. To avoid all abuses a European inquiry was ordered to appreciate the effect of this trade on the free play of competition. Hopefully Microsoft and Time Warner have decided to change their strategy.

⁷⁷ Stromdale, C (n 76) 1-6.

copying that work are much lower. For this reason the right to prevent copying is an important incentive without which new works may not be created.⁷⁸

PART 6

PROPOSALS

6.1 Legal Protection and Legislative Solutions

One approach to reconcile consumers' rights, fair competition and DRMs is to guarantee interoperability.⁷⁹ A recent European Commission report highlights the urgent need for interoperability.⁸⁰ The report concluded that interoperability should become a reality in the following 2 to 5 years. Experts have recommended to industrialists to start thinking about open DRM system expandable on different platforms. According to the report, DRMs must be conceived with the final aim of interoperability. Interoperability ensures the free play of competition for example and that consumers won't be obliged to legally download the same song several times for each different music player.⁸¹ In line with this approach, DRMs will not create additional obstacles in the way of legitimate circulation of copyrighted works.

According to French law, providers of technological measures are required to provide access to documentation, which is needed to achieve interoperability.⁸² In other

⁷⁸ In the case of *L.b. (plastics) Ltd v Swish Products Ltd*, Lord Wilberforce stated that: "[T]he protection given by copyright is against copying, the basis of the protection being that one man must not be permitted to appropriate the result of another's labour." There is also the natural rights argument for the protection of copyright (that copyright should be granted because it is right and proper to do so). This means that protection for the rights holder must be balanced against the difficulties of consumer protection and free pay of competition".

⁷⁹ The institute of Electrical and Electronics Engineers defines interoperability as "the ability of two or more systems or components to exchange information and to use the information that has been exchanged". In other words interoperability is the systems ability to work together.

⁸⁰ Written by an expert group called High level Group on Digital Right Management created in March 2004, including supplier of content representative, members of professional association collecting payments of artists' rights, editors, producers, mobile phone or Internet operators, manufacturers, DRM vendors and consumers association.

⁸¹ According to the French acting Minister of Industry in 2004, Patrick Devedjian, consumers can be interested in a legal download offer only if they are assured that they will be able to listen to their music on different media.

⁸² It includes technical documentation and interfaces needed to obtain, in an open standard, a copy of a technically protected work and a copy of information in an electronic form accompanying this work.

words, anyone (from a software publisher, technological measure conceiver to a service provider) can appeal to the new Independent Administrative Authority⁸³ against any other person who is illegally retaining any information that hinders interoperability.

Nowadays, the war against acts of counterfeiting and especially against massive counterfeiting (P2P) renders the need for a coalition of industry players. It is a question of public interest as well as a question of market power. In order to make DRMs an effective obstacle to piracy is by way of interoperability and to achieve this goal cooperation between industrialists is urgently needed. Accordingly, interoperability should be legal obligation as evident in France.

CONCLUSION

This report has considered the legal background relating to TPMs within the EU and Switzerland. The provisions of the EUCD have been met with considerable criticism in the course of their national transposition, particularly since these protection measures threaten the ability of consumers to legally access copyright works as well as detrimentally affect consumers' privacy rights. Nevertheless, it is recognised that these TPMs are required to protect copyrightable works from various threats posed by the Internet and the digital and electronic age⁸⁴

⁸³ This Authority is very powerful and is able to issue injunctions with pecuniary sanctions and to petition the Competition authorities if this is not complied with (L331-6; L331-7 CPI). As a result, a direct application of such a provision would result in banning techniques binding a format to a particular playback device.

⁸⁴ Will large companies follow this tendency? Will consumers show more respect to copyrighted works? It is argued that these are the new challenges in the future. In the Content Guard case (2005), Thomson joined Time Warner and Microsoft to acquire Content Guard. It puts a final point to the risk of illegal agreement between Time Warner and Microsoft and consequently the companies have withdrawn their notification under the Merger Regulation. In addition the investors have promised to develop interoperability of DRM and to accelerate the expansion of the access to the public. Therefore the Commission will not take any further action on the basis of the Merger Regulation. Nevertheless, the Commission will continue to supervise developments within the DRM sector and may take action under EU antitrust rules if necessary. It is rather satisfactory, a safeguard for privacy and consumers' right in Europe, the fact that EU authorities are now aware of the importance of DRM technical measures and their impact on the market. It is to be wished, that European Authorities continue taking this strong position to make changes as we observed the strategic change realised by Microsoft and Time Warner.

To this end this Report has proposed the introduction of interoperability standards into national legislation in regard to TPMs as well as to sufficiently and clearly mark products to which TPMs have been applied. The French ‘interoperability approach’ and the German ‘clear marking approach’ may provide valuable checks against instances of DRMs consumer abuse.

On the whole, the transposition and content of the EUCD may be too early to evaluate. It is argued that the EU Member States must remain cognisant of the similar situation within the United States of America and the potential for TPMs consumer abuse. Accordingly, it remains the domain of the Member States to guarantee that the balance between the copyright protection and human rights exists.

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