Digital disposition of a work: From technical protection measures to Creative commons

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Introduction

Law has always tried to stay neutral and above technological progress in order to remain applicable to all issues stemming from technological progress and thus immune to threats. In the case of laws defining and protecting intellectual property, a reaction was necessary against all threats coming from the continuous technological progress. Since then, intellectual property has grown to include many different artistic creations as well as to include new uses of these creations such as a digital disposition of a work[1].

The core of the function of the Internet lies on sharing. Intellectual property rules are more "flexible" in the eyes of the users when they are online and the risk of being caught seems minimal. Since the simple word of the law did not have an effect on peoples' attitudes, the legislator decided to use technology in order to eliminate the problems originating from the evolution of technology. The publisher Charles Clark, in his most memorable phrase concluded that "the answer to the machine is the machine"[2]. In other words, he suggested that all intellectual property problems related to new technologies can only be solved by the use of technology.

This is how the well-known technological measures were established in all kinds of creations. Since the very birth of copyright, there have always been legally controlled forms of getting access to protected works and objects of related rights, such as buying copies of works and records, lending books from libraries, buying entrance fees for cinemas, theatre, concert halls and exhibition halls etc.[3]

Regarding the case of the internet, many mechanisms appeared in order to secure the digital disposition of creations or in order to prevent and control certain uses of creations. Severine Dusollier graphically describes this attempt as the "*will of the author to reinforce their power over their intellectual possessions, to push away the intruders. It is an effort to reinstall their power over their creations which was lost by the digital mutation and other technological developments. In an era when copying is easy and the conscience of copying has died out, technical measures are nothing more than the "lost morality" of the user of digital creations*"[4].

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[1] Vagena E. *Technological protection and digital administration of intellectual property* (in Greek), Nomiki Vivliothiki, 2010, p.1

[2] Charles Clark, The answer to the machine, is the machine, in Hugenholtz B., *The future of copyright in a digital environment*, Kluwer law International, 1996, p.139-146

[3] M. Fiscor, Protection of 'DRM' under the WIPO 'Internet Treaties': Interpretation, Implementation and Application in Irini A. Stamatoudi, *Copyright enforcement and the internet*, Kluwer 2010, p.283

[4] Dusollier Severine, *Droit d'auteur et protection des œuvres dans l'univers numérique*, Larcier, 2007, p.37

But since the fate of technology is to be rapidly updated and thus outdated, the risks of circumventing the technical measures created to protect intellectual property rights of creations could not be ignored by the legislator. In order to put a legal fence of protection over the technical protection measures, international and national rules were created to penalize acts of circumvention.

1. Typology of TPMs

An official categorization of technical protection measures does not exist. However, several opinions exist by various scholars in an attempt to provide the most accurate description possible. The fear of over simplifying these measures as well as the constant evolution of technology makes this task even more difficult. The most widely accepted system of classification is that which takes as a distinctive criterion the function of each technological measure[5].

According to the aforementioned classification theory, there are three major categories of technical protection measures:

a) Technical measures that control the access to works

It consists of systems integrated in a creation so as to control the access to the original creation or even the making of copies of the original creation. These systems lock the creation and only the user with the proper password can get access. The anti-copying systems work in a way so as to make the illicit copying of a creation almost impossible. One of the most known examples of the anti-copying devices is the region code restrictions of DVDs. In other words, the globe is divided in 6 regions which do not interact when it comes to playing DVDs acquired from a specific region code to another. As most of technological measures, this function can be circumvented. In addition, another use is to not obstruct the original access to a creation but the graduated completion of this access. The use of *beta versions* of various programs online is the most common example. The user can store a particular program for use to their computer for a specific amount of time. Afterwards, and according to the amount of satisfaction, the user can decide to acquire a copy of the program in question or not[6].

b) Technical measures that control the uses of works

This type of technical measures consist of restrictions and controls over the potential uses of a creation. There are certain technical measures that authorize copying, for example, but in a restricted environment only. Others allow a specific number of copies or control the quality of the copied creation so as it can no longer be useful for further exploitation. The most common example of such measures can be found in the iTunes technology whose particularity will be discussed further below.

c) Technical identification measures

The identification measures assemble all the information that constitutes the identity of each creation. They can hence provide information not only about the name of the creation and its author but also information about the legal status of the creation. This information plays the role of the

[5] Dusollier S., *Droit d'auteur et protection des œuvres dans l'univers numérique*, op.cit., p. 40
[6] Vagena E. *Technological protection and digital administration of intellectual property,* op.cit., p. 19

matriculation plaques of digital objects in the "avenues of information"[7]. The use of these measures is manifold. The identification informs each potential user of the nature of the creation as well as of the uses that are legally permitted by the author. It also works as a guide to the computer that analyzes the data and accordingly grants or denies specific uses to third parties.

These technical measures apply to digitalized creations as a second layer of protection against intellectual property threats. Soon enough they were recognized as legitimate measures from the international legal community and their protection was considered necessary.

2. The legality of technical protection measures

Unfortunately, for the media industry technical protection measures are inherently fallible as ingenious hackers always find ways to circumvent them[8]. In an effort to offset this vulnerability, these measures attained legal protection and such tampering with them induced legal sanctions.

a) Legal protection for technical protection measures

The legislative foundation for TPMs was created through the two WIPO Internet Treaties on 1996. The expression Internet Treaties refers to the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty, adopted on 20 December 1996 by the WIPO Diplomatic Conference "on certain Copyright and Neighboring Rights Questions"[9].

According to article 11 of the WIPO Copyright Treaty, "*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*"[10].Article 18 of the WIPO Diplomatic Conference deals with the same issues using a language almost identical.

The European Union, in support to the aforementioned Treaties, protects in its turn the technical protection measures. The Directive 2001/29/EC of 22 May 2001 "on the harmonization of certain aspects of copyright and related rights in the information society" installs a similar protection system.

In the case of the United States, a law protecting technical protection systems was incorporated in the Digital Millennium Copyright Act on 1998. These provisions also integrate the conditions set by the WIPO Internet Treaties.

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[7] See Vagena E. *Technological protection and digital administration of intellectual property,* op.cit., p. 20 as well as Dusollier S., *Droit d'auteur et protection des œuvres dans l'univers numérique*, op.cit., p. 40 This metaphor was originally used by J.Ginsburg "Putting cars on the "Information Highway": Authors, Exploiters and Copyright in Cyberspace", in B. Hugenholtz (ed.), *The future of copyright in a digital environment,* Kluwer, 1996, p.189-219

[8] Stefan Bechtold, *Digital Rights Management in the United States and Europe*, 52 AM. J.COMP. L. 323,331 (2004) cited in Jane Winn & Nicolas Jondet, *A new deal for end users? Lessons from a French innovation in the regulation of interoperability*, 51 William & Mary Law Review 547, 2009

[9] M. Fiscor, *Protection of 'DRM' under the WIPO 'Internet Treaties': Interpretation, Implementation and Application*, op. cit., p.257

[10] The text of the treaty is available online in the WIPO site: http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html#P87_12240

The international community demanded from all contracting parties an "adequate" and "effective" protection regarding technical protection measures. This protection covers all acts of circumvention as well as preparatory acts of such circumvention. The difficulty in clearly defining the terms used in laws protecting technical protection measures led many cases to be clarified by courts.

The term "effective" when referring to technical protection measures needs further explanation in order to determine the criteria that define the nature of its effectiveness. It has to be noted though, as it has been pointed out by the WIPO Guide to the WCT that infallibility is not a criterion of effectiveness. According to the Guide, such interpretation would be absurd since the objective of the provision is exactly guaranteeing protection against acts of circumvention, which "by definition" must be regarded to be possible also in case of effective technological measure (since if it were possible, no protection would be needed)[11].

The Helsinki District Court, based on a theory applied in American courts, created a test of effectiveness of its own. According to the Court, if the software used to circumvent protected material is made available only to a limited amount of online sources, only then the technical protection measure can be characterized as effective. This case caused a lot of excitement in the copyleft movement but it was quickly overturned by the Helsinki Court of Appeal with the justification that the technical protection measure is suitable to achieve its objective *in the normal course of operation*.

b) Controversial application of technical protection measures

The Mulholland Drive case illustrated the meaning of the obligation of respect of limitations and exceptions introduced by copyright law when applying technical protection measures. The infamous case was followed with great interest from scholars. The decision concluded that the right to private copying does not apply in the case of DVD films protected with TPMs. In other words, the owners of rights are not obligated to remove any TPM systems applied to the DVDs because such "an action would be in conflict with a normal exploitation of the work in question". The Court of cassation justified its decision[12] by claiming that a possible permission to make free copies of TPM-protected works could result in an illegal online distribution for other users. Various countries in Europe have dismissed the claim of multiple copyleft advocates that the right to private copying is being obstructed by TPMs.

It would be convenient to defend the priority of TPMs over the legal exceptions introduced by international treaties and transposed in national laws. However, the importance of such exceptions should not be dismissed or ignored by technology. They do not constitute a "marketing option for

[11] M. Fiscor, *Guide to the Copyright and Related Rights Treaties Administered by WIPO* (Geneva, WIPO publication No 891 (E), 2003), 216 cited in M. Fiscor, Protection of 'DRM' under the WIPO 'Internet Treaties': Interpretation, Implementation and Application, op. cit., p.270

[12] Cour de cassation, 1ère chambre civile, 19 juin 2008 (pourvoi n° 07-14.277 F-P+B), rejet du pourvoi de cour d'appel de Paris, 4 avril 2007. Available on line (in French)
http://www.legalis.net/spip.php?page=breves-article&id_article=1909

the rights holders"[13] . In other words, it is not up to them to decide their applicability but only the legislator can decide the legality or not of a suppression of an exception.

The biggest enemy of TPMs is circumvention. However, the discussion has shifted lately to the legality of the so-called "jailbreaking". This term concerns all acts resulting in allowing the user to upload unapproved or unofficial software to a hardware device. This act does not fall in the notion of circumvention whose illegality lies in the fact that authors want to keep control over the uses of their works. The particular case of jailbreaking raises the question of whether users have the right to remove restrictions over what type of software can be installed in a particular device.

Since July 2010, the United States have given a solution to this problem in their national legislation. In other words, the library of Congress included "jailbreaking" in the list of actions that constitute fair use and thus do not violate the Digital Millennium Copyright Act (DMCA). Although this decision also called the iPhone case has given an answer to the problem of the legality of jailbreaking, in other countries this subject has yet to find an official resolute answer.

No matter how beneficial the use of TPMs is for the protection of the authors' rights, they sometimes constitute an obstacle to the spread of a work even for users who choose the legal road to purchase a work and do not recourse to illegal file sharing programs. Taking the example of the aforementioned region coding, it serves to control the release of films as well as their price but it is a barrier to individuals who purchase DVDs from different region codes expecting that they will work. Moreover, another example of copyright industries getting in their own way concerns the accessibility of the legitimate digital downloading market. In fact, a large number of developing countries do not have access at all or even when they do, it is largely depleted.

It has been established that sometimes the purpose of some TPMs is not completely fulfilled and that it can result to illegal behaviors such as illegal downloading. In those cases the question has to go even deeper in order to explore the possibility of different possible ways to keep control over works, without extremely restricting it to the point of excessive copyright control.

3. The existence of TPMs in the Creative Commons licenses

The goal of traditional legislation methods is to establish a sense of security regarding the digital fate of works by augmenting the control exercised by the author to their works using multiple technical or legal "tools". The free movement constitutes the antipode of this system. It provides authors with the possibility of digital disposition of their work using the same legal means, with the difference of conceding more power to the users accessing a particular work. This movement has a unique effect globally because the right to access to information has become one of the dominant rights in matters of intellectual property and the restrictions imposed by the current legislations repel many users[14].

[13] J. Ginsburg and Y. Gaubiac "*Private copying in the digital environment*", in Jan J.C. Kabel and Gerard J.H.M. MOM (eds.), Intellectual Property and information law, Essays in honor of Herman Cohen Jehoram, luwer, Information Law series, n°6, 1998, p. 152

[14] As Barlow and Brand have stated in the first Hackers Conference in 1984: "Information wants to be free"

a) The function of the Creative Commons licenses

The regime of the Creative Commons licenses[15] lies on the proprietary system that characterizes the current legislation. However, the licenses try in the same time to "*stimulate another practice of copyright in order to provide a different image than that of a system which restrains creation and access to works*"[16]. It essentially consists of private agreements which apply on the top of the law as a form of exploitation of rights emerging from copyright. The CC licenses have become a de facto standard for open content licensing.

According to the CC website[17], "*Creative Commons licenses are expressed in three different layers or formats: the Commons deed (human-readable code), the Legal Code (lawyer-readable code) and the metada (machine readable code)*"[18]. Each license is constituted by the "core clauses" which are similar to all licenses and by the optional elements that are chosen by the license chooser interface and lead to a puzzle of elements. The assemblage of all elements (optional and non optional) leads to one of the six licenses currently available online. According to the licensor's wishes, the license can include some, all or none of the optional elements. The six licenses available are: attribution (BY), attribution-share alike (BY-SA), attribution-non derivative works (BY-SA-ND), attribution- non derivatives-non commercial (BY-ND-NC), attribution-non commercial (BY-NC) and attribution- non commercial- share alike (BY-NC-SA). During the creation of the license, the licensor can add additional information in the form of metadata such as the name and contact information for the author. The 6 combinations forming a CC license, available in all three formats, constitute the heart of the licenses.

b) The anti-TPM provision and a new era for metadata

In its effort to keep intact the freedom of the licensed works, the Creative Commons organization inserted a particular restriction to the limitations clause. According to it, the acceptant of the license "*may not impose any effective technological measures on the Work that restrict the ability of a recipient of the Work from You* [the acceptant of the license] *to exercise the rights granted to that recipient under the terms of the License*"[19]. This is a direct expression of the anti-TPM position of the organization. They support the opinion that a controlled access or use of a work goes against the basic ideology of the organization and the freedom granted by all creative commons licenses.

However, there have been some doubts expressed by an organization in the free software community called Debian. According to their opinion, that kind of prohibition prevents licensees from distributing works in formats of their choice, even if this means TPM-protected formats. The example used was the possible distribution of CC content on Sony Playstation platforms. Debian proposal to resolve this problematic aspect of the CC licenses is called the "parallel distribution"

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[15] See Dulong de Rosnay M., "*Creative Commons licenses legal pitfalls: incompatibilities and solutions*", Institute of Information Law University of Amsterdam,
available online http://www.ivir.nl/creativecommons/CC_Licenses_Legal_Pitfalls_2010.pdf

[16] Dussolier S., « *Les licences Creative Commons : Les outils du maître à l'assaut de la maison du maître* », Propriétés Intellectuelles, 2006, n°18, p.10

[17] http://wiki.creativecommons.org/FAQ

[18] i) a human readable summary of the license's core freedoms and optional restrictions, ii) the legal code, which constitutes the full text of the license and iii) a machine readable code embedded in the HTML containing metadata to be processed by search engines to locate works according to their licensing conditions.

[19] Such clauses are present in all Creative Commons licenses, art.4a Restrictions.

proposal. It essentially consists of a provision that gives the right to licensees to distribute CC-licensed works into any kind of formats, protected or not, provided that at least one format of the work would not restrict another person's exercise of rights under the license. This possible TPM policy change has been discussed during the versioning process, but has finally not been included in newest versions of the licenses because of the opposition of the creative commons community to the possibility of restricting freedom.

The CC licenses' system "circumvents" the restricting applications of digital rights management in order to promote only their positive uses. The use of metadata is an easy way to attach a license to work in the digital environment. In addition, metadata can hold information about the author, pricing information, contact information or even the status of liberty granted by the author to the users.

The potential of metadata as a means of expressing rights related to content is huge and not yet exploited to its full extent. The priority place that legal metadata should have in the copyright management is underlined even by the European Copyright Directive: "*Technological development will facilitate the distribution of works, notably on networks, and this will entail the need for right-holders to identify better the work or other subject-matter, the author or any other right-holder, and to provide information about the terms and conditions of use of the work or other subject-matter in order to render easier the management of rights attached to them. Right-holders should be encouraged to use markings…*"[20]

The positive uses of legal metadata have been widely discussed in the case of the particular licenses. The most well known user- friendly application is the implementation of a special search engine that enables users to limit their searches down to only works that contain certain liberties (such as liberty to make derivative works for example). In fact, Yahoo and Google have already incorporated a creative commons search engine option. Given the amount of information available online as well as the proliferation of liberty levels to different works, the possibility to use the legal status of a work as a search criterion is an indispensable tool for users. With the information provided by the metadata, users can easier contact the copyright owner for authorization if the planned use of the work is not in the scope of rights described by the license embedded on the work.

Evidently, the metadata cannot solve any liability issues stemming from the quality of information available online. The user does not, for example, have a way of verifying that the information is up-to-date and correct[21].

One of the biggest challenges present regarding creative commons metadata is their relation to the function of collecting societies. The structures of the CC licenses as well as the language used in the contracts promote such collaboration. Up until now collecting societies monopolized the royalties' management. The rise of Internet and of digital dispositions has shown the birth of competition.

The use of legal metadata could be the key to the reform of the management of authors' royalties. Collecting societies' uses could include cc works as well in order to manage their commercial uses

[20] Council Directive 2001/29, art. 55, 2001 O.J. (L 167) 10 (EC)

[21] See Hietanen H. and Dulong de Rosnay M., "*Legal Metadata Web Applications: Case Creative Commons*", Author manuscript, published in "Symposium on Digital Semantic Content across Cultures, Paris, le Louvre: France (2006)". Available online http://halshs.archives-ouvertes.fr/docs/00/12/01/82/PDF/hietanen-DulongdeRosnay-Legal-Metadata-for-Semantic-Web-Applications.pdf

and educate the users regarding the "level of openness" of a work. This way the notion of collective management takes a different form in order to include all works to the benefit of users.

From an economic point of view, cc metadata lowers transaction costs since they are self-explanatory. In other words, the user can proceed to the use (or re-use) of a work without requiring the assistance of third parties as specialists (for example lawyers or IT specialists). Even a possible collaboration with collecting societies will not augment the distribution costs of a work since there are no technical obstacles for rights' holders to exercise some of the individual rights while being a member of a collecting society.

4. Conclusion

According to the Creative Commons organization, their goal is "*to build a layer of reasonable, flexible copyright in the face of increasingly restrictive default rules*"[22].

We have established that technical protection measures exist to reinforce the control over copyrighted material. There is no harm in trying to protect a work any way possible, but the fact is that this sometimes excessive protection reaches a point of obstructing regular uses of works.

The society should not reach to the point of constructing such barriers using the pretext of a sustainable economy serving the fight against piracy. The proliferation of "tolls" [23] as a means of controlling a work distributed through various ways (radio access, internet access, console access etc) will only lead to a further repulsion of the public towards the artists while in the same time the distributors gain most of the profit.

The positive potential of metadata has shown that there can exist alternative licensing schemes that will actually function in an open content environment. The collaboration of the existing traditional copyright industry with the open movement can lead to the resolution of the copyright insecurity that governs the Internet distribution.

Any aggressive attempt to "govern" all possible distributions of works is eventually going to fail. Current copyright enforcement policies do not seem to grasp the meaning of Foucault's saying that coercion cannot ensure compliance[24]. Since the goal of all technical measures is to achieve the optimum distribution of a work by minimizing the transaction costs and the potential copyright threats, it is imperative that decision makers start thinking outside the box.

[22] History of Creative Commons, http://wiki.creativecommons.org/History

[23] J.M. Bruguière et M. Vivant, obs. sous TGI Nanterre 2 septembre 2003, Propr. Intell. 2003, n°9 p. 464, cited in Vercken G. et M. Vivant, *"Mesures techniques de protection sur le DVD, le test des trois étapes met en échec l'exception de copie privée"*, Legipresse n° 214, rubrique Cours et Tribunaux, pp. 148-155

[24] "*Governing people in the broad meaning of the word, governing people is not a way to force people to do what the governor wants; it is always a versatile equilibrium, with complementarity and conflicts between techniques which assure coercion and processes through which the self is constructed or modified by himself*" Michel Foucault, About the beginning of the Hermeneutics of the self : Two lectures at Dartmuth, 21 POL. THEORY 198, 203-204 (1993)