

The 8th International Scientific Conference
eLearning and software for Education
Bucharest, April 26-27, 2012
10.5682/2066-026X-12-102

INTELLECTUAL PROPERTY RIGHTS IN THE INFORMATION AGE

Dora-Anca BERTA, Maximilian-Iosif ROBU

Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iasi, Romania
E-mail: anca.bertha@feaa.uaic.ro, maximilian.robustu@feaa.uaic.ro

Abstract: *In a world in which the means of spreading information are more and more advanced and data distribution is done exponentially, the need to protect the originality of the papers becomes of great importance. In the XXI century, intellectual property will play an increasingly important role on the international scene. Works of the mind, such as inventions, concepts, brands, books, music and films are now used and consumed with pleasure in every corner of the world. With the dramatic rise in the use of the Internet, specifically for e-commerce and exchange of information and knowledge, the system of intellectual property protection is crucial for the development of digital society. Intellectual property information may now be found easily. Intellectual property is the most effective tool for fostering and propagation of innovation and creativity, which modern society is becoming more dependent, in particular by patents, industrial design, copyright and related rights, trademarks, geographical indications etc. This is the surest way to prevent and combat the unfair competition, to order the products and services and to obtain positive results in the fight for respect of exclusive rights, against counterfeiting and piracy. However, there are some problems that might be prejudicial to intellectual property. The control is lost and the cases in which intellectual property is violated are becoming more frequent, unauthorized use of some forms of intellectual property is one of the main problems with the development of the Internet. This paper wants to approach the intellectual property right in knowledge society, focusing on the educational. The theme presents interest and because of a growing interest for combating all forms of illegal use of the material that is part of the intellectual property sphere.*

Keywords: *information, intellectual, right, property*

I. INTRODUCTION TO INTELLECTUAL PROPERTY RIGHTS

Assuming that the capacity of creation and renewal of humanity is unlimited, this article aims to treat a quite important aspect, to identify ways in which these works can be protected by intellectual property rights. Intellectual property rights can serve as a mechanism to encourage intellectual production. The accompanying controls on reproduction rights, however, can also restrict the freedom to disseminate knowledge. It is difficult, however, to measure the influence of the intellectual property system on education. Because the many elements that influence education, each of which produces effects that interact with those of others, which makes interpreting the impact of intellectual property rights more complex.

In this chapter we give a brief foray into intellectual property rights issues highlighting the genesis the legal framework and a brief conceptual delimitation.

1.1. History of Intellectual Property Rights

The idea of intellectual property makes its presence felt only in the sixteenth century, the main reason for this concern being so late because the technical means for multiplying the works were limited, copyists being the only ones who make copies of a work.

The first forms of regulations of property rights occur after an event of great importance for humanity took place: the invention of printing by Johannes Gutenberg. He has a meritorious role for the mass production of books and written texts from Europe [8]- the first mass work produced is the Bible - the famous "Bible of 42 lines", written in 200 copies, distributing printed version from 23 February 1455.

After this event, printing and marketing mass works have led to regulations. From 1494, Italy, France and England started giving regulations, favored the printers and booksellers to obtain a monopolistic position in the works, the writers were forced to surrender their propriety and exploiting of the manuscript [7] . The good part of this regulations was that the author enjoyed the protection of considering that his work could not be published without his consent.

Another important moment is recorded in 1709 when Queen Anne of England has enacted "The special status" which treats the property of the author for his work, stipulating that the work remains the property of the author even after the sale. However, the Decree of 10 July 1973 from France is one that recognizes the full property right of the writers on creation. As regards Romania, the first law that dealt so called "Media Law", enacted on 13 April 1862 by Alexandru Ioan Cuza.

1.2. Conceptual framework

Intellectual property law is one of many branches of civil law, its area can be divided into four broad categories of intellectual property rights [2]:

- ✓ Copyright for literary and artistic works;
- ✓ Rights related to copyright - Performances of performers, producers of sound recordings or phonograms, radio and television;
- ✓ Industrial property right;
- ✓ Other intellectual property rights not included in the first category - software programs.

According to the regulations in force, copyright is that intellectual property right acknowledged to one or more individuals who have developed an original work of intellectual creation in the literary, artistic or scientific, no matter which creative methods are adopted, concrete form or manner expression and independent of value and their use or other legal holders, individuals or companies.

Authorship of a work can be attributed only to human beings because it is only enjoying physical and spiritual qualities and skills necessary to achieve a creative act. This condition is necessary but not sufficient for the author of a work: author cannot be that person who has these qualities, and more, an idea of a work but has not materialized in any way this idea. Also cannot call the author nor the person who performs purely technical operations for manifesting an author under his work (e.g. a book designer cannot obtain copyright editing operation only).

In other words, as a work to be protected must satisfy the following conditions:

- ✓ be the result of an act of creation - be original
- ✓ to be played in a material form of expression or to be expressed in a form of expression discernible sense
- ✓ are liable to be disseminated – presented to the public by reproduction, display, performance.

The scope of intellectual property is the creation of reports relating to intellectual literary, artistic or scientific, intellectual creations industrial and hallmarks of such an activity.

In a systemic approach is inferred that the issue of intellectual property consists of two categories [10]:

- ✓ industrial property right include patents, trademarks and geographical indications, industrial designs and topographies of semiconductor products;
- ✓ copyright, rights related to copyright and sui generis rights of data creators.

The main forms of classical intellectual property rights include supported and protected by international agreements and conventions are patent, copyright, trademark, industrial designs, utility models and topographies of integrated circuits, with different forms and variations contained in the them.

II. LEGAL FRAMEWORK

To be recognized, respected and protected intellectual property rights it was necessary to create a legal framework but also the specific legislative organisms to ensure that laws are respected.

2.1. Institutions empowered to protect intellectual property rights

Internationally, there is a organization of intellectual property protection and regulatory laws concerning this, called WIPO (World Intellectual Property Organization) in Geneva. Established in 1967 this organization currently has 183 Member States and administers 23 international treaties.

Another international organization, also based in Switzerland, in Berna is the Berne Convention, having now 105 member states, including the U.S. Romania is a member of the Convention since January 1, 1927, at which its accession enters into force this Convention by Law no. 152/1926.

Also, on a national level there are operating two such organizations to protect intellectual property rights, namely the Romanian Copyright Office (ORDA.) and the State Office for Inventions and Trademarks (OSIM.)

Currently in Romania, there are 10 collecting societies organized that work with ORDA's accept. Of these, those that are directly linked to education are: COPYRO, which manages the rights of authors of written works and PERGAM that manages the scientific works.

2.2. Legislation

The current law governing copyright and related rights is Law 8/1996 adopted on March 4, 1996. To align with the EU legislation in recent years other changes occurred as a consequence of the development of new information and communication technologies, we would mention: Law no. 285/2004, nr.123/2005 Ordinance, Law no. 329/2006 and Government Ordinance. 58/2010.

Although it is very broad, this law has significant limitations regardless of the development of information and communication technologies.

The copyright law of 1996 gives copyright to software programs as their primary means of protection. Unfortunately, the experience has shown that the choice was not the most inspired, Romania being among the leading countries when it comes to piracy. That is an out of date law, requiring a regulatory agreement with current technologies used by computer users. Recommendation of specialists in this regard would be supplementing with articles of this law to provide and protect data and works created by computer.

III. INTELLECTUAL PROPERTY RIGHTS IN THE INFORMATIONAL ERA

In the 21st century, intellectual property plays a role in the increasingly important on the international scene. Works of the mind, such as inventions, concepts, brands, books, music and films are now used and consumed with pleasure in every corner of the world. However, the rapid evolution of information and communication technologies brings new challenges in the field of intellectual property rights. One of the most urgent is the need for organizations to adapt and begin to profit from changes in technology on a large scale, especially in the field of information and the Internet.

3.1. Internet and intellectual property rights, from absolute freedom to censorship

With the dramatic rise of the use of the Internet, specifically for e-commerce and the exchange of information and knowledge, the system of intellectual property protection is crucial for the development of digital society. Instead, the Internet brings many opportunities and challenges for the intellectual property community complex. The benefits of the Internet in the field of intellectual property are obvious: exploitation of new knowledge with amazing speed, all based on collaboration through various communication channels. Information in the field of intellectual property can be found with ease now. Search for patents, for example, is made much easier with the potential of the internet registration is required through new patents by the institutions concerned. An innovative idea may be implemented much easier, communication barriers no longer exist, and the practical aspect of

geography tends to grow increasingly important. However, there are some problems that might be prejudicial to intellectual property. The control is lost and the cases in which intellectual property is violated are becoming more frequent, unauthorized use of some forms of intellectual property is one of the main problems with the development of the Internet.

The context of the current economic crisis and the accelerated evolution of technology increasingly deepen the gap between the freedom of access to information and the right to intellectual property. Information is often perceived as an asset that can be marketed and, to be sure, will restrict future access to information essential to the development of quality intellectual, cultural, economic and social.

3.2. What's next with intellectual property right?

Opinions about the future of intellectual property rights are divided. A first approach [4] shows the impact of the Internet on intellectual property rights. The consumers of intellectual property rights are divided in two camps: those who believe that everything is free and can be used without restrictions and those who consider that for any work there must be a price. Taking into account the current situation at the global level, we can say that none of the sides holds the absolute truth. Free things are not always guarantees with regard to quality; there is the danger of the use of overvalued property. The demarcation must be clear between what is free and where relevant laws of copyright protection. A series of recommendations are necessary:

- New exceptions to copyright law for greater flexibility in the digital age;
- Adding some exception for private copying, in order to enable consumers to change their music on CDs in their possession;
- The existence of research centers and libraries fit for the digital age;

Another approach [11] points out the exaggerated protection measures that attract a series of disadvantages, which can halt the process of innovation. In the next decade as technology identification and identification of the individual will develop, there will be a danger that the freedom of the individual will be affected. The argument supporting this idea is that the legislation in the field of intellectual property rights is too complicated and too restrictive. The idea that outstanding protection blocks creativity arises again. As we have already stated, information and communication technologies open up new opportunities for creating and spreading information in the current society. However, there is a signal that exaggerated measures, the desire to control in a form or any other form of intellectual property, may revoke the benefit created by technology and even halt the process of creation. In the long term, it is suggested that the effort for the implementation of an idea becomes increasingly harder.

A final approach [9] presents the issue of intellectual property rights from the perspective of the political games of power. The concentration of most forms of intellectual property is in the countries that have primacy in terms of both economic development and social development. The policies and regulations and more stringent protection are regulated by the actors who have the most to gain from its application. The main actor in the area of intellectual property rights remains the US. However, we cannot fail to note the irony; one of the most prominent players was among the last countries that signed the international protection treaties. At the moment there is a continued collaboration between the US and the EU for the creation of mechanisms of protection of intellectual property forms that use the Internet, as online databases.

As we have seen, the approaches on the issue of intellectual property rights differ from author to author. If the first approach is focused on the financial side, the second approach focuses on technology and how it can influence the critical field of intellectual property, attracting attention that technology comes with a number of undeniable advantages, but also brings a number of problems.

Internationally there is a growing interest for combating all forms of illegal use of material which is part of the sphere of intellectual property. For example, at the last G8 summit in Tokyo the issue of creating a service at the level of each country to combat piracy was raised.

Extra pressure comes from the big producers from both the software industry as well as in the film or even cars. At the moment we can speak of a true offensive of the large producers.

Measures to combat piracy are becoming increasingly diverse. For example, solutions that can ban search engines from displaying the results that contain links that would be contrary to the

legislation in the field of protection of intellectual property rights are being searched and developed. A recent case is the lost trial of Yahoo China at the expense of a group of producers (EMI, Universal Music Group, Warner Music, Sony BMG Music Entertainment) in the music industry. However the indemnities obtained are much smaller in comparison to the expectations, \$28,000 instead of the demanded \$ 750,000 [3]. We are talking about a gray area at the boundary of legally and illegally.

Gray areas are ubiquitous in the 21st century, the legislative delimitation of it has become increasingly harder. The tendency is to focus more on potential sources of copyright infringement, rather than on individual cases [6].

However, at the European Union level a series of measures to block access to sites that make reference to illegal material have been taken. The Pirate Bay example is relevant to the matter; there are law suits with the organizations that host the web site in order to shut it down. It should be borne in mind that this case could create a dangerous precedent, especially if finally materializes and the site is blocked will definitely start and other processes.

At the time of the current international scene there is only one point of interest: the Anti-Counterfeiting Trade Agreement (ACTA), an agreement which proposes a multi-lateral series of international standards for the implementation of intellectual property rights. The agreement, negotiated by a small number of countries, in coordination with certain segments of the industry, is controversial both from the point of view of the production process, as well as in terms of its contents.

Another alarming thing is creating different blacklists of sites, with censorship and the possibility of abuses from those who hold the power [5]. The most eloquent example comes from the Commissioner on the Justice of the European Union who proposed censoring all sites that show how to produce bombs. However, reality has shown that such a measure is not only to increase interest in a particular site or subject. In Denmark after obtaining an injunction blocking the site interest has increased, the number of hits practically doubling.

The measures outlined above will have an impact on education also. Thus, one of the big problems of the institutions is addressed in plagiarism, a phenomenon we will discuss in the following chapter.

IV. INTELLECTUAL PROPERTY INFRINGEMENT IN EDUCATION

In this section we want to talk about the most serious and commonly found violations of property rights information but also method to detect them, in digital sphere. Another aspect illustrated here is the applicability of copyright infringement rules in education.

4.1. Academic plagiarism

According to DEX's, plagiarism is defined as "literary, artistic or scientific else, acquired (partial or full) and presented as personal creation". According to U.S. law on copyright, plagiarism is considered 'repeated use of more than 8 words without specifying the source "[1].

Forms that recognizes this offense are:

- ✓ accurate reproduction of text without mentioning the exact reference and without using quotes
- ✓ redrafting the text's by own words without mentioning the exact source
- ✓ voluntarily by conscious acquiring intellectual work of another person / group of persons
- ✓ involuntarily using ideas or words without specifying source or specify it inadvertently wrong, haste or forgetfulness.

The trend of plagiarism has grown with the development of the Internet considering that the number of electronic resources but also the number of Internet users have increased exponentially. To detect the phenomenon of plagiarism mostly used is the software especially designed for this purpose. On the market there are different tools to check the percentage of academic fraud; so this makes originality to be encouraged and academic fraud to be much easier detected. This forces students to

work for their papers and researchers to publish original works, that leading to a better educational system.

Quality becomes a target for any institution that provides education. The stakes are enormous: the quality of articles, essays, or even end of studies papers, represents a point of departure when referring to educational evaluation, the quality of the educational act. We cannot forget the number of scandals about the fake researchers that have based on the work of others. Here we are talking about getting rewards and recognition while these researches have used the research and opinions of their colleagues, while their work is minimal to some papers.

The best known software are Viper, plagiarism detector, and Turnitin. There are free or online versions of software to detect plagiarism but are not as effective as professional ones, used mostly in universities.

The disadvantage of this method for detecting plagiarism comes from the fact that the application can detect only what is on the Internet, accessible to anyone, can't verify works posted on an institution's intranet where access is limited group of insiders. Also, detecting copying from books in print is out of the talk, but now this trend is dramatically lower than the copy on websites.

The development of the Internet, the billions of documents on the World Wide Web, but also the manner in which we collect information by browsing or using the search engines, have changed the way in which a work, be it research or essay. Allowing the inclusion of fragments of other texts, simplifying and making it easier to detect plagiarism, but is hindered. When copying text from the network, we talk about online plagiarism, plagiarism or cut & paste. Universities have become the main victim of this phenomenon. Today there are a series of measures designed to put a hold to these practices, like advanced software, paper scanners.

A remarkable success had the system implemented by the Faculty of Business Administration from Iasi with the copyright system called Blackboard. MEDIAEC Blackboard platform is designed for the development of educational and research services through interdisciplinary interaction. The main objective of MEDIAEC Blackboard is to develop academic performance by technologies peaks and expertise.

From 2010 the Blackboard platform has begun to be used in order to detect academic fraud. It also became mandatory the checking of each undergraduate or dissertation paper to determine its originality. The maximum threshold of "inspiration" allowed is 30%, not complying leading to a failure of presentation of the paper.

So far there hasn't been any paper rejected, and the professors believe that there is a constant improvement in the license and dissertation work. Also Blackboard is used to verify research work.. When receiving articles and scientific research, members of the editorial board of scientific journals of university check academic fraud, and only then if it's original it will be sent for review.

4.2. Educational piracy

Piracy involves the reproduction, distribution or use illegal software and other electronic goods (such as recorded music, images, databases) for personal or illegal trading. In education, this phenomenon takes the form of distribution of educational materials such as course materials, scanned books, studies, worksheets, videos, etc. Worth analyzing is the example of the corporation with the highest rise in recent years, Google. The solution for electronic books proposed by the American giant, Google Books shows million pages, both complying with laws regarding copyright and those who fail to comply with these laws. Since these are strictly a business where money comes from advertising, however it's easy to understand this approach.

V. CONCLUSIONS

The necessity of some clear rules concerning intellectual rights is as clear as always, especially if you aim for a better academic environment. Study does not have to resume just at reading

some books and reiterating the concepts that have already been proven. The need for innovations is as big as it always has been; because progress is obtain only through innovation.

The fact that we have so much access to all sort of information must be used as a tool not as a way to steal, because intellectual work is just as important as any other and thus deserves a proper defense.

One other thing that we would like to point out is that balance is a thing to aim for. We should not follow the path of censorship just because we are trying to protect our work. Access to information also leads to a better understanding of concepts and also fuels contradictory opinions which can then lead to new ideas.

Ways to protect intellectual property have appeared thanks to the highly modernized society we live in and as long as we don't cross some invisible lines, all these measures will help us build a more competitive educational system which will then lead to better prepared professionals.

Acknowledgements

This work was supported by the European Social Fund in Romania, under the responsibility of the Managing Authority for the Sectorial Operational Programme for Human Resources Development 2007-2013 [grant POSDRU/CPP 107/DMI 1.5/S/78342].

References

- [1] *** - Plagiatul și drepturile de autor, Comisia pentru Probleme Juridice, Etice și Disciplină Universitară Universitatea de Medicină și Farmacie Craiova, 2009, p. 1, <http://www.umfcv.ro/files/d/e/Despre%20plagiat.pdf>, retrieved on 20.01.2012
- [2] ***, - Stop Pirateria, http://www.stoppirateria.ro/Imagini/CMS/Fisiere/lexicon_tipar.pdf, retrieved on 18.01.2012
- [3] ***, - Yahoo China sued by music site for copyright violation http://www.zeropaid.com/news/7542/yahoo_china_sued_by_music_site_for_copyright_violation/ retrieved 18.01.2011;
- [4] Becky Hogge, B. - The future of intellectual property: Andrew Gowers interviewed, 2006, http://www.opendemocracy.net/media-copyrightlaw/gowers_4160.jsp, retrieved on 18.01.2012;
- [5] Charter, D., Richards, J., - Website bomb-making lessons to be outlawed across Europe, The Times, <http://www.timesonline.co.uk/tol/news/uk/crime/article2023030.ece> , retrieved on 21.01.2011
- [6] Fleischer, R., - The Future of Copyright, <http://www.cato-unbound.org/2008/06/09/rasmus-fleischer/the-future-of-copyright/>, retrieved on 11.01.2011
- [7] Jozsef, K., Dreptul proprietății intelectuale – note de curs, Facultatea de Drept, Universitatea Babeș-Bolyai, Cluj-Napoca, 2008, p. 6;
- [8] Murray, D., *Changing technologies, Changing literacy communities?*, Language Learning & Technology, Vol. 4, No. 2, September 2000, pp. 43;
- [9] Ronning, H., - Systems of control and regulation: Copyright Issues, digital divides and citizens' rights, . Critical Arts. 20(1), 20-34, 2006
- [10] Romițan, C. - Protecția penală a proprietății intelectuale, Editura C.H. Beck, Bucuresti, 2006;
- [11] Spinello, R. - The future of intellectual property, Ethics and Information Technology; 2003; 5, 1; ABI/INFORM Global;