

## PhD THESIS DECLARATION

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## Abstract

This PhD research focuses on exploring the relationship between software vendors and business customers in order to identify the main dynamics through a qualitative analysis of software agreements. The research used a methodological triangulation for gathering data;

1. The software licensing terms and conditions (T&C's) of ten Independent Software Vendors (ISV) (Microsoft, Oracle, SAP, Salesforce, Symantec, VMware (AirWatch), Fiserv, CA Technologies, Intuit and Amadeus IT Group) were examined.
2. From a legal standpoint, the investigation reviewed if such T&C's were clear and provided end-users with the complete information regarding all aspects of the software copyright license.
3. Focusing on audit rights clauses, the practices were evaluated and a comparative analysis table was provided.
4. An open interview was performed with key personnel working with software asset management and software audit.
5. A review of the perceptions regarding this subject (available on internet blogs) were analyzed and compared to the previous findings.

The findings of the above referred empirical research evidenced in the T&C's did not provide clear information in regards to the licencing terms, which facilitated an improper use of copyright protection and the abusive or dysfunctional conduct of the software vendors.

In order to support the empirical analysis, Chapter 2 provides an overview of how software has received legal protection, mainly through copyright, with a brief historical perspective. Chapter 3 is dedicated to the analysis of technology agreements, with particular focus on EULAS – End-User License Agreements.

Chapter 4 reviews the potential legal implications of these findings and of the abusive conduct of software vendors trying to present suggestions of improvements to allow a better and more collaborative relationship between counterparties as well as potential remedies to the problems observed during the empirical research.

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## INTRODUCTION

Whereas information constitutes a key element in the decision making, its access represents a daily challenge for Companies. On the one hand, its high diversity (formal vs. informal, decisional vs. operational, etc.) obstructs the collection of data, knowledge and messages; on the other hand, through their culture and values system, people may misinterpret the information and modify its sense<sup>1</sup>. As a result, information systems play a crucial role in the information storage, process and transmission. However, the perpetual transformation of the information and communication technologies does not help companies being at the technology forefront and remaining competitive: time to implement new software and it's already obsolete! In addition, the more the company business is complex, the more the effective exchange of information and deployment of tools for managing wisely this information meet difficulties. This makes the relationship between customers and suppliers very complex, mixing interdependence, partnership but also distrust with respect to the counterparty.

The constant changes in this scenario and the effort to remain in the forefront is not only a matter that affects companies. Society in general changes and needs to be flexible to adapt to the technological revolution: printing presses replaced the scriptoria and also changed the role of the scribe; railways replaced canals and also changed the way in which social organization around the canals functioned; railroads did not only make an impact on the barge pilot but also on the bargeman, lock keeper, canal owners, canal-side innkeepers, barge builders, waterway engineers and the horse

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<sup>1</sup> BOURE, R.; DARRÉON, J.-L., *Quand l'information était du pétrole gris... Variations autour d'une métaphore* (1993).

trade (most barges were horse drawn). Nowadays the digital cameras replaced photographic films, cloud storage replaced floppy disks and local servers, streaming videos replaces DVD players and VHS players. Each change brings disruption<sup>2</sup>, each disruption can also mean new opportunities which may not only concern historical and sociological interest but for this specific study interests the impact on law.

Law is constructed of social rules and is challenged to evolve every time society changes. Technological evolution, nowadays, is undoubtedly changing faster than any other moment in time. This accelerated change, transcending countries' borders, increases the complexity faced by governments and by the European Union when shaping policy regulating Intellectual Property. Is it possible, though, to create a legislation that withstands the constant changes and the test of time?

Information and Communications Technology affect all businesses and is critical to every organization in every sector. It is decisive, in order to remain competitive, to procure technology solutions and services and to work closely with strategic partners and suppliers. It is not surprising then that technology evolution continues to rise. Furthermore, is unarguable that ICT is not only an important tool for businesses but it impacts directly the society as well. With this growth and deep impact to business and society, significant risks may arise which directs to the importance of studies in this area.

The Information and Communications Technologies ("ICT") worldwide spending in 2016 was over three trillion Euros, divided into five segments: data center systems, software, devices, ICT services and communications services. Growth only in the software segment in 2017 is expected to reach an increase of 7,2% in terms of spending worldwide<sup>3</sup>. The majority of the ICT business transactions that allow this business to grow are negotiated through agreements, either between businesses or between consumers and businesses. The vast majorities of business transactions are

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<sup>2</sup> KLANG, Mathias. *Disruptive Technology*. Göteborg: Göteborg University, 2006. P. 8

<sup>3</sup> Research provided by the information technology research and advisory company Gartner, Inc. Available at: <http://www.gartner.com/newsroom/id/3482917>> consulted on April 3, 2017.

regulated by contracts and with the ICT agreements is not different; however, not many studies reviewing its actual content are available.

This study will concentrate on a qualitative analysis of software license agreements, reviewing all aspects of the agreement but with specific focus on audit rights and the possibility of license owners to request to audit customers businesses in relation to the licensed software. As a case study, the qualitative analysis looks closely to agreements negotiated between sophisticated parties (which lawyers typically negotiate) as the cases reviewed are of software license agreements between businesses.

The Chapter 1 commits to a qualitative research of software license agreements, the so called empirical research of software license agreements. This chapter, through a qualitative research of 10 agreements from the 10 biggest software vendors, is the core of the research, which will be the basis for the analysis and bibliographic research performed in the later chapters. The findings of Chapter 1 will be confronted with the legal concepts that support the software license agreements: the concept of copyright for the protection of computer programs and the application of such concept in the copyright license agreements, with a focus on the tools used to protect the software vendors' rights, specifically in this case, the audit rights requested in the software license agreement subject to review.

On an exploration attempt, Chapter 1 aims to provide a picture of the relationship between software vendors and customers in order to identify main dynamics through a qualitative methodology which will combine multiple methods (document analysis, interviews and observation) in a methodological triangulation for gathering data<sup>4</sup>:

- The software licensing terms and conditions (T&C) of ten Independent Software Vendors (ISV) (Microsoft, Oracle, SAP, Salesforce, Symantec,

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<sup>4</sup> ROTHBAUER, Paulette. Triangulation. The SAGE Encyclopedia of Qualitative Research Methods. Sage Publications. P. 892-894.



WMware (AirWatch), Fiserv, CA Technologies, Intuit and Amadeus IT Group ) will be examined.

- From a legal point of view, the investigation will review if such T&C are clear and provide end-users with the complete information regarding all aspects of the software copyright license or if the T&C do not provide clear and straight-forward information, which facilitates an improper use of copyright protection. This part of the investigation will be better developed in the following Chapters.
- Focusing on audit rights clauses, the practices will be evaluated, a comparative analysis table will be included, and the conformity audits standards will be subject to review.
- An open interview will be performed with key personnel working with software asset management and software audit;
- A review of the perceptions regarding this subject (available on internet blogs) will be analyzed to investigate the findings.

The Chapter 2 will focus on how the IP protection of software has been granted and a brief review of the historical aspects that provided for such concept. Much debate has been in place for the subject matter regarding which IP rights regime shall be applied for the protection of computer programs. This study will be primarily on copyright law, following the historical tendency to protect computer programs through copyright and the protection the copyright system has provided to proprietary software companies to prevent the unauthorized copying of their software. The final part of Chapter 2 will be dedicated briefly to the study of cloud computing in order to understand why it impacts the traditional business model of software licensing and how copyright law can be applicable in that case.

Chapter 3 concentrates on the license agreements and its main characteristics. The copyright owner, in order to benefit from its creation, can give a license to another

person or company, which may allow the use, modification or distribution of his/her work in exchange of proper consideration. By the end of Chapter 3 the review of the main concepts related to the software diffusion will be concluded which intends to allow a better understanding of ICT transactions.

The study results, discussions and potential implications as well as an attempted suggestion of remedies will be further revised by Chapter 4. This Chapter will be dedicated to the discussion of findings of the qualitative research of Chapter 1 and the analysis of the questions presented during this research, trying to promote a legal analysis to this problem and, if possible, presenting suggestions of improvements to allow a better and more collaborative relationship between counterparties as well as potential remedies to the problems presented in the first chapters.

## CHAPTER 1 – Software license agreements empirical research

Companies in need of Information and Communication Technologies as an element for supporting their business have a conflicted interest with the owners of the Intellectual Property, whose aim is to obtain the maximum profit from its product. One of the parties need to have access to the product and the other party need to make such access as costly – profitable – as possible. These different interests can only be resolved or mitigated by contractual arrangements. Well-designed contracts provide incentives for the contracting parties to obtain advantages from cooperation, assuming both parties have symmetric access to information.<sup>5</sup>

The empirical research of the Chapter 1 aims to review ICT agreements and to evaluate, among other things, if they present similar aspects and provide for proper cooperation between the parties. Together with the analysis of the agreements content, the focus will be directed to the audit rights clause, an instrument of control used by the Independent Software Vendors (ISV) to ensure compliance with the license terms and conditions as well as control any infringement of its Intellectual Property rights.

The number of Customers/Software Users being audited by Independent Software Vendors (ISV) regarding the usage of programs and compliance with software license agreements has increased dramatically during the last ten years<sup>6</sup>, and although the audit frequency is stabilized at the present moment<sup>7</sup>, the problem has no potential definitive solution and remains of great concern for the customers which depend on

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<sup>5</sup> Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. Oliver Hart And Bengt Holmström: Contract Theory. 2016.

<sup>6</sup> On January 27, 2012, the information technology research and advisory company, Gartner, released a survey showing that two-thirds of all companies have been subject to software auditing during the 12 months prior to the research. DISBROW, Jane B.; BONA, Alexa.

<sup>7</sup> BARBER, Victoria; JEPSON, Ben; MARQUIS, Hank; SIENKOWSKI, Marie. Toolkit: Surviving a Software Audit. Gartner Inc., 23 February 2016.

certain technologies for running their businesses.

Through a documents content analysis, the Chapter 1 aims to examine the ISV practices with particular focus on the software licensing contract terms and conditions and the audit practices related to such terms and conditions. The qualitative research will verify the terms and conditions as well as the audit terms described by the software agreement.

### **1.1 Software Implementation: A Tool to Access Information and be Competitive**

Information results a vital resource in the decision process. But the access to information leads to several questions: how to get there? What information is relevant? How to store it? What is the cost of information? What is the return on investment of projects implemented to acquire it? In business, information is the result of a dual process: on the one hand, it comes from internal or external company stakeholders. Those later have their own cultural representations and will therefore make sense to certain and filter other<sup>8</sup>. On the other hand, information is linked to the organizational control system: information is considered relevant according to the company strategic objectives.

There are different types of information that will constitute the general information<sup>9</sup>. Information system will allow processing it, involving both the company and its environment. Information system corresponds to the set of all interactive informational situations and to the complex game of all significant information exchange<sup>10</sup>. To analyze this system, several factors must be considered:

- The actors which belong to different information systems (business, profession, trade union, etc.). Their perceptions and information filtering

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<sup>8</sup> BOURE, R.; DARRÉON, J.-L., Quand l'information était du pétrole gris... Variations autour d'un métaphore (1993)

<sup>9</sup> FLORIDI, Luciano. Information - A Very Short Introduction. Oxford University Press, 2010. 152 p.

<sup>10</sup> MÉLÈSE, Jacques; Approches systémiques des organisations. Paris, Hommes et Techniques, 1979. P. 72.

will be heavily influenced by their cultural representations and by their level of autonomy.

- The synergy actions between the actors: people may resist flowing the information, or involuntary withholding information.
- The organizational structure, which can obstruct the information circulation.

The applications and Information Technology (“IT”) systems will support the information system. Indeed, Information Communications Technologies affect all business functions. The new information and communications technologies have greatly evolved since the 70's and offered important innovations. Initially, the information system design was based on the analysis of the tools already present. It was compared to what company wanted to set up: must it be automated and to which level? Then, IT developers tried to understand how to apply the technology of the moment in order to be the more competitive. This shift led to two problems:

- Information system design remained abstract and far from reality of the specific companies business.
- Human behaviors of end users were not taken into account in the development of the Information system.
- The information system development was long whereas technological innovations were so fast, leading to a final obsolescence between the beginning and the end of the ICT projects.

Such considerations enhanced the need to establish a closer partnership between information system vendors and end-users in order to achieve a constructive agreement for all the parties involved. On the contrary, actions from civil society such as the non/profit organization *Campaign for Clear Licensing* (“CCL”)<sup>11</sup>, the *Free ICT*

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<sup>11</sup> <http://www.clearlicensing.org/>

*Europe Foundation*<sup>12</sup>, the *Digital Right to Repair Coalition*<sup>13</sup>, the *ITAM Review*<sup>14</sup>, among others groups which will be further studied in deep on the next chapters, highlighted how the relationship between both the parties is unbalanced. In particular, software copyright and audit clauses are questioned, as this Chapter 1 will try to expose in the next sections.

## **1.2 Audit Rights to protect the Intellectual Property and fight its Infringement by the users**

Concerns have pulled the alarm bell about the audit rights enforcement among businesses: Although the high cost of software audit and the unpredictable results were highlighted, the attention paid to the analysis of an eventual software vendors' abuse of rights remained limited.

Main literature regarding IT audit focused on a unique typology of IT audit activities: the one required by law, that is to say an “*independent examination of an organization's management assertions that must follow a set of guidelines and standards promulgated by an external sanctioning body*”<sup>15</sup>. However, other audit missions are often lead, and remained out of current scientific research scopes. It is especially the case of the IT licensing audit rights. IT licensing audits are performed by the software vendor in order to verify the conformity of products sold under license; these verifications could be particularly intensive in time and money for the licensor<sup>16</sup>. Whereas these audits may lead to very high audit penalties, they are not investigated and the modalities and scope, the role and independence of auditors, the level of penalties are not questioned.

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<sup>12</sup> <http://www.free-ict-europe.eu/>

<sup>13</sup> [www.digitalrighttorepair.org](http://www.digitalrighttorepair.org)

<sup>14</sup> <http://www.itassetmanagement.net/>

<sup>15</sup> MERHOUT, Jeffrey W.; HAVELKA, Douglas. Information Technology Auditing: A Value-Added IT Governance Partnership between IT Management and Audit (2008). Communications of the Association for Information Systems: Volume 23. Article 26.

<sup>16</sup> MEGANTZ, Robert C. Technology Management: Developing and Implementing Effective Licensing Programs. Wiley, 2002, 288 p.

- Who is the auditor? Internal audit or external audit? Which examiner is the more independent? Is there a co-audit lead by both vendor and end-user and guaranteeing the results objectivity? The risk of collusion between auditor and audited entity was deeply examined<sup>17</sup>; the relationship between managers and auditors was analyzed leading to purpose of audit contracts gathering three parties to guarantee the results' objectivity: internal auditors, external auditors and managers<sup>18</sup>.
- What are the audit areas? Database, network, system development, security, application systems may be areas of audit, depending of audit scope.
- What is the audit scope? Main audits examined the business processes according to internal policies and standards in order to evaluate risks and financial impacts. According to IIA (2012), "*Auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes*". Two types of IT audit used to be distinguished: value-added IT audit and risk-based IT audit. On the one hand, value-added IT audit assessed the coherence between the organizational business processes and the integration of different stakeholders' objectives<sup>19</sup>; on the other hand, risk based IT audits focused on the areas where the risks to identify issues with a financial impact are higher<sup>20</sup>.
- What are the audit methodology and processes? Audit stages, sample based

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<sup>17</sup> BAIMAN, S., EVANS III, J. H. and NAGARAJAN, N. J. Collusion in Auditing. Journal of Accounting Research, Vol. 29, No. 1, 1991. P. 1-18.

<sup>18</sup> KOFMAN, Fred; LAWARREE, Jacques. Collusion in Hierarchical Agency. Econometrica, 1993, vol. 61, issue 3, pages 629-56. .

<sup>19</sup> HUTCHINS, Greg. Value Added Auditing. CERM Risk Insights, 2012. Available at: <<http://insights.cermacademy.com/2013/03/risk-based-auditing/>> Consulted on April 3, 2017.

<sup>20</sup> IIA Guidelines: Risk Based Auditing: a value add proposition - Participant Guide. Available at: <[http://www.theiia.org/media/files/virtual-seminars/SEM\\_RBP\\_2HD\\_0109\\_PG.pdf](http://www.theiia.org/media/files/virtual-seminars/SEM_RBP_2HD_0109_PG.pdf)> Consulted in April 3, 2017.

methodology? Studies stated that incentive audits are more profitable for both the auditees and auditors than punitive audits?<sup>21</sup>

- Is the audit client oriented? According to the structure of the customer organization, the information system is more complex and the compliance with guidelines and standards is more difficult to be reached.

The literature review evidenced the different approaches which are currently deployed by certain software providers to frame their relationship to customer. On the one hand, the interdependence between the two parties and the strategic necessity to implement a win-win agreement had been clearly highlighted. Research about technologic market knowledge focused on strategic issues, as the competitive advantages supported by licensing<sup>22</sup>, which lead to penetration market barriers and to eventual strategic cooperation. On the other hand, few studies empirically examined the costs generated by such licensing strategies<sup>23</sup>. Some clauses, like software copyrights and audit clause seemed to favor the provider's rights, especially when audit clause was enforced, leading to unexpected and very expensive penalties.

Such contradictions led to the need of further investigating the relationship between the two parties through the following research questions:

- What is the content of software copyright clause? Is the information clear and homogeneous throughout the sample analyzed with the main software providers?
- Are the audit rights clauses clearly defined? Do practices refer to conformity audit standards?

In order to answer these questions, the software copyrights clause will be

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<sup>21</sup> RUEY-JI, Guo; MING-CHIN, Chen. Incentive vs. punitive conditional audit policy. *Asia Pacific Management Review* N. 20. 2015. P. 234 -240.

<sup>22</sup> KATZ, Michael; SHAPIRO, Carl. Network Externalities, Competition, and Compatibility. *American Economic Review* N. 75, June 1985. P. 424-40.

<sup>23</sup> SATTIN, Jean-François. Procédures d'audit et gestion des licences de brevet : une analyse transactionnelle. *Revue D'Economie Industrielle* N. 139. 2012. P. 77-99.



examined in detail within a sample of 10 software license agreements among the 10 most important software providers that will be subject to analysis in this Chapter 1. Subsequently, the audit rights clauses will be compared together.

### 1.3 Methodology

This research is part of an exploratory approach. Reference is taken from previous research work in order to try to produce new knowledge from the documents' content review and analysis, without prior assumptions<sup>24</sup>. Content analysis is an “*objective methodology to collect a contain description*”<sup>25</sup>.

For this, a qualitative research has been done among the software developers comprising the 10 biggest revenues, based on the list for the "Software & Programming" industry published by Forbes (2015)<sup>26</sup>: Microsoft, Oracle, SAP, Salesforce, Symantec, VMware (AirWatch), Fiserv, CA Technologies, Intuit and Amadeus IT Group. This list published annually by Forbes Magazine provides a ranking of the top public companies based on a mix of four metrics: sales, profit, assets and market value. The market value calculation is as of March 11 closing prices, including all common shares outstanding<sup>27</sup>. The list of software companies is concentrated on companies focused exclusively on software and did not include manufacturers of hardware, consumer electronics companies, conglomerates, IT consulting firms, computer services companies. This differentiated list and the omission of more diversified companies helped this research to concentrate on the software license agreements of software vendors and presented a very useful aspect: the analysis of this chapter could verify only the software sector main firms agreements and practices.

<sup>24</sup> BERTAUX, Daniel. Le récit de vie: L'enquête et ses methods. 3. ed. Armand Colin, 2010. 152 P.

<sup>25</sup> BERELSON, Bernard. Content analysis in communication research. New York: The Free Press, 1952. 220 P.

<sup>26</sup> <http://www.forbes.com/global2000/>

<sup>27</sup> The methodology used by Forbes magazine is explained in its website:  
<http://www.forbes.com/2011/04/20/global-2000-11-methodology.html>

In some cases of the sample analysis of Table 1, the license terms and conditions were easily found and collected from the ISV internet sites, where they were available (legal IT service agreements, software copyrights clauses, audit rights clauses), however, in other cases it was very difficult or not available at all. After the download of the software license agreements and review of its terms and conditions, the next step was to compare the audit terms and conditions.

## **1.4 Results**

Initially a horizontal analysis was conducted, comparing audit clauses, as per Table 1. After that, a detailed review of every agreement has been performed and the 2 extreme examples, with the clearest agreement and the agreement that is less clear and more difficult to understand, will be reported below.

## **1.5 Comparison of audit rights clauses**

The following table presents a summary of the comparative analysis concerning the type of technology, the accessibility of the terms and conditions at the company website, the audit aspects such as scope, costs, definition of violation and potential penalties as well as the organ in charge of performing the audit. The objective of this analysis is to check the compliance with international internal audit standards.

Table 1: Comparative analysis of the audit rights clause

Vendors		Technology	Terms and Conditions Accessibility	Audit Scope	Audit Costs	Definition of violation	Penalty	Audit Leader
1	Microsoft	On-Premise License and Cloud Services	Easy to access on ISV website <sup>28</sup>	Defined	Indicated	Yes	Indicated	Third party
2	Oracle	On-Premise License and Cloud Services	Easy to access on ISV website <sup>29</sup>	Defined	Not mentioned	Not clear	Indicated	Vendor
3	SAP	On-Premise License and Cloud Services	Not easy to access	Defined	Not mentioned	No	Indicated	Vendor
4	Salesforce	Cloud Services	Easy to access on ISV website <sup>30</sup>	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
5	Symantec	On-Premise License and Cloud Services	Easy to access on ISV website <sup>31</sup>	Defined	Indicated	Yes	Indicated	Vendor or Third Party
6	Wmware	On-Premise License and Cloud Services	Not easy to access	Defined	Not mentioned	No	No	Not mentioned
7	Fiserv	Cloud Services	Not easy to access	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
8	CA Technologies	On-Premise License and Cloud Services	Not easy to access	Not clear	Not mentioned	Not clear	Not clear	Vendor
9	Intuit	Cloud Services Agreement	Easy to access on ISV website <sup>32</sup>	Defined	Not mentioned	No	No	Vendor or Third Party
10	Amadeus IT Group	Cloud Services Agreement	Not easy to access	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

<sup>28</sup> <http://www.microsoftvolumelicensing.com/DocumentSearch.aspx?Mode=3&DocumentTypeId=53>

<sup>29</sup> <http://www.oracle.com/us/corporate/pricing/olsa-ire-v122304-070683.pdf>

<sup>30</sup> [http://www.sfdcstatic.com/assets/pdf/misc/salesforce\\_MSA.pdf](http://www.sfdcstatic.com/assets/pdf/misc/salesforce_MSA.pdf) (consulted on March 17, 2016)

<sup>31</sup> <https://www.symantec.com/content/en/us/enterprise/eulas/b-administrator-software-developer-kit-eula-eng.pdf>

<sup>32</sup> [https://developer.intuit.com/docs/0000\\_about\\_intuit\\_developer/0090\\_legal\\_agreements/001\\_intuit\\_partner\\_platform\\_terms\\_of\\_service](https://developer.intuit.com/docs/0000_about_intuit_developer/0090_legal_agreements/001_intuit_partner_platform_terms_of_service)

Out of 10 providers, 4 offered only cloud services (Salesforce, Fiserv, Intuit, Amadeus IT Group), and 6 proposed both the solutions (Microsoft, Oracle, SAP, Symantec, VMware and CA Technologies). In 6 cases (Oracle, SAP, VMware, Fiserv, CA Technologies, Amadeus IT Group), there was no easy access to the terms and conditions on the Company website. 7 agreements included an audit clause, only one referring to cloud services (Intuit vendor). The comparison of the audit rights clauses evidenced a high diversity of terms.

Only in one case (CA Technologies), the audit scope was not defined at all. However it greatly varied from a vendor to another, including:

- Compliance with the agreement for 4 vendors (Microsoft, Symantec, CA Technologies, Intuit);
- The use of programs for 3 vendors (Oracle, SAP, Symantec);
- The number of deployed licenses versus the purchased licenses for 2 vendors (SAP, VMware);
- The customer records relating to the products for 1 vendor (Microsoft);
- The security level for 1 vendor (Intuit).

Out of the 7 audit clauses, only 2 (Microsoft, Symantec) mentioned who has to bear the audit costs, specifying in both the case that it will be charged to the customer if issues are identified.

In 2 cases (Symantec, Microsoft), it is considered as a violation the material unlicensed use and the unauthorized deployments of products. In 3 cases (SAP, VMware, Intuit), there is no definition of the violation whereas in 2 other cases, the definition is unclear (Oracle, CA Technologies).

About the potential penalty, 2 vendors (VMware, Intuit) did not indicate any information. For the other 4 vendors (Microsoft, Oracle, SAP, Symantec), the penalty

mainly corresponded to acquisition of the necessary additional licenses at single retail license cost.

Finally, in 3 cases (Oracle, SAP, CA Technologies), it was planned that the vendor would lead the audit. Only in one case (Microsoft), the audit had to be led by a third party. In 2 cases, the audit could be led by both the vendor or a third party (Symantec, Intuit).

It is important to mention that Cloud providers have the software licenses installed on a server which is under their own control, as will be further explained in Chapter 2 of this thesis. Therefore, audit clauses to verify copyright infringement are not necessary as there is no distribution of the software to the customer and the software is installed in the cloud controlled by the vendor which makes pointless to perform a software license audit in its own licenses. Considering that aspect, this research analysis can conclude that all the software vendors that actually distribute licenses and provided copies of their licenses to be installed by customers, required audit rights in their agreements, which mean that 100% of software vendors of this sample analysis request their customer to be submitted to the audit practices hereby described.

### **1.6 Legal analysis in depth of 2 agreements chosen from the sample list**

Among the 10 ISV's terms and conditions analyzed, 7 have established the ISV has the right to audit end-users, which can be a legitimate right to verify compliance with the software license terms and conditions. However, the qualitative analysis of each of those 7 terms and conditions that established audit rights, brought several questions regarding the lack of clarity and sometimes ambiguity that may impede the end-user to comply with the Software License T&C. Among the sample list, 2 examples of agreements were chosen to be analyzed in depth, because they represented two different approaches: Microsoft T&C seemingly has a more complete set of information regarding end-users rights and obligations while Oracle T&C for

copyrights license lacks information and clarity in what concerns the rights and obligations of end-user.

The Microsoft “Business and Services Agreement” defines several different cases and how the products will be licensed. Evidently, the main products are Microsoft copyright; modifications or enhancements, or their derivatives are treated in two different ways: when they are general releases (such as service packs) the customer has a non-exclusive, perpetual, fully paid-up license to use and reproduce, solely for its internal use. In case of developments in collaboration with customer, Microsoft grants joint ownership in any computer code or non-code written materials. “Joint Ownership” establishes each party has the right to independently exercise any and all rights of ownership known or later created or recognized, including without limitation the rights to use, reproduce, modify and distribute the developments for any purpose, without the need for further authorization to exercise any such rights or any obligation of accounting or payment of royalties. Microsoft Agreement was found, among all the other agreements, to have a better definition of the terms of use, ownership, rights and restrictions as well as in terms of compliance verification, giving a clearer outline to user about what can be expected from Microsoft.

Even if Microsoft was found to have clearer license terms and conditions, several problems have been reported by the lobby group CCL<sup>33</sup> in its Microsoft report<sup>34</sup>: 1) Tracking the use of Microsoft software is difficult; 2) Licensing is at times unnecessarily complex; 3) The bundling of products – e.g.: license for one product includes products not used by customer; 4) Not enough information is provided to support transitioning to new license programs and economic models requirements.

The second agreement chosen was the Oracle “License and Services Agreement”. The definition of rights granted is not clear and thorough in the agreement, as it states

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<sup>33</sup> The CCL - Campaign for Clear Licensing - <http://www.clearlicensing.org> – is an independent, not-for-profit organization campaigning for clear licensing, manageable license programs and the rights of business software buyers that will be further described in Chapter 4.

<sup>34</sup> THOMPSON, Martin. Microsoft stunts its own growth through licensing complexity. Campaign for Clear Licensing, DECEMBER 2015. 10p.

user has “limited right to use the programs” without establishing how this limitation is effectively implemented. The details of rights granted by the licenses are left to be provided in the ordering document. Oracle audit clause is not clear also as it simply states Oracle “may audit your use of the programs”. This definition does not allow the end-user to know precisely what will be evaluated as the “use of the programs” is not clearly defined by the license terms. Once the agreement is signed with Oracle, user has to “cooperate with Oracle’s audit and provide reasonable assistance and access to information”. The only aspect clear in the Oracle audit clause is the penalty: Oracle can end the technical support and licenses in case users do not pay any “fees applicable to the use of the program” within 30 days after the conclusion of the audit. As Oracle products embed company processes and integrate different systems and other computer programs, it is very difficult for a company to change provider in case the fees requested after Oracle audit are considered inequitable or too onerous for the user.

Campaign for Clear Licensing Report<sup>35</sup> concerning Oracle Licensing gives a very negative feedback regarding Oracle practices and, as a result of a survey performed with more than 100 companies, several matters were presented: 1) Compliance is not known – the customer cannot complete or finds it very difficult to measure compliance or complete their own self-assessment; 2) License measurement techniques are not outlined in the contract; 3) Poor contract terms defining license requirements; 4) Inconsistent communication with the customer during sales; 5) Audit activity starts as license reviews and immediately after is positioned as legal audits leading to sales engagement; 6) Renewals strategy (retiring an item from an order); 7) Oracle changing licensing policies, customer’s business does not change – yet the onus is on the customer to decipher changes and rectify issues; 8) Oracle terms referring to URL’s, which change, broken links in documents; 9) Installs and upgrades triggering licensable changes; 10) No definitive source of information available for licensing policies / policy changes.

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<sup>35</sup> THOMPSON, Martin. Key Risks in Managing Oracle Licensing: An independent study into managing Oracle licensing and working with Oracle LMS. Campaign for Clear Licensing, NOVEMBER 2014. 22 p.

### **1.7 Completion of analysis by interviewing key personnel who directly work with software agreements and software asset management**

The methodology used in the previous section was based on document content analysis. The researcher interpretation of the collected documents were one point of the analysis. In order to complement the findings and improve the range of results, interviews were set with key persons who work directly with software asset management and software audit.

An open interview with license managers and head of purchase department of 5 different companies shall complement the document analysis findings by adding these customers position and perception of the software vendor practices in relation to audit rights. This qualitative study aims to understand the experiences and perceptions related to software license audit. The confidentiality regarding company names and employees interviewed had to be maintained in order to receive their collaboration.

The interviews intended to obtain information to help understanding how the audit activity related to software licensing may impact companies and what is the perception of the personnel who work with the subject on a daily basis. It concerned questions related to the organizational measures for supporting the audit activity such as the existence of a dedicated department for the software asset management, the amount of audits received in the last 3 years, the scope of the audit and the establishment of a proper audit process on-site.

The second part of the interview focused on the customer experience and opinion about software audit, the perception about the treatment received before, during and after the audit concerning fairness, ethical and equality principles and the perception about how these audits affect the business.



### 1.7.1 Comparative analysis of the interview – horizontal analysis

Table 2

Number of employees and revenue in Euros in 2015	Role of the employee interviewed	Use of software on premises	Approximate number of audits in the last 3 years	Perception of the audit (in brief words used by the person interviewed)
<b>Company 1:</b>  90.000 employees 23 billion revenue	License Manager with 8 years of experience in this role	Yes	9	Software audit are time consuming and the terms and conditions present many grey areas that have to be interpreted and discussed with auditors; this subject is strongly connected with the legal matters and only because of audit I started to work closely with the legal department. So many workers must be involved and work closely in order to avoid surprises: legal department, architecture, application managers and all sectors of the ICT Department must be involved. In my personal evaluation audit is used to pressure customers to close other deals with the software vendor. Vendors apply grey and unclear rules to license T&C in order to audit customers later and find mistakes that can induce to fines for infringement.
<b>Company 2:</b>  64.391employees 26.4 billion revenue	License Manager with 7 years of experience in this role	Yes	6	Huge amount of work dedicated to be in compliance with the agreements, however, the rules imposed by the vendor are so complex that sometimes is difficult to comply with them and the customer is in breach without knowing.
<b>Company 3:</b>  10.000 employees 2 billion revenue	Chief Procurement Officer – 2 years in this role	Yes	3	After receiving many audits with negative results for the company, all the agreements with vendors were reviewed to remove any grey area and impose the conditions that better

				suit the company needs. After many negative surprises and litigation in the past, a strong and continuous compliance activity is keeping the problem under control
<b>Company 4:</b>  740 employees 400 million revenue	IT Financial Manager and Process Owner of Service Asset & Configuration Manager with 11 years of experience	Yes	3	It was very time & resources consuming but once the audit started the processes were clearly communicated and the steps/tasks clearly defined.  We had financial losses due to audit results. Some of the audit were very complex and the needed documentation was huge, therefore, a lot of resources were impacted and it was very time consuming. The financial losses were also big just because of unclarity/misunderstanding of license agreements.
<b>Company 5:</b>  373.000 employees 28,4 billion revenue	Chief Information Officer with 4 years experience in this role	Yes	7	The licensing terms change very rapidly and the company has to adapt so quickly in order to follow the changes. When the software vendor comes to perform an audit, they install software that collects information from the company system to see everything that is installed and being used. Each audit requires a strenuous work because in some cases the license metrics changes every year and the company needs to follow each one of them. Each audit done, even with the best customer in perfect good-faith, there is always a price to pay. I have never seen anyone 100% compliant; remaining in compliance with the

				license rules is a difficult work and many customer give absolute priority to these audits but it should not be a priority. The companies budget remain always stricken.
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### 1.7.2 Important findings and common aspects verified in a vertical analysis

The interviews required approximately 40 minutes of time where the interviewed could speak freely about his/her experience with software license agreements and audit. All the interviewed persons stated the company used software installed on premises and needed to purchase licenses from independent software vendors. The interviewed were all personnel from the Information and Communication Technologies sector, with a very practical view and experience regarding the subject, living on a daily basis the operational aspects of the applicability of software license terms and conditions. They came from five different companies, from different sectors such as banking, aeronautics, construction equipments and even one information technology services provider. The number of audits in the last three years varies but all the interviewed stated their companies had to undergo software audit from vendors.

One aspect observed in the document analysis found in the previous sections was confirmed by each single person interviewed: there are “grey areas” in the software license agreements that can be interpreted in many different ways; the same expression “grey areas” was repeated by each single interviewed person. 3 out of 5 interviewed completed this observation saying there were “surprises” after the conclusion of the audit because the user did not have a clear idea of the scenario. These “grey areas” and unclear terms, according to the interviewed, emerge only after the audit, through non-compliances that are translated into extra-costs to the companies using the software. The interviewed persons said that after many negative “surprises” and in some cases copyright infringement litigation, the company had to start a very detailed work of revision of the agreements and diligent care of each single aspect of

the software license: word brought during interviews was “compliance”, as the solution for the issue: a diligent work of compliance with a detailed review to each term and condition seemed to help avoiding “surprises”.

Another common term used by each single person interviewed was “time-consuming” referring to the dedication and the amount of resources necessary to comply with the licensing terms and the audit activity. They described software audit as time consuming due to the fact the licensing terms are difficult to understand and therefore it requires many resources to work with it and a long detailed work to comply with the terms.

One common aspect between all the persons interviewed was the fact they all described the “huge” work to try to be in compliance and demonstrated to be eager to be in compliance with the software licensing terms and conditions. These customers are willing to use all their efforts to comply with the terms, which demonstrated their good faith approach. They explained how much they strive to be in compliance with the terms and conditions and how difficult it is.

3 out of 5 interviewed persons stated it is “impossible” to be in compliance because the vendor will always find a problem and impose extra license costs. According to 4 out of 5 interviewed persons, the unclear terms of the license agreement can create misunderstandings and those terms are always interpreted in favor of vendors or in some cases, part of the terms and conditions (e.g.: technical aspect of the product) are available at the vendor’s website, giving the possibility to the vendor to change periodically and unilaterally such terms. The interviewed persons stated a huge organization is required to overcome the complexity – customer needs to verify every single aspect and there are thousands of software with different rules applied to them. The process is strenuous and is not simple to follow every change from each vendor. Furthermore, the license metrics may change every year and the customer needs to follow each one of these changes and adapt its usage or technical

installations to be in compliance.

All the 5 persons interviewed stated that once the audit starts, the process becomes clear and transparent – “the customer gets to know the rules only when the vendor audits the customer” – and in several cases the customer is found in breach without being aware of that. Audit scope was considered clear by all the interview participants, they referred that vendors follow their audit process strictly, however, one of the interviewed state the strict formalities impede the use of a fair or common sense approach because the audit searches only for the aspects non compliant when this is reputable to the customer, however, when vendor is found to be charging more for a certain product, there is no possibility of evaluating the bigger picture and settling for compensation.

All the 5 persons interviewed declared the company observed financial losses after audits related to the audit findings and one stated the grounds for the audit had been prepared in advance, on purpose, to induce customers in mistakes.

3 of the interviewed persons stated the audit was used to pressure customers to close other deals with the software vendors, stating the vendor already has more bargain power in relation to the customers and the audit process increases this power and in many cases leave the customer with no alternative.

Although the companies subject to interview can be considered large enterprises, this fact did not seem to help in terms of bargain power and all of the interviewed persons said the negotiation with the software vendor was very difficult.

## **1.8 Examples of practices related to audit rights – review of organizations websites and blogs used to share information regarding software audit**

An overview of how this topic is treated in blogs and organizations websites

will be briefly described in this section, which has the objective of gathering information from software users who see in practice the application of the software licensing terms and conditions as well as the audit in relation to that. This review supports this empirical research with further information shared online between users from all over the world telling their stories and confronting their problems.

One interesting example was chosen from the online magazine ComputerWeekly.com which published a description of how it works with Oracle database licenses from the purchasing process until the audit review. Once the customer purchases the licenses and accepts the End-User License Agreement, only for the simple regular software version, without the performance-enhancing utilities (called data packs and management options), due care must be taken at the time of installation: with the simple regular software version, the previously mentioned utilities are installed by default, unless they are expressly turned off at the time of deployment. Therefore, the customer bought a simple version but actually has installed (unknowingly) some very expensive utilities. As these utilities are neither free nor are included in the price of the simple database package; they need to be licensed before they are installed. If the customer does not realize these utilities and enhancements are installed in the servers, the software audit will evidence this aspect and the customer will have to pay for this additional cost that can be very high: the price of utilities may vary but in some cases they can cost even more than the basic package; it is easy to reach hundreds of thousands of dollars in utilities, which can have a huge impact in terms of costs for the licensee. On the occasion software licensor decides to audit the licensee, these further utilities installed by default are revealed and have to be immediately (“within 30 days”, as per the previous examples of contractual clauses seen in this chapter) paid by the licensee, without any possibility of defense or explanations<sup>36</sup>.

Another example of article regarding software license and audit, published on

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<sup>36</sup> <http://www.computerweekly.com/news/2240225282/Interview-Working-with-software-providers-to-improve-licensing-Ts-Cs>

the blog “Itam Review” states that “software licensing is an unregulated industry and it is often difficult to tell the difference between genuine infringements of intellectual property and over zealous sales reps and biased auditors”<sup>37</sup>. In this article is found the description of how vendors may use the grey areas of old software license agreements and evidence audit findings founded on “weaknesses (...) ambiguous or misunderstood licensing terms, shortfalls or mismanagement by the customer”. Based on those findings, the article states that vendors introduce their cloud solutions as a resolution for the audit and a mean to avoid a potential lawsuit for copyright infringement. A similar example is suggested on forbes.com article “Is Oracle Using Legal Pressure To Increase Cloud Sales?”<sup>38</sup>, revealing the pressure over customers, through audit and breach notices that may be another form of “bargain” for increasing sales of other products<sup>39</sup>.

The audit revenue for such practices, for many licensors, could be an important part of their profits but it is difficult to find evidence as this information is confidential and in many cases hidden through a new sales order subterfuge. However, as the software licensor relies on this short-term audit revenue, there are risks customers will find other alternatives, whether they are to search for different providers or even to look for open source solutions.

## 1.9 Discussion

The transversal analysis through the vendor agreements illustrated a strong lack of transparency in several aspects of the transaction. The first difficulties observed were related to the access to the terms and conditions on diverse company websites, which were not easily available. Among the 10 ISV Agreements analyzed, 7 included an audit rights clause, and therefore, other important finding concern key elements

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<sup>37</sup> <https://www.itassetmanagement.net/2016/06/28/getting-lumbered-cloud/>

<sup>38</sup> <http://www.forbes.com/sites/danwoods/2015/06/18/is-oracle-using-legal-pressure-to-increase-cloud-sales/#1596aebc3437>

<sup>39</sup> <http://www.forbes.com/sites/danwoods/2016/03/16/can-customer-hardball-tactics-counter-oracles-audit-bargain-cloud-earnings-machine/#79ee62f04edc>

regarding the audit conditions (like audit scope, violations or penalty amounts) not clearly defined or not indicated at all, questioning the non-transparency and potential lack of fairness of the agreement and the audit quality. The lack of transparency was also strongly mentioned by the responses obtained during interviews with personnel who work with software audit and have to manage audits from vendors and this aspect was mentioned by each and every interviewed person.

The Institute of Internal auditors (IIA) is an international professional association for the audit profession and also a recognized authority for the establishment of audit standards and education in that area<sup>40</sup>. According to the IIA standards (2016), audits should present attributes and performance norms; especially attributes are related to the audit team characteristics, like technical competences or experience level. In particular, a crucial element results in the auditor independence (financial, personal and professional) in order to achieve objective results.

As the analysis of Table 1 evidenced that the audit is mainly led by the vendor, how can the audit independency and objectivity be preserved? In addition, whereas studies stated that incentive audits are more profitable for both the auditees and auditors<sup>41</sup>, this study highlighted the persistence of punitive audits. Such results interrogated the relationship between licensor and licensee. How a relationship, which is not customer oriented may preserve a productive partnership?

Regarding the first objective of this Chapter, the analysis of the ISV terms and conditions has demonstrated that each single agreement presents aspects that are not clear and well explained. All the agreements analyzed present licensing metrics complexity and in some cases lack of information in relation to end-user rights and obligations. In virtue of that, end-user does not have enough information to comply with the software license requirements which may lead to involuntary actions not

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<sup>40</sup> <https://na.theiia.org/Pages/IIAHome.aspx>

<sup>41</sup> RUEY-JI, Guo; MING-CHIN, Chen. Incentive vs. punitive conditional audit policy. *Asia Pacific Management Review* N. 20. 2015. P. 234 -240.



compliant with the ISV terms and conditions or even copyright infringements revealed only after the audit. These findings were also confirmed during the interviews performed and described in Section 1.10 of this Chapter 1.

As the Chapter focus on the audit rights as a method for protecting copyright, the analysis of the agreements and the response received during interviews demonstrated that is not possible for the users to have a clear guidance given by the license agreement and therefore the audit may present a risk that cannot be calculated by the customer. In other words, the customer has consistent difficulties for interpreting and understanding the license terms and conditions and therefore complying with those terms. As a consequence, any non-compliance found during audit represent an extra-cost for the customer and extra-revenues for the ISV, with further impacts in the related businesses and also potentially affecting consumers.

The agreements subject to review in this empirical analysis encompass diverse fields of law for safeguarding the parties' interests, which include but are not limited to: Commercial Law, Contract Law, Civil Law, Consumer protection Law, Competition Law, Tort Law, among others. On top of all rights and obligations concerning the parties' interests, the protection of the software creator's work is the main objective of such agreements: the Intellectual Property rights of the Independent Software Vendor are in the forefront of those transactions. Without the creations of the mind of the software author, the contracts subject to analysis would not have any reason to exist. Therefore, the next Chapters will focus on the analysis of the legal aspects related to this empirical research. Chapter 2 will make a bibliographical and historical analysis of the Intellectual Property Law that allow protection to the work of the Licensor as the main subject of the empirical analysis is protected by Intellectual Property Law.

The legal instruments that allow protection to the ISV include also the agreements and the content subject to review. Therefore, Chapter 3 will be dedicated

to the analysis of the contracts as instruments used to promote collaboration between different interests and the laws and regulations related to them.

The abusive conduct of the licensor clearly consists on an abuse of rights. The licensor is protected by a well-established system as better described in Chapters 2 and 3. On the other side, for the protection of the licensee (the business customer), are there laws and regulations in place that allow customers to rely on adequate protection? Chapter 4 will finally undertake to overview if there are legal instruments for providing protection to customers or if alternatives can be proposed. After the analysis of the remedies available to the licensee, Chapter 4 aims also to evaluate if other instruments are necessary in order to protect licensors or improve the regulation in this area.

## CHAPTER 2

The term Intellectual Property (IP) is supported by a number of legal doctrines that regulate the use of ideas: copyright law, patent law, trademark law, trade-secret law. The economic and cultural importance of these rules is increasing and the majority of businesses now depend deeply on intellectual-property rights. There are several theories for the justification of the protection of IP. Some important philosophers and researchers have dedicated time and effort to different theoretical approaches: for instance, the Utilitarianism, the Labour Theory, the Personality Theory, the Social Planning Theory reveal different rationalizations for IP protection: (i) promotion of development and creativity or (ii) protecting the rights each one should have in order to benefit from the fruits of his/her own labour, (iii) protection of moral rights, (iv) connecting IP to fundamental human needs and last but not least, (v) the promotion of justice<sup>42</sup>. Libertarian theories, on the other hand, premise that intangible rights are overprotected and should not be treated as property; therefore, its arguments are against Intellectual Property because the creations of the mind, due to their intangible nature, should not be considered as property<sup>43</sup>.

At the broadest level of abstraction intellectual property is concerned with protection of information.<sup>44</sup> Copyright Law and Industrial Property Law are the two branches of Intellectual Property Law. Intellectual Property Law (IP), roughly, means

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<sup>42</sup> FISHER, William. Theories of Intellectual Property. New Essays in the Legal and Political Theory of Property Cambridge University Press, 2001. P. 1 – 14.

<sup>43</sup> KINSELLA, Stephan. Contro la proprietà intellettuale. Rubbettino, 2011. 87 p.

<sup>44</sup> MACQUEEN, Hector; WAELDE, Charlotte and GRAEME, Laurie. Contemporary Intellectual Property: Law and Policy. Oxford University Press, 2008. P. 7.

the legal rights resulting from intellectual activity in the industrial, scientific, literary and artistic fields. Its objective is to protect the rights of creators and other producers of intellectual goods and services, providing specific time-limited rights to control the use and commercialization of such goods and services.<sup>45</sup>

Chapter 2 will focus on how the protection of the Intellectual Property (IP) Rights of software creators and developers has been granted and a brief review of the historical aspects that provided for such protection. Much debate has been in place for the subject matter regarding which IP rights regime shall be applied for the protection of computer programs. This study will primarily focus on copyright law, following the historical tendency to protect computer programs through copyright and the protection the copyright system has provided to proprietary software companies to prevent the unauthorized copying of their software.

The interests furthered by the protection of Intellectual Property can be<sup>46</sup>:

- *moral interests* – intellectual products are the fruit of the efforts of the people who have contributed for its creation, it required the creator’s time, labour and expenditure and therefore the intellectual property reflects the moral connection between the property and its creator.
- *social interests* – Social benefit can arise from Intellectual Property, however, “social interests can be significantly compromised if intellectual property is protected too strongly” as it may interfere with healthy competition.
- *economic interests* – many economic interests are involved: the economic interests of the creators of the intellectual property, the economic interests of their competitors and the economic interests of their customers. Considering all of these interests, it should be clear that a balance is required to ensure that one interest is not dominating, while at the same time ensuring a fair and just degree of protection for any intellectual property that has been produced

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<sup>45</sup> WIPO Intellectual Property Handbook. WIPO Publication No. 489 (E). 2008. p. 3.

<sup>46</sup> MACQUEEN, Hector; WAELE, Charlotte and GRAEME, Laurie. Contemporary Intellectual Property: Law and Policy. Oxford University Press, 2008. P. 8 – 9.

The importance of IP protection in the field of technology is crucial for the ‘incentive for progress and development’, however, finding the balance between the proper protection of the interests of IP owners and the respect of public interest is a question that has to be analyzed every time the game changes in the field of technology.

## **2.1 Software copyright: how computer programs are allowed to receive legal protection**

The European Union Directive highlights the significant role of computer programs and their fundamental importance for the European Union industrial development<sup>47</sup>; furthermore, the protection of computer programs in a homogeneous way within EU countries is of great importance as technology development moves fast therefore should not be limited by physical or legislative borders.

In the beginning of the Information Age<sup>48</sup>, when computers and computer programs were not yet widespread, creators did not know how their creations would receive protection. Much debate was brought at the time, and the law needed to provide a response to the changes proposed by technology: provision of patent protection, copyright protection or even the creation of a third form of protection specific for computer programs.

A prized article written by Columbia and Harvard professors Hanna and Pound<sup>49</sup> in 1964 analyzed the requirements for copyrightability such as “*writing*” and “*authorship*” and concluded those could be applicable to computer programs as well: - the “writing” requirements are fulfilled by three prerequisites: permanence, tangibility

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<sup>47</sup> DIRECTIVE 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs.

<sup>48</sup> CASTELLS, Manuel. The Information Age, Volumes 1-3: Economy, Society and Culture. Oxford: Wiley-Blackwell, 1999.

<sup>49</sup> HANNA, John; POUND, Roscoe. Copyright Protection for Computer Programs. Columbia Law Review, Vol. 64, No. 7, Nov. 1964. P. 1274-1300.

and a form capable of being copied; - as “authorship”, the authors argued that since computer programs are complex and difficult to write, there should be little question about the standard of creativity.

In fact, the prerequisite “writing” for a computer program concerns the written form of the source code, which is turned into an object code that once executed must carry out a particular task. Moreover, it can include one or more of the preparatory writings created for the implementation of an algorithm. *“All of these writings are like the plans an architect may draw as a guide to the construction of a house”*<sup>50</sup>.

The authorship, as above argued by Hanna and Pound, is intrinsically related to the creative factor that distinguishes the work of the author. The Berne Convention, in Article 6 bis, states the author shall have the right to claim authorship of the work and object any distortion, mutilation or other modification, which, in the case of a computer program, can be interpreted as the right to object any modification to the source code.

In May 1964 the United States Copyright Office<sup>51</sup>, for the first time, agreed to register copyrights on computer programs<sup>52</sup>. Once the Copyright Office started to accept registration of computer programs, the United States Congress was already working on the revision of the federal copyright law, and, due to difficulties on managing the issues related to the new technologies, the Congress decided for the creation of a special commission for dealing with this unresolved problem. Therefore, one significant step for the evaluation and development of this subject, was the creation of the National Commission on New Technological Uses of Copyrighted

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<sup>50</sup> SAMUELSON, Pamela. "CONTU Revisited: The Case against Copyright Protection for Computer Programs in Machine-Readable Form". *Duke law journal*, 1984 n. 4, p.686.

<sup>51</sup> The United States Copyright Office, a part of the Library of Congress, is the official U.S. government body that maintains records of copyright registration in the United States, including a Copyright Catalog. It is used by copyright title searchers who are attempting to clear a chain of title for copyrighted works. <https://www.federalregister.gov/agencies/copyright-office-library-of-congress>

<sup>52</sup> New York Times, May 8 1964, p. 43, cols 4 – 6. In: HANNA, John; POUND, Roscoe. Copyright Protection for Computer Programs. Source: **Columbia Law Review**, Vol. 64, No. 7 (Nov., 1964), p. 1274.

Works (CONTU), by the United States Congress in 1976.<sup>53</sup>

The CONTU carried out three years of extensive research and analysis before the emission of a report recommending the treatment of computer programs as a form of literary work, assimilating databases and compilations under existing copyright principles of protection<sup>54</sup>. The CONTU concluded that: (1) computer programs are a proper subject for copyright because they are forms of expression; (2) programs should be awarded the same category of exclusive rights given to other works of expression under copyright; and (3) traditional principles of copyright law – in particular, the dichotomy between protectable expression and unprotectable ideas as restated in section 102(b) of the 1976 Act should be applied to programs.<sup>55</sup>

After this recommendation, the United States Congress endorsed the CONTU Final Report and passed the 1980 Computer Software Copyright Act, applying to computer programs the same principles applicable to traditional literary works and included the definition of Computer Program as “*a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result*”.<sup>56</sup>

At that time, the CONTU could not predict the enormous changes and evolution the computer industry would experience after 1980, thereafter, courts had to develop and elaborate new principles each time a new technology was developed, the case law relating to this will be further reviewed later in this text. The application of copyright principles, however, provides certain flexibility to accommodate the aspects that could not be anticipated and the CONTU has considered that as when deciding to adopt

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<sup>53</sup> SAMUELSON, Pamela. "CONTU Revisited: The Case against Copyright Protection for Computer Programs in Machine-Readable Form". *Duke Law Journal*, 1984. n. 4. P. 663-769.

<sup>54</sup> National Commission on New Technological Uses of Copyrighted Works. **Final Report on New Technological Uses of Copyrighted Works**. Consulted on <http://digital-law-online.info/CONTU/PDF/index.html>

<sup>55</sup> MILLER, Arthur R. "Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?". *Harvard Law Review*, Vol. 106, n. 5, 1993. P. 982-983.

<sup>56</sup> (17 USC § 101) GHIDINI, Gustavo. *Innovation, Competition and Consumer Welfare in Intellectual Property Law*. UK: Edward Elgar, 2010.

copyrights.<sup>57</sup> After this position taken by the United States Congress, the rest of the world started to adopt similar prospects: “*It was natural in a global sector like IT that the approach which found favour in the US would make its way around the world, thanks also to strong diplomatic pressure*”<sup>58</sup>.

Copyright, as its concept manifests, is a right given against the copying of defined types of cultural, informational and entertainment productions, in the international jargon “literary and artistic works”<sup>59</sup>. It is historically linked to written literary works since the invention of the movable type by Gutenberg and the printing press by Caxton. The first attempted legal protection for the commercial and exploitation of literary works came in 1556<sup>60</sup>, with the Charter granted by the Queen Mary I of England. The Royal Charter of the Company of Stationers allowed protection to the entrepreneurs that exploited the author’s works – the forefathers of publishers, then called stationers. Stationers acquired the works from their authors, organized the printing and the commercialization of such works, taking the risks; at the time, stationers succeeded in obtaining support from the Crown for protecting their interests in such investments<sup>61</sup>.

Initially, the focus of protection was not given to the authors but to the entrepreneurs that invested on the printing and commercialization of their work. The French Revolution was a turning point for the development of the copyright concept as a protection of author’s rights. The idea of freedom and equal rights inspired the notion of protection of creativity of men and the fruit of its intellectual effort. The author and

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<sup>57</sup> MILLER, Arthur R. Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?. Harvard Law Review, Vol. 106 n. 5, 1993. P. 985.

<sup>58</sup> GHIDINI, Gustavo. Innovation, Competition and Consumer Welfare in Intellectual Property Law. UK: Edward Elgar, 2010. P. 132.

<sup>59</sup> CORNISH, W. R. Intellectual Property: patents, copyright, trade marks and allied rights. 3.ed. London: Sweet & Maxwell, 1996. P. 7

<sup>60</sup> CORNISH, W. R. Intellectual Property: patents, copyright, trade marks and allied rights. 3.ed. London: Sweet & Maxwell, 1996. P. 297.

<sup>61</sup> TORREMANS, Paul e HOLYOAK, Jon. Intellectual Property Law. 6th. ed. Oxford, Oxford University Press, 2010. P. 8-9.



not the publisher or stationer became then the center of protection.<sup>62</sup> The protection of authors, therefore, is a consequence of a legal institute that preceded it and not actually created for direct protection of authors, which is the privilege conceded at first to publishers and/or stationers<sup>63</sup>.

In the 1970s, with the arrival of computer products for mass markets, another challenge and many unanswered questions were presented; in this initial moment Contract Law and associated confidence were thought to be suitable instruments for the protection of computer programs. These instruments, although remained critical for the protection of authors' creations, have started to be supported by Copyright Law as well. Alongside the development of author's creations, Copyright Law has demonstrated to be flexible in order to provide the required protection for authors and the investments that supported their creations<sup>64</sup>.

The Computer Software, as the set of instructions aimed at having computer hardware perform a specific task<sup>65</sup>, can be protected by copyright, patent or trade secret law. As Computer Programs are written codes and the computer turns the writing into object code, the reasoning that copyright protection could be a suitable option for conferring protection to these written codes was applied. In a comparative note, the printed pages are like object code and the creativity, style and idea are like the source code<sup>66</sup>; this comparison may help understand the concept, however, the source code can be considered more than a simple idea as it is already the written representation of this idea.

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<sup>62</sup> PEREIRA, Marcio. *Direito de Autor ou de Empresário? Considerações, críticas e alternativas ao sistema de direito autoral contemporâneo*. São Paulo: Servanda, 2013. P. 63.

<sup>63</sup> DE MATTIA, Fabio Maria. *Do privilégio do editor ao aparecimento da propriedade literária e artística em fins do século XVIII*. *Revista Interamericana de Direito Autoral*, 1980. Vol. 3, N. 2. P. 51.

<sup>64</sup> CORNISH, W. R. *Intellectual Property: patents, copyright, trademarks and allied rights*. 8.ed. London: Sweet & Maxwell, 2013. P. 818.

<sup>65</sup> BAND and Katoh (1995) p.3; European Commission 1988, §5.1.1; National Commission on New Technological Uses of Copyrighted Works 1978, p.9.

<sup>66</sup> BOND, Robert. *Software Contract Agreements: Negotiating and Drafting Tactics and Techniques*. 3 ed. London, Thorogood, 2004. P. 60.

Patents for the protection of software are applicable to “inventive techniques associated with programming”<sup>67</sup>. In this respect, “computer-implemented inventions” can be defined as inventions whose implementation involves the use of a computer, a computer network or other programmable apparatus, having one or more features realized by means of a computer program. An invention can attract patent protection if the subject of this invention as a whole has a technical character present in all variants covered by the patent claim<sup>68</sup>. The cases of applicability of patent protection for a program are rare but patents are still valuable mean of protection.

On top of that, trade secrets can increase the protection to the computer program. Among these possibilities of legal protection for the computer programs, the copyright system has been appointed as the most suitable and it seems to adapt for its purposes, as discussed further in this chapter, due to its adaptability and flexibility attributes.

The historical background that guided to conferring copyright protection to computer programs started in the United States, as previously seen. However, as this work will be primarily focused on the European Union normative, this Chapter will have a specific section analyzing the Directives and decisions that carved the IP protection to computer programs in the European Union.

## **2.2 Normative framework on copyright protection to computer programs**

The Berne Convention for the Protection of Literary and Artistic Works, first adopted in 1886 in Berne, Switzerland, was further revised<sup>69</sup> along the years and last

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<sup>67</sup> CORNISH, W. R. Intellectual Property: patents, copyright, trademarks and allied rights. 7.ed. London: Sweet & Maxwell, 2007. P. 819.

<sup>68</sup> Information provided by the European Patent Office, available at: <https://www.iprhelpdesk.eu/kb/1848-how-can-computer-software-be-protected-europe>

<sup>69</sup> More specifically, the Berne Convention of September 9, 1886, completed at PARIS on May 4, 1896, revised at BERLIN on November 13, 1908, completed at BERNE on March 20, 1914, revised at ROME on June 2, 1928, at BRUSSELS on June 26, 1948, at STOCKHOLM on July 14, 1967, and at PARIS on July 24, 1971, and amended on

amended in 1979, “*deals with the protection of works and the rights of their authors. It provides creators such as authors, musicians, poets, painters etc. with the means to control how their works are used, by whom, and on what terms*”<sup>70</sup>. It is the first International Convention attempting to harmonize copyright law, and its beginning in the late 1880’s first established the Berne Union<sup>71</sup>, at the time composed by only 10 Countries<sup>72</sup>. As of May 1, 2016, 169 States are party to the Berne Convention.

The Berne Convention is currently being administrated by the World Intellectual Property Organization (WIPO). WIPO is one of the sixteen specialized agencies of the United Nations system, established in Geneva since 1970, which has the objectives: (i) to promote the protection of intellectual property throughout the world through cooperation among States and, where appropriate, in collaboration with any other international organization; (ii) to ensure administrative cooperation among the Unions<sup>73</sup>.

The Berne Convention established the Copyright System main rules and those rules are, since 1994, applicable to the protection of computer programs. The problem concerning how to protect the Intellectual Property of Computer Programs, after more than 30 years of discussions<sup>74</sup>, was addressed in the international sphere by the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) in 1994. The TRIPS Agreement, concluded in the ambit of the World Trade Organization

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September 28, 1979. <[http://www.wipo.int/wipolex/en/treaties/text.jsp?file\\_id=283698](http://www.wipo.int/wipolex/en/treaties/text.jsp?file_id=283698)> consulted on February 14, 2016.

<sup>70</sup> [http://www.wipo.int/treaties/en/ip/berne/summary\\_berne.html#\\_ftn2](http://www.wipo.int/treaties/en/ip/berne/summary_berne.html#_ftn2) consulted on February 12, 2016.

<sup>71</sup> Berne Convention for the Protection of Literary and Artistic Works. World Intellectual Property Organization, Geneva, 1996. P. 7.

<sup>72</sup> Belgium, France, Germany, Haiti, Italy, Liberia, Spain, Switzerland, Tunisia, and the United Kingdom. [http://keionline.org/sites/default/files/1886\\_Berne\\_Convention.pdf](http://keionline.org/sites/default/files/1886_Berne_Convention.pdf) consulted on February 14, 2016.

<sup>73</sup> Convention Establishing the World Intellectual Property Organization (Signed at Stockholm on July 14, 1967 and as amended on September 28, 1979).

<sup>74</sup> The first developments of the computer software promoted discussion concerning how the IP System could provide for protection to authors and developers. Copyrights granting was not the initial approach; many years ago much debate between academics in United States discussed whether software should be covered by patent or copyright or some other third option. This subject has been object of several court decisions in the United States and actions by the United States Congress that promoted the current understanding of this subject, later extended to most of the countries worldwide. BOYLE, JAMES. "What Intellectual Property Law Should Learn from Software." Communications of the ACM, 52 n. 9, p. 71.

(WTO), established in its Article 10: “*Computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971)*”<sup>75</sup>. As compliance with the TRIPS Agreement is a condition of membership of the World Trade Organization, country members, after this conclusion, adapted their internal legislations for harmonizing its concepts worldwide.

In a further effort to harmonize the Copyrights System, WIPO adopted in Geneva on December 20, 1996, the WIPO Copyright Treaty<sup>76</sup>, which “*is a special agreement within the meaning of Article 20 of the Berne Convention for the Protection of Literary and Artistic Works, as regards Contracting Parties that are countries of the Union established by that Convention*”<sup>77</sup>. The Article 4 of the Treaty contemplates the protection of Computer Programs “*as literary works within the meaning of Article 2 of the Berne Convention. Such protection applies to computer programs, whatever may be the mode or form of their expression.*”<sup>78</sup> The WIPO Treaties has then confirmed the extension of the exclusive rights, typical of copyright, to the digital environment.<sup>79</sup>

In terms of new rights brought by the WIPO Copyright Treaty to the international scope, the commercial rental to the public of originals or copies of their works as an

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<sup>75</sup> The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994.

“The acronym TRIPS refers to a US initiative of the 1980s that sought to link more stringent, internationally harmonized IP policies to international trade policy. The US strategy was to move IPR issues from the auspices of WIPO (seen by US as too weak and narrowly focused) into the GATT Uruguay Round of multilateral trade negotiations in which the US had more influence. The outcome was a success for the US and its allies, but developing nations were frustrated. When the World Trade Organization (WTO) came into being in 1995 as a successor to GATT, the TRIPS Agreement was one of its founding components.” GRANSTRAND, Ove. *Innovation and Intellectual Property Rights*. Oxford Handbooks Online, September 2009. P. 13.

This aspect may have collaborated for giving stronger support to the interests of software vendors as most of them are located in the United States and therefore, protecting their interests are on the US best interests as well.

<sup>76</sup> SHEINBLATT, Julie S. "The WIPO copyright treaty.". *Berkeley Technology Law Journal*, 13 n. 1, p 550.

<sup>77</sup> WIPO Copyright Treaty, Article 1.

<sup>78</sup> WIPO Copyright Treaty, Article 4.

<sup>79</sup> MONTAGNANI, Maria Lilla. A new interface between copyright law and the technology: how user-generated content will shape the future of online distribution. *Cardozo Arts & Entertainment*. Vol 26. 2009 P. 731.

exclusive right of authors was first recognized by the Treaty in its Article 7.<sup>80</sup>

The WIPO Copyright Treaty gave rise, inside member countries, to the creation of laws and regulations shaped for its implementation. In the United States, the Digital Millennium Copyright Act (DMCA); in European Union, with the Decision 2000/278/EC of 16 March 2000, the Council of the European Union approved the WIPO Copyright Treaty and the EU Directives covering this matter are: Directive 91/250/EC creating copyright protection for software, Directive 2009/24/EC on the legal protection of computer programs (EU Computer Programs Directive), Directive 96/9/EC on copyright protection for databases and Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society and the European Union Directives will be subject to further discussion in the next section.

The substance of these new treaties can be summarized in three themes: it starts with the extension of copyright to the digital world, followed by the consideration of legitimate protection to technology and electronic information on digital works and last the regime of exceptions to which digital works are subject.<sup>81</sup>

### 2.3 European Union Directives

The European Union Commission decided to include the subject of the legal protection of computer programs among the areas of national legislation requiring harmonization in 1985. More on, the first European Union Directive regarding this subject was presented to the Council in 1989 and endorsed by the European Parliament in 1990. The Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs was adopted unanimously by the member-states in May 1991. As

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<sup>80</sup> OKEDIJI, Ruth L. Copyright in TRIPS and beyond: the WIPO Internet Treaties. Research Handbook on the protection of Intellectual Property under WTO Rules. Massachusetts, Edward Elgar Publishing, 2010. P. 361.

<sup>81</sup> MONTAGNANI, Maria Lilla. A new interface between copyright law and the technology: how user-generated content will shape the future of online distribution. Cardozo Arts & Entertainment. Vol 26. 2009 P. 730.

the first copyright harmonization Directive of the European Union, it was influenced by the GATT-Uruguay Round. With this first Directive, a common platform of IP rights in Europe was built, giving creators of computer programs essentially the same degree of protection everywhere.<sup>82</sup>

Directive 91/250/EEC has been repealed and replaced by Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs (EU Computer Programs Directive). This new Directive established that Member States should accord protection to computer programs under copyright law as literary works and, further, established who and what should be protected, the exclusive rights on which protected persons should be able to rely in order to authorize or prohibit certain acts and for how long the protection should apply.

Another European Union Directive important to the protection of Copyright is the Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996. This Directive on the legal protection of databases harmonizes the treatment of databases under copyright law and the sui generis right for the creators of databases which do not qualify for copyright.

A database is a selection or compilation that gathers information related to any area of human knowledge such as names, addresses, literature. A database which includes only facts of public domain is not protected by copyright. In case it contains material protected by copyright, authorization will have to be requested to the copyright owners. The database will be protected by copyright as well as the material that makes part of such database<sup>83</sup>.

The Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the

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<sup>82</sup> CZARNOTA, B.; HART, R. Legal Protection of Computer Programs in Europe: a guide to the EC Directive. London: Butterworths, 1991.

<sup>83</sup> GANDELMAN, Henrique. De Gutenberg à Internet: Direitos autorais na era digital. Rio de Janeiro: Ed. Afiliada, 1997. P. 168.

information society – the Copyright Directive – is also known as the Information Society Directive or the InfoSoc Directive. This Directive of the European Union was enacted to implement the WIPO Copyright Treaty previously outlined. It aimed to harmonize in the European Union the aspects of copyright law, for instance, limitations and exceptions to copyright which allow for copyrighted works to be used without a license from the copyright owner.

Article 2 contains the definition the "reproduction right", Article 3 defines the right of "communication to the public" or "making available to the public" and Article 4 determines the "distribution right". Article 3 – the right to communicate to the public - is specifically applicable to publication and transmission on the internet or through cloud computing law<sup>84</sup> which will be further discussed in this chapter. The Directive 2001/29 leaves a good amount of space for national legislators to choose the system for better protecting copyright.<sup>85</sup>

## 2.4 Copyright essentials

The owner of a copyright has a number of legal rights recognized, they may vary in terms of description but the concept is similar in the different Berne Convention member countries and usually concern the following rights: copying or reproducing the work; performing the work in public; making a sound recording of the work; making a motion picture of the work; broadcasting the work; translating the work; adapting the work<sup>86</sup>. The legal rights that mostly interest a software copyright owner may comprise:

a) Copying or reproducing the work: the copyright owner has the right to decide

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<sup>84</sup> DETERMANN, Lothar. What Happens in the Cloud: Software as a Service and Copyrights. Berkeley Technology Law Journal, 29 n. 2. P. 1125.

<sup>85</sup> COLANGELO, Giuseppe. L'enforcement del diritto d'autore nei servizi cloud. Relazione tenuta in occasione del Convegno dell'Associazione Letteraria e Artistica Internazionale (ALAI). Milano, giugno 2012. Rivista Il Diritto di Autore. Giuffrè Editore, Fasc. 02,2012. P. 181.

<sup>86</sup> BAINBRIDGE, David I. Information technology and intellectual property law. Sixth. ed. Haywards Heath, Bloomsbury Professional, 2014. p.37 and WIPO Intellectual Property Handbook. pp 43-46.

if the work can be copied and can prevent others from copying the work. Only the copyright owner of the software program can exploit such work and can control the reproduction of its protected proprietary software;

- b) Distributing the work and the right to authorize rental of copies of the computer program. The proprietary software owner determines, through a license agreement, how the users are allowed to access and use the program and the restrictions users have to respect, such as number of copies, back/up copies;
- c) Adapting the work or modification of the work: only the copyright owner of the proprietary software can adapt or modify the work or expressly authorize such actions. The Berne Convention included the Moral Rights as “*the right to claim authorship of the work*” and “*the right to object to any distortion, mutilation or other modification of, or other derogatory action in relation to, the work which would be prejudicial to the author’s honor or reputation*”<sup>87</sup>. In this regard, the copyright owner has the sole discretion to authorize modification of the program and in case a different work derive from such modification the derivative work will be part of the proprietary original work and the ownership will remain the same as of the original work .

In this regard, software copyright, the extension of copyright law to machine-readable software, is used by proprietary software companies to prevent the unauthorized copying, distribution or modification of their software.

#### **2.4.1 The idea - expression dichotomy**

Ideas or facts themselves are not allowed to receive copyright protection. In order to be protected by copyright, such ideas must be established in some form of expression. Only the expressed form of an idea or fact can receive copyright

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<sup>87</sup> WIPO Intellectual Property Handbook. P. 46.



protection. Copyright therefore protects works that are the author's own expression of the underlying idea<sup>88</sup>.

The article 1(2) of the EU Computer Programs Directive<sup>89</sup> refers to the idea/expression dichotomy applicable to computer programs: *“Protection in accordance with this Directive shall apply to the expression in any form of a computer program. Ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected by copyright under this Directive”*.

This principle was explained by the above article 1(2) once made clear the expression of a computer program is subject to protection while ideas and principles underlying any element of a program and its interfaces, are not protected. The criteria to distinguish between an idea and an expression, unfortunately, are not clearly defined by the above mentioned Directive.

One distinguishing element that helps address the line between idea and expression – protected and non-protected elements – concerns the fact that the expression of the idea must be original.

#### 2.4.2 Originality

Among the conditions a computer program needs to meet in order to attract copyright, the originality is certainly of great importance. The EU Computer Programs Directive<sup>90</sup>, in its Article 1 (3), established the requirements for a software to be considered for receiving copyright protection and the originality concept has a significant importance: *“A computer program shall be protected if it is original in the*

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<sup>88</sup> WIPO. Introduction to Intellectual Property: theory and practice. London: Kluwer Law International, 1997. p. 151. TORREMANS, Paul e HOLYOAK, Jon. **Intellectual Property Law**. 6th. ed. Oxford, Oxford University Press, 2010. P. 177.

<sup>89</sup> DIRECTIVE 2009/24/EC of the European Parliament and of the Council of 23 April 2009.

<sup>90</sup> DIRECTIVE 2009/24/EC of The European Parliament and of the Council of 23 April 2009.

*sense that it is the author's own intellectual creation. No other criteria shall be applied to determine its eligibility for protection.”*

Originality in a computer program means it must be an independent creation, which includes a modest amount of creativity. Originality shall not be confused with novelty or innovation; the work must be the expression of the authors’ idea and cannot be copied from others.<sup>91</sup> Moreover, there must be a ‘relation of creation between the work and the author, whatever this act of creation – sometimes only a presentation – means’,<sup>92</sup>.

As originality is required in order for a work to receive copyright protection, *“protected are only those elements in a program where the programmer had enough room to make a programming choice based on a sufficient number of alternatives”* and *“elements that are dictated by efficiency, external factors, or elements that prove to be commonplace (trivial), remain outside the scope of protection.”*<sup>93</sup>

The concept of originality is applied in copyright law for evaluating whether a work can be allowed to receive protection. It is used to separate works that are sufficiently original from those that are not, granting copyright protection only to those works considered to be an independent creation.

### **2.4.3 Authorship/ownership**

As established by the Directive 2009/24/EC, in its Article 2, the author of a computer program shall be the natural person or a group of natural persons who have created the program or, where the legislation of the Member State permits, the legal person designated as the rightholder by that legislation. The owner of a copyright is, at

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<sup>91</sup> TORREMANS, Paul e HOLYOAK, Jon. Intellectual Property Law. 6th. ed. Oxford, Oxford University Press, 2010. P. 180.

<sup>92</sup> DIETZ, Adolf. The Artist's Right of Integrity under Copyright Law: a Comparative Approach. International review of intellectual property and competition law: IIC n. 177 / published by the Max Planck Institute for Intellectual Property, Competition and Tax Law. 1994. P. 179.

<sup>93</sup> DREXL, Josef. What is protected in a computer program? ICC Studies Vol 15. New York: VCH, 1994. P. 99.

least in first instance, the person who created the work<sup>94</sup>

While copyright protects “works of authorship,” not every work of authorship qualifies; only works that are both original and fixed in a tangible medium of expression, as seen in the previous sections, can actually obtain copyright<sup>95</sup>.

Computer programs are, in general, the result of collaboration between two or more authors and mostly corporate bodies, which is possible under copyright law. In the latter case, the employer is the owner of employee’s creations. As the creative process for the fixation of a computer program is in most of the cases a result of a collective effort, the Berne Convention core principle of strong ‘moral rights’ dedicated to one unique creative genius has to be reconsidered, as strong authors’ rights can no longer command universal respect among the born-digital generation<sup>96</sup>. Other aspects that make moral rights in certain cases not easy to connect with the digital works are: digitized material can be easily transformed and may increase the difficulty to identify the author; computer programs are continuously being worked upon by others, either for eliminating errors (“bugs”) or for improvements or the creation of new functionalities or uses and in that case again is difficult to evaluate the importance of moral rights recognized towards authors of computer programs.<sup>97</sup>

Authorship and the recognition of moral rights, on the other hand, are the driving force of the Free Software Initiative, whose mission is “*to preserve, protect and promote the freedom to use, study, copy, modify, and redistribute computer software, and to defend the rights of Free Software users*”<sup>98</sup>. The Free Software Initiative, which makes available computer programs and source code for the

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<sup>94</sup> WIPO. Introduction to Intellectual Property: theory and practice. London: Kluwer Law International, 1997. P. 164.

<sup>95</sup> REESE, R. A. Copyrightable subject matter in the “next great copyright act”. Berkeley Technology Law Journal, 29n, 3, 2014. P. 1491.

<sup>96</sup> BALDWIN, Peter. The Copyright wars: three centuries of trans-Atlantic battle. Princeton University Press, 2014. P. 385.

<sup>97</sup> CORNISH, W. R. Intellectual Property: patents, copyright, trademarks and allied rights. 8.ed. London: Sweet & Maxwell, 2013. P. 857.

<sup>98</sup> <https://www.gnu.org/philosophy/philosophy.html#mission-statement>

population to freely use, study, modify and distribute, encourages a serial collaboration of software developers in exchange the recognition of moral rights to all the authors who collaborated for the development, improvement or bug fixing of a certain work product. Therefore, the Free Software Initiative, has enhanced the need of recognizing authors moral rights as an important aspect for the protection of the creations of the mind<sup>99</sup>.

The qualitative research done in Chapter 1, though, focused on computer programs whose authorship and ownership belong to corporate bodies and this is due to the fact that is difficult to locate different examples, where a natural person retain copyrights over a software that is used by a large amount of users. Furthermore, the criteria used to choose the examples subject to the study was based on the software vendors with the biggest revenue in the ICT market, which automatically excludes the natural person as sole author.

#### 2.4.4 Fixation

Works need fixation in order to attract copyright and fixation is the mark for the existence of such work in the reality, fixed in some material form: “all works need to exist in some permanent form before attracting copyright”<sup>100</sup>. The Berne Convention mentions a fixation requirement in a “nonbinding and arguably unhelpful terms”<sup>101</sup>, as its provisions leave to the signatory countries the freedom to prescribe fixation requirements as well as specify the categories of works that shall be protected once they have been fixed in some material form.<sup>102</sup>

The Berne convention does not allow the fixation requirement to depend on

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<sup>99</sup> STALLMAN, Richard M. *Free software, free society: selected essays of Richard M. Stallman / intr. by Lawrence Lessig*; ed. by Joshua Gay. Boston: FSF, 2002. 220 p.

<sup>100</sup> TORREMANS, Paul e HOLYOAK, Jon. *Intellectual Property Law*. 6th. ed. Oxford, Oxford University Press, 2010. P. 177.

<sup>101</sup> WHITE, Elizabeth. *The Berne Convention's Flexible Fixation Requirement: A Problematic Provision for User-Generated Content*. *Chicago Journal of International Law*, Dec 01, 2013; Vol. 13, No. 2, p. 687.

<sup>102</sup> Berne Convention, Article 2.

registration or other formalities and the European Union Directives do not mention the requirement of fixation. As for computer programs, this aspect may have an ambiguous impact: while there is freedom of choice in terms of fixation and formalities, the lack of uniformity may cause uncertainty as to what form is necessary in order to attract copyright protection. For most judicial systems in the European Union, fixation is not required for copyright or author's right protection. Fixation is a way of proving creation, and, as a form of evidence, it can guarantee that copyright is effective<sup>103</sup>.

#### 2.4.5 Formalities

Formalities can be described as administrative obligations necessary to comply with in order to receive a specific protection. Copyright protection cannot require any formality in countries party to the Berne Convention, which means that protection does not depend on compliance with any administrative obligations such as registration or deposit of copies in most of its signatory countries.

The European Union Directives, in its turn, did not require its member countries to create registration processes for the recognition of software copyrights. Some European Union Member States (Italy, Portugal and Spain for example), have introduced a voluntarily registration system for Computer Programs which may provide copyright holders with the presumption of ownership rights.

In Italy, Article 103 of Law 633/1941 provides for a possibility of registration<sup>104</sup> with SIAE<sup>105</sup>, the Italian Society of Authors and Editors. SIAE provides for a service where the software details are deposited but SIAE does not review the content to ensure the work product contain the prerogatives to receive copyright protection; SIAE

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<sup>103</sup> LATERILLE, Antoine. From idea to fixation: a view of protected works. Research Handbook on the Future of EU Copyright. Cheltenham: Edward Elgar, 2009. P. 139.

<sup>104</sup> <http://ufficiobrevetti.it/guide/software/registrazione-software/>

<sup>105</sup> Società Italiana degli Autori ed Editori

works just as a deposit of the copyrighted material which could be done by other institutions as well and can be effective for opposing any other later creation which violates the previous work. In Portugal, the ASSOFT<sup>106</sup> - Portuguese Software Association - takes care of the registration according to the national laws and the Portuguese Intellectual Property Code. In Spain, the registration is one of the mechanisms for the protection and safeguarding of Intellectual Property Rights, set out in Articles 144 and 145 of the Intellectual Property Law, revised text approved by Royal Legislative Decree 1/1996 of 12 April, and such registration is provided by the “Oficina de Registro de la Propiedad Intelectual”<sup>107</sup>. Although none of these registrations can be mandatory, they may have the effect of providing more safety to the creator and supporting in case of litigation.

In the United States, the computer program can be registered with the United States Copyright Office through a simple online application<sup>108</sup>; it is not considered an absolute formality, as it is a very simple process and is not mandatory.

To understand why the Berne Convention avoided including formalities as part of uniform mandatory rule for each signatory country in relation to Copyright, it is necessary to return to its beginning, back in 1886. One of the Berne Union initial goals was “*to overcome obstacles to international trade in copyrighted works such as burdens of complying with the multiple formalities*”<sup>109</sup>. The fact that each participating country (only 10, in the beginning) of the Berne Union had its own formality requirements for copyrights granting could be an enormous issue and prevent authors from fully exercising their right of protection. Accepting all of each single Berne country member rules regarding formalities could be an extensive if not impossible task for the Union and the authors would certainly face difficulties. In that regard, an amendment to the Berne Convention in 1908 prevented Berne Union members from

<sup>106</sup> Associação Portuguesa de Software - <https://www.assoft.org/pt/servicos>

<sup>107</sup> [www.madrid.org/rtpimadrid](http://www.madrid.org/rtpimadrid)

<sup>108</sup> <http://copyright.gov/circs/circ61.pdf>

<sup>109</sup> SAMUELSON, Pamela. "Legally Speaking: Too Many Copyrights?" Communications of the ACM, 54 n. 7, p. 30.

imposing on authors formal conditions for the exercise of copyrights. With the Berne Convention ban on formalities, the TRIPS Agreement incorporated the same rule by reference and it is clear that the difficulties for changing such a perspective replicated in different international conventions valid worldwide are immense.

The benefits and importance of formalities for copyright law have, however, returned to be a topic of discussion and interest for the United States Copyright Office and further changes may rise together with the interest in this topic in the future.<sup>110</sup> That said, if the United States Copyright Office is interested in the formalities discussion, technology and computer programs might have a strict relation to that increased interest as the majority of the computer industry is still concentrated in the United States.

The question important for this work is whether formalism may help improve the market for computer programs: one of the problems exposed by the empirical research of Chapter 1 is the fact that software license agreements subsist across an unregulated environment. Such lack of regulation could be in part responsible for allowing an abuse of rights from the ISV side. Research does not found evidence of studies where the positive or negative impact of formalities was observed. However, in the case of software copyrights, formalities could provide for protective rules, giving clarity in relation to the ownership of the rights as well as the limits for third parties, which may allow licensors and licensees to better understand what are their rights and obligations, and after all provide for benefits to all the parties involved in the contracts<sup>111</sup>.

## **2.5 How the case law stands with examples that present similarities with the cases of Chapter 1**

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<sup>110</sup> PALLANTE, Maria A. "The Curious Case of Copyright Formalities." Berkeley Technology Law Journal, 28 n. 3. P. 1416.

<sup>111</sup> STAMATOUDI, Irini; TORREMANS, Paul. EU Copyright Law. Elgar, 2014. p. 1140.

After a brief overview of the theoretical aspects related to copyright and the protection conferred to computer programs, another important aspect is to consider how courts are interpreting the cases and their position, such as when the copyright holder may go beyond what is necessary to safeguard the specific subject-matter of the IP concerned.

As referred by Chapter 1 the number of enterprises in distress due to aggressive software audits are high, however, evidence of formal proceedings and court litigation are very rare. Companies found in infringement, albeit the abusive conduct of the software vendor, believe they have little chance of winning the case, which leads to negotiations and settlements of most of the occurrences<sup>112</sup>. There are only a few cases that actually concern the scope of the licenses, addressing how courts may decide in relation to what is acceptable or not in terms of software licensing, copyright and software audit.

One academic article analyzed this phenomenon, why litigation is not the preferred method for Intellectual Property disputes and the reasons why parties prefer settling either before formal legal proceedings have started or before the conclusion of a litigation. The preliminary considerations in this regard concern typical reasons applicable to any other judicial cases such as the considerable costs and the commercial uncertainty. In particular, however, in case of the IP litigation, the right owners, even after the assertion of a patent by the patent office for example, rarely have the absolute confidence that such rights will be confirmed by the Courts, that's why IP rights have probably been described as "probabilistic rights". In most cases the parties find out that it is better to collaborate with each other instead of facing a long and uncertain court ruling.<sup>113</sup>

The same reasons can certainly be applied for the software audit cases. In case the software licensor finds inconsistencies during the audit, the licensee may be

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<sup>112</sup> DANZIG, Christopher. Program Pirates; Even accidentally unlicensed computer software leads to costly penalties. Inside Counsel Magazine, July 2009. P. 40.

<sup>113</sup> TREACY, Pat; LAWRENCE, Sophie. Intellectual Property rights and out of court settlements. In: ANDERMAN, Steven; EZRACHI, Ariel. Intellectual Property and Competition Law. Oxford University Press, 2011. P. 278-281.



prevented from using the computer program until the non-compliant aspects are resolved. The licensee in that case may be prevented from using a work instrument if the payment to the software vendor is not performed or while the judicial case is in course. That said the parties find out that is better to collaborate: while the customer can keep using the product without affecting its business, the licensor can maintain the commercial relationship and avoid losing a customer as well.

### **2.5.1 UsedSoft GmbH v. Oracle International Corp.**

According to the agreements sample analyzed in Chapter 1, the Independent Software Vendors establish that the user, after the acquisition of the license, cannot transfer such licenses to other users even if those licenses are no longer necessary to the first user. The non-transferability seems to be the common terms for the licenses, certainly subject to audits later, which is clear in the agreements sample where the licenses are always targeted as “non-transferable”. But what does it mean in real terms and what the EU Court of Justice said about that?

One important example is the case known as UsedSoft GmbH v. Oracle International Corp., presented to the European Union Court of Justice<sup>114</sup>. The referred case, Oracle (the claimant) started a proceeding in Court against UsedSoft (the defendant), at the national level in Germany, because UsedSoft purchased software licenses from the claimant customers and sold them to third parties. The claimant sold software to its customers in combination with an agreement that granted “non-exclusive non-transferrable user right” and sustained that such operation did not purport the transfer of the right of ownership of the copy. The defendant, instead, argued that Article 4(2) of the Software Directive turned its activities lawful as such article stated:

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<sup>114</sup> Case C-128/11

*“The first sale in the Community of a copy of a program by the rightholder or with his consent shall exhaust the distribution right within the Community of that copy, with the exception of the right to control further rental of the program or a copy thereof”.*

Oracle claimed that the agreement signed between Oracle with its Customers did not purport a “first sale”, as per above described Article 4(2), as the agreement did not transfer the right of ownership of that copy. The claimant argued that signing a license agreement while downloading a copy from the internet was a distinct operation compared to the purchase of a program on a material mean such as a CD or DVD.

The European Court of Justice disagreed with the claimant and considered that Article 4(2) of Directive 2009/24 must be interpreted as meaning that the right of distribution of a copy of a computer program is exhausted if the copyright holder who has authorized the downloading from the internet has also conferred, in return of a fee intended to enable him to obtain a remuneration corresponding to the economic value of the copy of the work of which he is the proprietor, a right to use that copy for an unlimited period. Moreover, the Court found that the downloading onto the customer’s server of a copy of the computer program and the conclusion of a user license agreement for that copy form an indivisible whole which must be classified as a sale; and concluded that: “Such a restriction of the resale of copies of computer programs downloaded from the internet would go beyond what is necessary to safeguard the specific subject-matter of the intellectual property concerned”.

The first customer, in case the license is sold to another customer, needs to make sure the referred computer program is no longer being used or installed in its servers. In that case, the Court found that the rightholder such as Oracle is entitled, in the event of a resale of a copy of its computer program, “to ensure by all technical means at his disposal that the copy still in the hands of the reseller is made unusable”.

This last aspect, the fact that the ISV is allowed to use all technical means at his disposal to make sure the copy still in the hands of the reseller is made unusable, can also legitimate the audit rights established in almost all software vendor agreements as a technical mean to control that the copies are being used in the correct way. So the question now is: What are the limits for the use of all technical means at its disposal? What is the difference between the legitimate technical mean for protection of its rights or an actual abuse of rights?

### **2.5.2 BMM Ispat Limited v. Autodesk India Private Limited**

In this regard, another case law directly related to audit rights was passed through judgment before the “Additional City Civil Judge” in Bangalore, India. BMM Ispat Limited, a Bangalore based company, filed a lawsuit against Autodesk stating that Autodesk, with the software audit, was interfering with BMM business activities. Autodesk is a company leader in engineering design software and the Autodesk software is widely used by the industry for the design of all sorts of engineering projects<sup>115</sup>.

Everything started with the purchase by BMM of the Autodesk software licenses through the signature of a Software License Agreement. The terms of the Software License Agreement were duly accepted by BMM and that included clearly defined audit rights clause. Approximately seven years after the signature of the agreement, BMM received a letter from Ernst and Young (E&Y), a third party audit company acting on behalf of Autodesk, stating they intended to send someone from E&Y to visit the BMM premises in order to give instruction for creating awareness about the Autodesk Software Asset Management Program. After the E&Y visit, BMM received an audit report describing discrepancies that demanded BMM to buy new licenses to cover their usage requirements in case they were interested on using the Autodesk software licenses.

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<sup>115</sup> <http://www.autodesk.com/>

BMM, after receiving the audit report, filed a lawsuit against Autodesk alleging Autodesk audit practices were interfering with their business activities and, if not stopped, it would cause severe and irreparable losses.

Autodesk, in its defense, stated the audit was conducted by an independent third party, following proper notification and through a transparent process, requesting the suit should be dismissed without a cost.

The court ruled that the problem alleged by BMM concerning the interference with their business does not arise. The Additional City Judge stated that BMM cannot impede Autodesk and/or its officials to inspect if their software is being used in compliance with the software license agreement and therefore, Autodesk can audit BMM premises in respect of the use of Autodesk software<sup>116</sup>.

With this recognition by the Court of the enforceable audit rights in the Software License Agreement, allowing the inspection of the Customers' premises, the message is clear that freedom of contract concerns also the responsibility to abide by what was agreed between the parties. The ruling showed that the court will not interfere with what the parties have agreed through the Software License Agreement, in a very pragmatic approach. If the audit rights of the software vendor are legitimate, however, to which extent can they be admitted?

## **2.6 The EU Court of Justice clarification concerning what is protected by copyright**

Another example of case law which deeply affected competition and ongoing innovation was a decision of the European Union Court of Justice of May 2 2012 in

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<sup>116</sup> Case number WP 3221/2015; Bangalore, 26-Feb-2015 Judge B.Manohar; Petitioner M/S BMM ISPAT LTD M/S; Respondent: Autodesk India PVT LTD.  
<http://judgmenthck.kar.nic.in/judgmentsdsp/handle/123456789/1/browse?type=respondent&order=ASC&rpp=20&value=M%2FS+AUTODESK+INDIA+PVT+LTD>

the case between SAS Institute Inc. versus World Programming Ltd: Case C-406/10.<sup>117</sup>

SAS Institute filed a lawsuit against World Programming alleging World Programming had infringed SAS Products and Manuals copyrights and also practiced object code decompilation of the SAS computer program. This lawsuit was initially presented by SAS before the court in the United Kingdom and the UK High Court referred some questions regarding the interpretation of the Software Directive and the Copyright Directive to the Court of Justice of the European Union (EUCJ). The EUCJ interpretation gave an important clarification concerning the limits of the application of the rules in relation to computer programs; however, there is still no certainty in this area of the law.<sup>118</sup>

The first questions presented by the High Court of Justice of England and Wales for preliminary ruling by the EUCJ concerned the possibility of a computer program which replicates the functionalities of another program without accessing or copying the source code could constitute a copyright infringement<sup>119</sup>.

As observed in the previous sections of this Chapter 2, only the expression of a computer program is protected and this protection cannot be extended to ideas or principles underlying elements of the program as per Article 1(2) of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs and the EUCJ confirmed that traditional interpretation stating that “neither the functionality of a computer program nor the programming language and the format of data files used in a computer program in order to exploit certain of its functions constitute a form of expression of that program and, as such, are not protected by copyright in computer

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<sup>117</sup> SAMUELSON, Pamela. Legally Speaking: Do Software Copyrights Protect What Programs Do? Communications of the ACM, 55 n. 3, 2011. P. 29.

<sup>118</sup> Analysis: What the SAS ruling means for computer programs. Managing Intellectual Property, Issue number 219, May 2012. P. 109.

<sup>119</sup> JUDGMENT OF THE COURT (Grand Chamber) 2 May 2012. Case C-406/10. Available at: <http://curia.europa.eu/juris/document/document.jsf?docid=122362&doclang=EN> Consulted on March 11, 2017.

programs for the purposes of that directive”<sup>120</sup>.

The functionality of a computer program, the programming language and the format of data files used in a computer program in order to exploit certain of its functions are not a form of expression and cannot be protected by copyright as stated by the EUCJ. Through that understanding, competition has been taken into consideration, as the Advocate General states in point 57 of his Opinion, “to accept that the functionality of a computer program can be protected by copyright would amount to making it possible to monopolise ideas, to the detriment of technological progress and industrial development”<sup>121</sup>.

As the European Software Directive does not mention program functionality or behavior being protected by copyright, it clarifies that substantial similarity in the expression of program ideas must be verified in order to configure an infringement of copyright. Therefore, the European Court of Justice had to analyze the above described case and determined the behaviors of computer programs are not protected by copyright. This decision is also in line with international law as pointed in Article 9 (2) of the TRIPs Agreement and Article 2 of the WIPO Copyright Treaty. The rationale of these rules is that the originality of a work, which gives access to legal protection, lies not in an idea, which may be freely used, but in its expression.<sup>122</sup>

Another important aspect that can be interesting for this study was established in this decision when it concerned the limits a license can impose on users as the audits subject to review on Chapter 1 identified several limits (not always clearly determined) imposed on customers by the software licenses.

This particular case overviewed these limits once the questions proposed by the UK High Court requested where a person has the right to use a copy of a program

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<sup>120</sup> Case C-406/10, Paragraph 44.

<sup>121</sup> Case C-406/10, Paragraph 40.

<sup>122</sup> STAMATOUDI, Irini; TORREMANS, Paul. EU Copyright Law. Elgar, 2014. p. 95.

under a license, if this person could be entitled to perform acts of loading, running and storing the program in order to observe, test or study the functioning of this program in order to determining the ideas and principles which underlie any element of the program for the purpose of writing another program.

On those grounds, the EU Court ruled that Article 5(3) of Directive 91/250 must be interpreted as meaning that a person who has obtained a copy of a computer program under a license is entitled, without the need of an authorization of the copyright owner, to observe, study or test the functioning of that program and these acts do not infringe the exclusive rights of the owner of the copyright in that program.<sup>123</sup> This opportunity given to users and other businesses is positive and provides for more freedom and legality in the field of technology development.

Unfortunately the EUCJ did not address much in detail the reasoning behind this aspect of the decision, however, once concluded that observing, studying or testing the functioning of that program for the purpose of writing another program does not constitute an infringement, the limits of users' rights may have been slightly reestablished because the sample analyzed in the empirical research of Chapter 1 excluded those acts explicitly and therefore, another door has been opened for the analysis in this field. Actually, when the case was returned to the UK's High Court of Justice for final ruling, based on the aforementioned guidance from the European Union, the High Court found that World Programming did not infringe SAS's copyrights by reverse engineering their program to create a competing product. As a consequence, the High Court also found the license provision, which expressly prohibited reverse engineering, was unenforceable as a matter of EU law.<sup>124</sup>

The last group of questions referred to the EUCJ concerned the copyright aspects related to manuals associated to the computer program. Where the "Manual" is

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<sup>123</sup> Case C-406/10, Paragraph 62.

<sup>124</sup> HUNTER, Steven V. The EU Delivers "One-Two Punch" to Computer Software Companies. *The Computer & Internet Lawyer*, Volume 30, Number 11, November 2013. P. 15.

protected by copyright as a literary work, is it an infringement of the copyright if the Manual is substantially reproduced in: (a) the selection of statistical operations, (b) the mathematical formulae used to describe those operations, (c) the commands or combinations of commands by which those operations may be invoked; (d) the options provided in respect of various commands; (e) the keywords and syntax recognized; (f) the defaults which the author has chosen to implement in the event that a particular command or option is not specified by the user; (g) the number of iterations which the Program will perform in certain circumstances?

The EUCJ responded stating that Article 2(a) of Directive 2001/29/EC must be interpreted as meaning that the reproduction, in a computer program or a user manual for that program, of certain elements described in the user manual for another computer program protected by copyright is capable of constituting an infringement of the copyright in the latter manual if — this being a matter for the national court to ascertain — that reproduction constitutes the expression of the intellectual creation of the author of the user manual for the computer program protected by copyright.”<sup>125</sup>

After the aforementioned guidance from the European Union regarding the user manual, when the case was returned to the UK’s High Court of Justice for final ruling, the decision of the national Court was that World Programming did not infringe SAS’s copyrights in the SAS Manuals.<sup>126</sup>

This decision, among others, demonstrate the European Court work to develop copyright law since 2009 and the tendency of leaving room for new ideas to be built, trying not to limit creativity while protecting authors’ creations. The ideas of author’s own creativity and the fair balance as well as the identification of the person who actually causes “harm” to the author seem to be principles identified in the European

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<sup>125</sup> Case C-406/10, SAS Institute Inc. versus World Programming Ltd, available at: <http://curia.europa.eu/juris/document/document.jsf?text=&docid=122362&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1&cid=972439>

<sup>126</sup> HUNTER, Steven V. The EU Delivers “One–Two Punch” to Computer Software Companies. *The Computer & Internet Lawyer*, Volume 30, Number 11, November 2013. P. 15.



Court's decisions.<sup>127</sup>

The case law is still far from exhausting all the questions relating to software licensing and software copyright but the tendency of the decisions overviewed above is to respect the author copyright without creating barriers for improvement of technology, giving a certain freedom to users and considering also the development of markets and competition.

One aspect important for this research is that EUCJ decisions reflect the fact that software vendors do not have a limitless possibility to write in the software agreements all sorts of limitations and obligations to users, applying the proportionality principle to ensure protection either to authors as well as customers.

The importance of these decisions for the harmonization of copyright law in Europe greatly reflect on the technology sector, as security for its operations and clear directions to vendors and customers are an urgent need. With the changes proposed by the internet and by software developers, the national courts will have to be prepared for support shaping the legal system providing authors with proper protection as well as guaranteeing users and the population in general a fair and inclusive treatment.

## **2.7 The copyright protection in the cloud**

Cloud computing, differently from the type of technology seen in the previous chapters, is a way of delivering computing resources (for example, but not limited to: servers or storage equipment, software applications, services) via a network (usually the internet). The computing power from the cloud is delivered as a utility like water or electricity, and customers can pay for cloud computing in proportion to their use. Cloud computing refers to both the applications delivered as services over the internet and the hardware and systems software in the datacenters that provide those services.

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<sup>127</sup> STAMATOUDI, Irini; TORREMANS, Paul. EU Copyright Law. Elgar, 2014. p. 1125.

The National Institute of Standards and Technology (NIST), a federal technology agency from the United States of America that works with industry to develop and apply technology, measurements and standards, has provided the definition for cloud computing most widely used and accepted<sup>128</sup>:

*Cloud computing is a “model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g.: networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction”<sup>129</sup>.*

Cloud computing can present advantages to customers such as reduce IT costs, provide remote and easy access to the latest technology eliminating the need of buying and installing software and maintaining hardware equipment, in environments where the demand for IT resources may vary in a fast pace, cloud computing can cover this need by enabling a fast transition of resources, the cloud can be a better and safe environment for the storage of protected data at a lower cost, it can allocate IT resources to regions where the cost is lower.

Despite of all the benefits of cloud computing, there are several risks related to the usage of such technology and considerable uncertainty as to the legal and regulatory status of several essential aspects of cloud computing, which includes but is not limited to the respect of copyright laws. Moreover, there is a growing concern that

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<sup>128</sup> As an example, the following documents apply the NIST definition: Working Party 29 (WP 29), "Opinion 05/2012 on Cloud Computing", WP 196, 1 July 2012, accessible via [http://ec.europa.eu/justice/data-protection/article-29/documentation/opinion-recommendation/files/2012/wp196\\_en.pdf](http://ec.europa.eu/justice/data-protection/article-29/documentation/opinion-recommendation/files/2012/wp196_en.pdf); the European Commission's description of cloud in its Communication on the "Unleashing the Potential of Cloud Computing in Europe" of 27 September 2012, accessible via <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0529:FIN:EN:PDF>, together with the Commission Staff Working Document, accompanying this document, <http://euapm.eu/wp-content/uploads/2013/04/STAFF-WORKINGDOCUMENT-Unleashing-the-Potential-of-Cloud-Computing-in-Europe.pdf>, page 2 referring to the NIST definition of cloud computing.

<sup>129</sup> P.MELL-T.GRANCE. **The NIST Definition of Cloud Computing**, 2011. Available at: <http://csre.nist.gov/publications/nistpubs/800-145/SP800-145.pdf>.

mainstream adoption of cloud computing could present a mixture of privacy and ownership issues, with users potentially being locked out of their own files<sup>130</sup>.

In order to better understand how the cloud service models operate, it is important to review the classification of the 3 main cloud service models: SaaS, PaaS and IaaS. The definition of such models has been based on the United States NIST – National Institute of Standards and Technology – “The NIST definition of cloud computing”<sup>131</sup>:

**Infrastructure as a Service (IaaS):** *The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls).*

**Platform as a Service (PaaS).** *The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.*

PaaS are used for applications, and other development, while providing cloud components to software. PaaS is a framework for developers where they can build upon to develop or customize applications. PaaS makes the development, testing, and

<sup>130</sup> <http://www.theguardian.com/technology/2008/sep/29/cloud.computing.richard.stallman> (Accessed 23 June 2014).

<sup>131</sup> P.MELL-T.GRANCE. The NIST Definition of Cloud Computing, 2011. Pages 2 and 3.

deployment of applications quick, simple, and cost-effective. The IT operations are centralized and the platforms are installed on top of the hardware. As the PaaS allows the creation of applications using software components that are built into the PaaS (middleware), there might be implications in terms of protection of the Intellectual Property of the developers.

**Software as a Service (SaaS).** *The capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g. web-based email), or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user specific application configuration settings.*

The SaaS represents the largest portion of the cloud market and it concerns using the web to deliver applications that are managed by a third-party vendor and whose interface is accessed on the clients' side. The common use of SaaS is to replace traditional on-device software. Most SaaS applications can be run directly from a web browser without any downloads or installations required, although some require small plugins. Because of the web delivery model, SaaS eliminates the need to install and run applications on individual computers, eliminates the need for more space in servers and the usual problems that follow the local installation and running applications such as expenses with maintenance, management, among others. SaaS enables customer to generate, through use of the cloud, information subject to IP rights.

Cloud-computing related transactions involve a variety of branches of law and is bringing into discussion several aspects, whether commercial disputes focused on contract law, intellectual property law cases involving patent or copyright infringement or trade secret misappropriation, claims related to privacy and data breach and even

cyber crimes will have to be considered in that case<sup>132</sup>. The issue related to security of data in the cloud is maybe the most sensitive as businesses rely on a third party to manage their information which can involve but is not limited to personal data and trade secrets<sup>133</sup>. However, for supporting the research of Chapter 1, the analysis will concentrate on the aspects affecting copyright law and how it will be applied for the cloud business models.

With cloud computing, software no longer needs its physical copies to be distributed because customers can access the content remotely and the copies of software remain on the cloud provider's servers. Software as a service concerns different rights comparing to the traditional distribution models. In cloud business models, providers usually retain physical possession of their software copies and enable customers to remotely access and use the software functionality.<sup>134</sup> Software copyright, in this case, are implicated differently: the cloud provider must have the right to provide his customers with access the software remotely. This authorization must either come from an expressed license authorization or from the ownership of the software copyright. Furthermore, as server location and access to such services may occur in different jurisdictions, additional complexities are added to this scenario as different laws may be applicable.

As described previously, the Directive 2001/29/EC of the European Parliament and of the Council on the harmonisation of certain aspects of Copyright and Related Rights in the information society, determined that Member States shall provide the copyright owner with exclusive rights to the "reproduction", "communication to the public" or "making available to the public" and "distribution to the public" by sale or

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<sup>132</sup> WITTOW, Mark H. Cloud Computing: recent cases and anticipating new types of claims. *The Computer and Internet Lawyer*. Volume 28. January 2011. P.1.

<sup>133</sup> SRINIVASAN, S. Is security realistic in the cloud? *Journal of International Technology and Information Management*. Volume 22, Number 4. 2013. P. 47-66.

<sup>134</sup> WIDMER, Michael P. Application Service Providing, Copyright, and Licensing. *The John Marshall Journal of Information Technology and Privacy Law* V. 25. (2007) p.93.

otherwise<sup>135</sup>.

In the cloud context, the cloud provider more often involves the copyright owner's right to communicate to the public, by installing copies on servers and making it available to users. In this case the distribution right is not implicated because software copies are not transferred to the user's computer, therefore, there is not a change of possession of the software. Based on that, copyright owners receive the right to license or exclude the protected work of online transmissions, which means, without the copyright owner proper consent allowing communication to the public, the work cannot be accessed through cloud computing as it requires proper license grant.<sup>136</sup>

Copyrights are affected differently with cloud models as it implicates rights under copyright law very different if compared to usual and well established distribution models of software licenses, also known as "on premise model". When changing from a software license agreement to a SaaS contract, the focus shifts from buying, implementing and managing the software application to establishing and managing the SaaS vendor relationship<sup>137</sup>.

The electronic management of the content available in the cloud gives more control to the copyright owner over the works accessed through this mean and therefore the prevention of any infringement may occur with greater precision than the traditional software licenses model. With the cloud computing, proprietors can restrict access to users in any desired level and keep the control over all the content; the cloud model, hence, requires contractual conditions specifically modulated.<sup>138</sup>

The qualitative research of Chapter 1, in this regard, has demonstrated that

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<sup>135</sup> Articles 2, 3 and 4 of the Directive.

<sup>136</sup> DETERMANN, Lothar. What Happens in the Cloud: Software as a Service and Copyrights. Berkeley Technology Law Journal, 29 n. 2. P. 1119-1125.

<sup>137</sup> Department of Defense Chief Information Officer ESI White Paper. Best Practices for Negotiating Cloud-Based Software Contracts. Guidance on the differences between purchasing perpetual software and renting Software as a Service.

<sup>138</sup> CORNISH, W. R. Intellectual Property: patents, copyright, trademarks and allied rights. 8.ed. London: Sweet & Maxwell, 2013. P. 859.

Cloud Agreements have a different approach when it concerns license management, as customers do not have any software copies installed and directly managed on their premises. It is important to highlight this fact because the results of the qualitative research are deeply affected by this factor: cloud services agreements are dramatically different from software license agreements and, as the work subject to copyright is not “on premise” of customer, several controls, such as customer audit are not necessary or applicable.

## 2.8 Copyright Infringement

As seen before in this text, copyright law aims to protect authors in order to impede that the author’s work, which required investment and effort, ends up being used by a third party that did not share the burden and costs for producing such work. The immediate function of copyright protection, therefore, can be to avoid illegitimate use and profit of the author’s work, also known as “free-riding”. In a very simplistic way, free-riders subtract benefits without giving a contribution of any kind.<sup>139</sup>

Unfortunately, this over-simplified description does not cover the complex scenarios where copyright law is enforced and the different vectors affecting the circumstances where it is applied. The biggest software vendors as copyright owners, especially after the changes and fast technological development of the last four decades, have a strong dominance and capability of controlling and protecting its assets as well as influencing organizations, governments, legislators to work for the benefit of IP owners in disadvantage of consumers and community in general.

Essentially, copyright is a right to make copies<sup>140</sup> and once determined a certain work attracts copyright protection, the next step would be to define what concern an

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<sup>139</sup> MACQUEEN, Hector; WAELDE, Charlotte and GRAEME, Laurie. *Contemporary Intellectual Property: Law and Policy*. Oxford University Press, 2008. P. 41. BARRON, Anne. *Copyright Infringement, ‘Free-Riding’ and the Lifeworld*. LSE Law, Society and Economy Working Papers 17/2008. London School of Economics and Political Science Law Department. P. 15.

<sup>140</sup> TORREMANS, Paul e HOLYOAK, Jon. *Intellectual Property Law*. 6th. ed. Oxford, Oxford University Press, 2010. P. 244.

infringement; how this “right to make copies” is violated.

Copyright infringement occurs when one of the acts that intrinsically relates to the copyright ownership is practiced by someone else without the owner’s authorization. The unauthorized copying of copyrighted materials for commercial purposes and the unauthorized commercial dealing in copied materials is known as “piracy”<sup>141</sup>.

The copyright infringement of software (often referred to as software piracy as the previous clarification) refers to several practices which involve the unauthorized copying of computer software. To infringe a copyright, “*the part taken should be the result of skill and labour in its own right*”<sup>142</sup>, and the copying of the elements protected by copyright must be substantial.<sup>143</sup> As the case law revised in the previous chapter, the EUCJ confirmed this interpretation in its report at paragraph 20, stating that “restrictions imposed by copyright in respect of acts performed on a work apply in relation to the work as a whole or any substantial part of it, either directly or indirectly”.

An infringement, as per Article 4 of the Directive 2009/24/EC, concerns unauthorized acts of permanent or temporary reproduction; translation, adaptation, arrangement and any other alteration; any form of distribution to the public, including rental. In terms of computer programs, the most significant of the acts are making copies and making an adaptation<sup>144</sup>.

The EU Directive 2009/24/EC also establishes, in its Article 7, that Member States shall provide for remedies against a person committing copyrights infringement, and for the seizure of any means used to infringe software copyrights. The Directive,

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<sup>141</sup> WIPO. Introduction to Intellectual Property: theory and practice. London: Kluwer Law International, 1997. P. 166.

<sup>142</sup> BAINBRIDGE, David I. Information technology and intellectual property law. Sixth. ed. Haywards Heath, Bloomsbury Professional, 2014. P. 39.

<sup>143</sup> TORREMANS, Paul e HOLYOAK, Jon. Intellectual Property Law. 6th. ed. Oxford, Oxford University Press, 2010. P. 567.

<sup>144</sup> BAINBRIDGE, David I. Information technology and intellectual property law. Sixth. ed. Haywards Heath, Bloomsbury Professional, 2014. P. 103.



however, does not provide for profound and proper guidance for the configuration of what an infringement is. In terms of remedies, the Berne Convention, in Article 16 (1) and (2) provides that infringing copies of a work are subject to seizure in any country of the Berne Union where the work receives protection.

Nevertheless, software copyright infringement is very common and a few examples can be found in the list below<sup>145</sup>:

- “*CD-R infringement*” is the illegal copying of software using CD-R recording technology;
- “*Commercial use of non-commercial software*” is using educational or other commercial-use-restricted software in violation of the software license;
- “*Counterfeiting*” is the duplication and sale of unauthorized copies of software in such a manner as to try to pass off the illegal copy as if it were a legitimate copy produced or authorized by the legal publisher;
- “*Hard-disk loading*” occurs when an individual or company sells computers preloaded with illegal copies of software, usually, it is an incentive for the end-users to buy the hardware from that particular seller;
- “*Internet infringement*” is the illegal uploading of software on to the internet for anyone to copy;
- “*Softlifting*” is a neologism invented by anti-copyright infringement advocates, and is a term used to describe when a person purchases a single licensed copy of a software program and loads it on several machines, in violation of the terms of the license agreement.
- “*Unrestricted client access infringement*” occurs when a copy of software program is copied into an organization’s servers and the organization’s network

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<sup>145</sup> <http://cs.stanford.edu/people/eroberts/cs201/projects/1999-00/software-piracy/types.html>;  
<http://www.safenet-inc.com/software-monetization/types-of-software-piracy/#content-left>.

“clients” are allowed to freely access the software in violation of the terms of the license agreement.

The copyright system grants exclusive rights to the beneficiaries but the basic approach in most countries is, or has been, that it is for the injured party himself to take action<sup>146</sup>; therefore, software developers have to rely on their own protection devices<sup>147</sup>. The software industry has invented several creative ways to prevent improper usage of its copyrighted content: passwords, locked programs, strong contractual safeguards, surveillance of its protected material and audit of its customers among others.

The findings of the empirical analysis of Chapter 1, related to audit, demonstrated licensor abuse of their exclusive right when using audit to protect their intellectual property. Licensee behaviour, in that case, has nothing in common with the concept of “piracy”, as the unclear terms and condition of the license agreement induce into mistakes. The willful misconduct cannot be present in the licensee conduct and in many cases the elements are not “substantial”. However, licensees have been treated as if their intent was to commit an infringement or even an offense and the punishment consist on heavy increase in unexpected costs with software licenses and loosing the freedom to choose which software is better for their businesses.

## 2.9 Inference

Through this analysis of how IP has been providing protection to authors works, it was possible to observe that since Johannes Gutenberg mechanical movable type printing, all the way through the development of the computer industry in the seventies and eighties until the current digital environment of online distribution, user-generated content and use of cloud computing as an utility, copyright protection has

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<sup>146</sup> WIPO. Introduction to Intellectual Property: theory and practice. London: Kluwer Law International, 1997. P. 333.

<sup>147</sup> STAINES, Anne. Copyright in Computer Programs: A Hollow Victory. The Modern Law Review, Vol. 46, No. 2 (Mar., 1983) P. 234.

demonstrated to be flexible in order to follow the development of technology and support authors protecting its works.

In this chapter it was observed how the law changed and improved in order to go along with the development of technology. As stated by Professor Montagnani, “technology challenges copyright law, and copyright law tends to react initially by fighting and subsequently by encompassing the new ways of exploiting copyrighted works developed by the new technologies, when necessary through reform of the law”.<sup>148</sup>

Legislators have an important role in supporting the legal development as a reaction to all this technological development but history should now have demonstrated that tension between technological evolution and protection of author's rights is not manageable exclusively through new laws to which the market systematically adapt and contrast by finding new ways of exploitation. In this continuous evolving relationship, further measures have to be developed in order to give more tools to authors to protect the unauthorized use of their work<sup>149</sup>.

In that regard, courts need to draw near technology related subjects and take the lead on influencing the emergence of certain new technologies. If technological progress threatens legal rights the first instance of protection needs to be found in court; and judges, arbitrators and mediators must be prepared for the constant transformation of the technological environment.

Currently, one of the main tools in terms of copyright protection is the establishment of robust, well-established binding agreements between authors, vendors and customers. The next chapters will be dedicated to this analysis from the academic prospective, through bibliographic research and through the overview of the qualitative

<sup>148</sup> MONTAGNANI, Maria Lillà. A new interface between copyright law and the technology: how user-generated content will shape the future of online distribution. *Cardozo Arts & Entertainment*. 2009 Vol 26:719. P. 721.

<sup>149</sup> COLANGELO, Giuseppe. L'enforcement del diritto d'autore nei servizi cloud. Relazione tenuta in occasione del Convegno dell'Associazione Letteraria e Artistica Internazionale (ALAI). Milano, giugno 2012. *Rivista Il Diritto di Autore*. Giuffrè Editore, Fasc. 02,2012. P. 191.

research presented on Chapter 1.

## CHAPTER 3

Contracts are an essential part of modern society: they help different parties with opposite interests to be cooperative and trusting when they would be otherwise disobliging and distrusting. Oliver Hart and Bengt Holmström stated that “any trade — as a quid pro quo — must be mediated by some form of contract, whether it be explicit or implicit”<sup>150</sup>. Contracts are part of every aspect of life and they became as well one of the main tools for parties with different interests to collaborate in the exchanging of information.

This Chapter will analyze how software contracts are shaped for allowing copyright owners to provide access to its intellectual property to third parties through a license agreement, managing to keep the control over the copyrighted work. The details of software license agreements sample analyzed in Chapter 1 will be subject to review, in order to help understanding the qualitative research performed.

As described in Chapter 2, computer programs, whether in cloud or not, can be protected by copyright, patents or trade secrets. The most common and suitable mean of protection of the computer program intellectual property is through copyright.

### 3.1 Transfer of copyright and related rights

The copyrighted work is an asset belonging to the copyright owner and only the

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<sup>150</sup> HART, Oliver; HOLMSTRÖM, Bengt. The Theory of Contracts. MIT, March 1986. P.1.

copyright owner can dispose of the asset, just like any other company asset. Copyright can be transferred by succession<sup>151</sup>, by assignment or through a license. These are the three predominant ways of transferring copyright; this Chapter will focus mostly on the licensing of copyrights, as the qualitative research of Chapter 1 concerns the content of software licensing agreements.

### **3.1.2 Assignment of copyright**

The assignment of copyright consists on the passage of the property interests from the right owner or transferor to the acquirer or transferee. The assignment can be fully or in part and the transferee becomes the new copyright owner.<sup>152</sup> Assignment of copyright occurs when the acquirer aims to the ownership of copyright and needs to have control over the work. In case of computer programs, a common example is when a company requires one developer to create a specific code based on its instructions and information for the exclusive use and purposes of the company of transferee. The agreement between the parties must establish the ownership in advance in order to avoid problems for each of the parties.

### **3.1.3 Copyright License**

The most common solution found in practical terms for the commercialization of computer programs was through a software license agreement, which confers to the computer program, therefore, the protection through copyright law and contract law as well. The commercialization of licenses is very different from the sale of copies of the software. The license agreement establishes all the conditions the provider (or licensor) request the buyer (licensee) to respect in order to have access to such computer program.

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<sup>151</sup> Aspects related to succession will not be object of analysis because the focus of this research is the transfer of copyrights through licenses.

<sup>152</sup> VAN EECHOUD, Mireille. Choice of law in copyright and related rights. Netherlands: Kluwer Law International, 2003. P. 192.

The license concerns the transfer of rights to use, modify or distribute a computer program. The copyright owner or licensor grants to another party (in this case the licensee), a license to exercise certain rights inherent to his IP. The license can be limited in time and territory and can include all the obligations the licensee must respect in order to be authorized to use, modify or distribute the licensor copyrighted work.

The licensee (with some exceptions) does not obtain title to the licensed copy but obtains possession of one or more copies of licensed software and gains certain specified rights to deal with the licensed copy under the terms of the software license agreement: there is a strong legal string attached to these goods.<sup>153</sup>

### 3.2 General types of Software License Agreements

This Chapter 2 will concentrate on the analysis of software license agreements as Chapter 1 research focus on a qualitative analysis of software license agreements provided by the main Software Vendors worldwide. There are many types of Software License Agreements<sup>154</sup> as listed below:

- Developer-publisher license agreements;
- Publisher-distributor license agreements;
- User license agreements;
- Escrow and Trusted Third Party (TTP) agreements;
- Runtime license agreements;
- Manufacturing license;

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<sup>153</sup> BOND, Robert. *Software Contract Agreements: Negotiating and Drafting Tactics and Techniques*. 3 ed. London, Thorogood, 2004. P. 59.

<sup>154</sup> BOND, Robert. *Software Contract Agreements: Negotiating and Drafting Tactics and Techniques*. 3 ed. London, Thorogood, 2004. P. 72.

- Cross-licensing;
- Joint venture licensing;
- Core technology license agreements;
- Software conversion agreements;
- Database and access software license agreements;
- Maintenance service license agreements;
- Facilities management agreements;
- Website agreements;
- Open source licenses;
- Application service provider licenses;
- Software as a service (SaaS) – cloud services agreement.

Among those types of agreement listed above, this research will concentrate mostly on the *Standard End-User Software License Agreement* due to the fact that the qualitative research of Chapter 1 analyzes this type of agreement. Furthermore, it is one of the most widely used type of agreement applied by software vendors as well as starts the relationship between vendor and customer, which may include other products later on such as maintenance.

The qualitative analysis performed in Chapter 1 with the ten *End-User Software License Agreements*, demonstrated those examples are the best option for licensors but certainly not the most reasonable option for the licensee. As the agreements are proposed by the licensor, they are very strict and protective in relation to the licensor only and the type of agreement has a great influence on that. Through a license, the software vendors impose many limitations for the customers. An assignment of rights



could ensure more reasonable and fair options for users.

As the request of having the copyright assigned to customers is not a feasible option, licensees have to be very careful once starting a contractual relationship with software vendors as the warranties provided by the vendor/licensor are minimum or inexistent while the risks for the user/licensee can be significant. While some business customers with the power to negotiate better options may obtain more favorable conditions than the standard contract provided by the licensor, small and medium enterprises, not to mention consumers, remain without a choice. Certainly the type of agreement influences in that outcome and therefore, it deserves a detailed observation as follows.

### **3.3 Standard End-User Software License Agreement**

End-User Software License Agreement, commonly known as “EULA”, is the contractual instrument that determines the rights a computer user has in relation to that software. It is the conditions of license which grants the customer rights to copy software or to exploit it in the ways described by agreements terms and conditions. The title and ownership remains with the vendor. A license can be compared to a rental agreement: the vendor/landlord still owns the house but the customer/tenant has the right to use it.<sup>155</sup>

### **3.4 General Clauses found in Software License Agreements**

Chapter 1 of this thesis focused on the qualitative analysis of 10 software license agreements. For supporting this analysis, this section will focus on a brief overview of the content of these agreements as there are similarities in terms of structure and several aspects in common among these agreements.

Initially, the agreement section related to the *Technical Specifications* is a

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<sup>155</sup> TOLLEN, David W. *The Tech Contracts Handbook*. 2.ed. Washington, ABA, 2015. P.3.

common aspect: this section of the agreement will describe what the technology will do and how it is supposed to perform. The technical specifications are located in the initial part of the agreement as they provide the foundations for the other sections, such as warranties and maintenance clauses. For example, in the warranty section, the vendor warrants that the software will perform in accordance with the technical specifications; in the maintenance section the vendor commits to provide proper maintenance so the software will perform according to the technical specifications. The technical specifications, also known as “specs” are a very important aspect of the agreement and a good example where professionals with different technical knowledge and background (e.g.: programmers, engineers, lawyers and the business people) have to work together in order to prepare a good foundation for the other sections of the agreement.

*Service Level Agreement*, also called *SLA* may refer to a clause or even a group of clauses describing and addressing the performance of a service whether it is provided in cloud or professional services related to the software such as support and maintenance. The SLA provides for the levels of services addressing vendors obligations, for example: repairing technology problems, response in case technical support is required, the time necessary for repairing each type of problem or providing for remedies in case the problem cannot be fixed in accordance with the customer needs. In case the vendor does not reach the service levels agreed initially, the customer has the right to terminate the agreement.

Software license agreements include in many cases the *Maintenance* services clause with the provision of maintenance services required to have the technology working properly. Maintenance can be defined within the software license agreement together with the other clauses or can be a separate services agreement. The maintenance is slightly different from the service level clause as it is a specific dedicated service previously described by the agreement and defined to maintain the technology. In the majority of cases it starts at the end of the warranty period.

In the contract sample analyzed in Chapter 1, one clause that appeared in every vendor terms and conditions was the *Nondisclosure/Confidentiality* clause, in which one or the parties commits to keep the proprietary information of the other party confidential. The nondisclosure clause may be applicable to both parties in the agreement as the discloser and the recipient can be either the vendor or the customer. A well-defined nondisclosure obligation plays an important role at defining how the confidential information can be used: what is authorized or unauthorized use of the discloser sensitive information. The recipient cannot use the confidential information for any other reason but the transaction defined by the agreement; the recipient cannot pass the information to third parties without the discloser's permission and the recipient shall take reasonable steps to protect the information is the common structure in nondisclosure clauses.

The *Warranty* section of software license agreements concern a variety of warranties, such as, that the software will work for a certain amount of time and guarantees the vendor has the right to transfer the intellectual property. Warranties can cover almost any topic and vendors and customers have to craft whatever language better fits the objective of the deal.<sup>156</sup>

*Indemnity* clauses, present in all license agreements analyzed in Chapter 1, is a clause where the indemnitor promises to “defend, indemnify, and hold harmless the indemnified party. In other words, one party promises to protect the other from claims and lawsuits in certain cases specified by the agreement. The indemnities commonly found when the vendor is the indemnitor can be (i) infringement of patent, copyright, trade secret, or other intellectual property right, (ii) injury or death of any individual, (iii) loss or damage to property, (iv) personal data protection laws violation or disclosure of personal data caused any act or omission of the vendor. Among the indemnities from the customer, the obligation of defending the vendor in case the customer does not use the products in accordance with the terms proposed by the vendor. In mutual indemnities, each party shall indemnify the other against any claim

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<sup>156</sup> TOLLEN, David W. *The Tech Contracts Handbook*. 2.ed. Washington, ABA, 2015. P. 119.

originated by the indemnitor's actions or omissions, typically in relation to data breach, personal/property injury and Intellectual Property infringement; the party who causes the breach, injury or infringement becomes the indemnitor.

Another clause found in every sample agreement analyzed, is the *Limitation of Liability* clause. In some examples, software vendors limit their liability to the maximum amounts paid by the customer during one year, in other examples the maximum liability is limited to the total fees due under the contract. The limitation of liability may be considered excessively harsh on customers and too beneficial for software vendors at a first glance but it is a common ground for software agreements, based on the fact that information technology is a scalable tool: it can be used to achieve goals geometrically more valuable than the tool itself<sup>157</sup>, as, for example, a five thousand Euros software can be used to manage a one billion Euros asset portfolio. If the software vendor shall remain liable for the total amount of damages, it may surpass many years of profit or even the company value itself.

A matter that cannot be forgotten in the agreement concern the *Applicable Law* and how disputes will be addressed – *Dispute Resolution* or *Alternative Dispute Resolution* clauses. A pattern could not be identified in the sample analyzed in Chapter 1, as the clause varies according to the place where the software vendor is located and the place where the agreement will be executed. There is a tendency of choosing alternative dispute resolution methods to avoid going to court and this aspect is evolving in relation to technology transactions. Having a specialized referee to decide on technology matters may be beneficial to both parties. Examples of dispute resolution procedures include: Informal negotiation; Mediation - negotiation facilitated by an independent and experienced neutral person (a mediator); Arbitration - Formal dispute resolution, leaded by independent decisionmakers (arbitrators); Litigation - Formal dispute resolution through a public process.<sup>158</sup>

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<sup>157</sup> TOLLEN, David W. *The Tech Contracts Handbook*. 2.ed. Washington, ABA, 2015. P. 146.

<sup>158</sup> FREEDMAN, Bradley. *A Practical Guide to Software License Agreements: Governing Law and Dispute Resolution*. *The Licensing Journal*. April 2014. P. 31.

*Term and termination* clauses address aspects like the contract duration, when a party can terminate for cause, if there is the possibility for a party to terminate for convenience and what happens after termination.

In furtherance to the above mentioned clauses, a particular attention will be given to the audit rights clause, as this practice will be subject to evaluation in the next chapter.

### **3.5 Audit rights clause**

As the owner of copyright, the licensor may have the right to use legitimate tools aiming for an active control over infringements of its rights. Copyright owners - in this specific study the Independent Software Vendors (ISV) - as licensors, may require to have audit rights in licensee's premises and devices as a protection against unauthorized copying and use of software.

As part of the standards software license agreement, an audit clause may be requested in order to authorize the vendor to review the customer's books and computers. The vendor, during the audit, will look for evidence of copies in excess of the license, use beyond the scope authorized, or distribution without royalty payments<sup>159</sup>.

Licensees, in order to use the rights established by the software license agreement, cannot act differently but allow the copyright owner to perform an audit to verify if the use of their work is complying with the agreement signed between the parties and if the licensee is acting in accordance with the authorization provided by the licensor.

One example of audit clause, taken from one major software vendor can be the following:

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<sup>159</sup> TOLLEN, David W. *The Tech Contracts Handbook*. 2.ed. Washington, ABA, 2015. P. 169.

*“Licensee agrees to create, retain, and provide to licensor and its auditors accurate written records, system tool outputs, and other system information sufficient to provide auditable verification that Licensee's use of all Programs is in compliance with the Program Terms. Upon reasonable notice, Licensor may verify Licensee's compliance with Program Terms at all sites and for all environments in which Licensee uses (for any purpose) Programs subject to the Program Terms. Licensor will notify Licensee in writing if any such verification indicates that Licensee has used any Program in excess of its Authorized Use or is otherwise not in compliance with the Program Terms. Licensee agrees to promptly pay directly to Licensor the charges that Licensor specifies in an invoice for 1) any such excess use, 2) support for such excess use for the lesser of the duration of such excess use or two years, and 3) any additional charges and other liabilities determined as a result of such verification.”<sup>160</sup>*

This example is similar to the audit clauses analyzed in Chapter 1, as it explains:

i) licensee will provide sufficient information to licensor and its auditors regarding the use of the programs;

ii) the licensor will verify if such use of the programs is in compliance with the agreement;

iii) as an outcome of the audit, licensee will be notified in case the audit indicates any non-compliance;

iv) licensee will pay for the licenses used in excess as well as the corresponding technical support in relation to those licenses as well as possible damages for copyright infringement.

In this clause, the fact that the auditor is an independent third-party auditor or an internal auditor working on behalf of the licensor is not specified. Moreover, who is responsible for the payment of the audit costs is not as well clear.

In some agreements, the audit clause will provide clear guidance regarding the penalties in case of unlicensed software and propose an alternative in case the

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<sup>160</sup> Clause slightly modified to omit the names of the parties.  
[http://www.scottandscottllp.com/main/ibm\\_audit\\_clause.aspx](http://www.scottandscottllp.com/main/ibm_audit_clause.aspx)

customer is not interested in using such unlicensed software, which can be to uninstall the unlicensed software or simply to stop using it.

It is difficult though, to have a clear provision in case of damages for copyright infringement as the infringement is not possible to forecast in advance and it can concern several aspects in relation to the software use, right to modify and distribute, as reviewed further in Chapter 2

### 3.5.1 The case law

In February 2017, a difficult case between the Claimant SAP UK limited and the Defendant Diageo Great Britain Limited was ruled by the London High Court of Justice Queen's Bench Division Technology and Construction Court<sup>161</sup>.

The case details are close to the examples analyzed in the empirical research of Chapter 1: a Software License and Maintenance Agreement for the grant of a license to use the SAP software in return for the payment of license and maintenance fees was signed in 2004 by SAP and Diageo. Among all the products purchased through that agreement, the object of the dispute was the product named “mySAP ERP” software, which comprises a centralized database, together with an application layer installed and running on a customer’s server. The software mySAP ERP is a tool used to run company activities that are vital for the business which includes the financial management and human capital management. In addition to the tools for running many business aspects, mySAP ERP provides a master data store capable of interacting with multiple business processes.

The Defendant Diageo is a company with businesses located worldwide and uses mySAP ERP software for management of the manufacturing, stock, supply chain, financial reporting and control, human resources requirements of its business. The agreement between SAP and Diageo established the license fees are calculated based

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<sup>161</sup> Case No: HT-2015-000340. Neutral Citation Number: [2017] EWHC 189 (TCC). Date 16 February 2017.

on the number of “named users” and the maintenance fee is payable annually as a percentage of the license fee. Under the same agreement, SAP grants Diageo with a license to use a software engine called “SAP Exchange Infrastructure” for the distribution of messages between the systems and the fees are paid by Diageo based on the monthly volume of messages processed.

Diageo introduced in its business in 2011 two new software systems for managing sales and service representatives provided by Salesforce.com, a well-known SAP competitor. Some years after Diageo was making use of both systems, SAP has now alleged that Salesforce systems use and/or access the mySAP ERP software directly or indirectly and as a result, SAP required the payment of additional licence and maintenance fees in the approximate sum of fifty four million pounds<sup>162</sup>. SAP seeks also a mandatory injunction requiring access to the mySAP ERP software so as to audit usage by Diageo and verification of any additional licence and maintenance fees payable.

Diageo acknowledged that Salesforce and SAP systems interact via the SAP Exchange Infrastructure, for which payment is made on the basis of the monthly volume of messages processed and therefore, Diageo has requested a declaration from the court that has been no infringement by Diageo of any copyright or other intellectual property rights owned by SAP.

The Court started its analysis by reviewing the agreement terms<sup>163</sup>, followed by the examination of the interactions between the software systems of Salesforce and

<sup>162</sup> As per Section 8, page 2 of the decision number [2017] EWHC 189 (TCC), the total amount requested by SAP corresponded to £54,503,578 corresponding to licenses and maintenance fees under the agreement.

<sup>163</sup> Section 38 of the above case number [2017] EWHC 189 (TCC) the Court stated the following: “When interpreting a written contract, the court is concerned to ascertain the intention of the parties by reference to what a reasonable person, having all the background knowledge which would have been available to the parties, would have understood them to be using the language in the contract. It does so by focussing on the meaning of the relevant words in their documentary, factual and commercial context. That meaning has to be assessed in the light of (i) the natural and ordinary meaning of the clause, (ii) any other relevant provisions of the contract, (iii) the overall purpose of the clause and the contract, (iv) the facts and circumstances known or assumed by the parties at the time that the document was executed, and (v) commercial common sense, but (vi) disregarding subjective evidence of any party's intentions”: *Arnold v Britton* [2015] UKSC 36 per Lord Neuberger Paras.15-23; *Rainy Sky SA v Kookmin Bank* [2011] UKSC 50 per Lord Clarke Paras.21-30; *Chartbrook Ltd v Persimmon Homes Ltd* [2009] UKHL 38 per Lord Hoffmann Paras.14-15, 20-25.



SAP to verify if there is an actual unauthorized access to the SAP software which may require the payment of extra costs for SAP licenses and maintenance.

The license agreement established diverse named user categories: *Developer User, Limited Professional User, Employee User, Light User, Mobile User, Light ESS User*. The Salesforce software systems presented 2 different functionalities: a) one of them allowed Diageo's customers to place orders online (instead of using a call centre) by using the Salesforce.com website and cloud system that utilized data held in a database but also associated with the SAP Exchange Infrastructure; b) the second system allowed Diageo's sales staff to use an iPad to access, via a Salesforce.com application, customer data in a database associated with the mySAP ERP software.

The Claimant SAP argued that once Diageo's customer, although based on Salesforce technology, connected directly into mySAP ERP software, all Diageo's ultimate customers (5,800 individuals) needed to be licensed as "named users".

The definition of named user applicable to the type of usage performed through the Salesforce system was not clearly defined by the agreement and this aspect was admitted by the court when stated that certain Salesforce software system usage in connection with SAP "*do not fall within any identified category of Named User (...). Their interaction with the software is limited and specific to their role. The category that most closely resembles the use or access for the sales representatives is the Mobile User identified in the Schedule*".<sup>164</sup>

However, the Court supported to the Claimant's case, stating the Defendant is obliged to pay damages to the Claimant for breach of the Agreement. Diageo's users through the Salesforce platform are not Named Users and therefore such usage was considered unauthorized by the Court, which amounts to a breach of the Agreement. The judge determined that SAP's right to additional licence and maintenance fees for unauthorised usage is without prejudice to any other rights or remedies available.

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<sup>164</sup> As per Section 101 of the decision number [2017] EWHC 189 (TCC).

Although the Court ruled that Diageo's business customers and sales representatives were within the ambit of SAP's licensing controls, the SAP demand of declaring that all usage has to be licensed at *professional user* level<sup>165</sup> was rejected and other types of named users that could not be identified in the agreement would have to be applied to the case.

After this decision, business using SAP may now be exposed to substantial penalties when audited by SAP. Companies using SAP software will have to establish licenses not only for their internal users but also their customers and suppliers, and be extremely careful if there is any flow of data, even indirectly, from the SAP systems to individual customers through other systems such as customer portal website.

The Court ruling itself brought to light the fact that the license terms are not clear: the judge ruled there was an unauthorized usage, in breach of the software license agreement, however, the Court was not able to identify in the agreement which *Named User* category could correspond to that.

This decision can open many other discussions:

- In a similar case like the one above defined, can the requirement to license 'indirect access' cover any consumer accessing a price on a website or placing an order if any of the information has been generated by, or delivered through, any SAP software?

- After this ruling by the Court, in which position the other competitors may remain? In this example, the costs are substantive and may render unviable for customers and competitors to have any interface with SAP software.

- To which concern software maintenance price being directly connected and

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<sup>165</sup> Which can amount 9,400 Pounds per user including VAT, according to comments to the case found in blogs related to the subject, available at:

<http://diginomica.com/2017/02/20/sap-v-diageo-important-ruling-customers-indirect-access-issues/>

<https://high-court-justice.vlex.co.uk/vid/ht-2015-000340-666536081>

<http://www.pcworld.idg.com.au/article/614490/sap-license-fees-due-even-indirect-users-court-says/>

Consulted on April 15, 2017.

calculated on top of the license price, can that practice be considered a tying arrangement?

### **3.6 Other aspects of concern observed in the sample of agreements analyzed**

One aspect observed during the agreement qualitative analysis of Chapter 1 was the fact that all the terms and conditions from the sample analyzed presented, together with its main content, hyperlinks, or simply links, referring to data that the reader can directly follow either by clicking, tapping, or hovering. These hyperlinks used to link any information to any other information over the Internet are present in the Software License Agreements and allow access to content related to the agreement, made available by the licensor in the internet.

Some examples of the hyperlinks observed, give access to the software vendor policies such as the company code of conduct or code of ethics which determine general principles to which either the software vendor as well as the customer need to abide by. These general rules include but are not limited to examples like anti-corruption and export control policies, express indication that the company respects labor laws and regulations, environmental laws, among others, all based on applicable laws and regulations establishing the same content and in force in the countries where the vendor operates and has its main headquarters.

While this practice may be considered, in a first glance, legitimate and may not present a risk for the licensee as the laws and regulations must be enforced and respected by both parties even if not expressly written in the company rules of conduct, other hyperlinks may represent a more substantial risk for the licensee, especially if the content available in such hyperlinks may be changed unilaterally by the vendor after the agreement execution.

Certain conditions, initially accepted by the customer at the time the agreement was signed, and available exclusive through a hyperlink, may present issues during the

execution of the agreement. Examples of terms and conditions available through a link that, if changed unilaterally by the vendor, may be harmful to the customer include:

- The software technical support and maintenance conditions and the customer support information, where the software vendor describes how the maintenance services will be provided, the help desk services opening hours and the commitment of the software vendor to respond to a request as well as resolve certain problems when there is any claim regarding the software or help is needed by the customer in case of problems with the product usage, installation, etc;

- The types of software and services included in product lists where the available software products are described, together with the products specifications applicable to each specific product;

- The information on how the personal data will be processed as well as the privacy policy applicable to the services, determining how the software provider will process the customer data and in many cases the personal data of customer clients as well;

In this case, are software vendors using an inadequate mean for contracting or is it true that *traditional contract law is insufficient to address modern contracting needs*<sup>166</sup>?

There is no clear instruction or unified position from laws and regulations yet and common sense should prevail in these cases as this practice could make sense, given the particular business environment, if used appropriately. Technology transactions need certain flexibility to adapt to the business environment which promotes constant changes and require greater adaptability.

In some cases, however, the choice of using hyperlinks promote to the licensor a possibility of changing unilaterally the conditions that may affect aspects that are

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<sup>166</sup> KIM, Nancy S. *Wrap Contracts*. Oxford University Press, 2013. P. 5.

vital for the licensee; aspects that emerge later and render the licensee terms less attractive to the licensee but it is too late to look for another supplier as the licensing terms sometimes do not allow a termination for convenience or it is simply not cost effective to change again a certain software. The examples found in the sample analyzed during the agreements qualitative analysis correspond to subjects that should not be unilaterally changed by the vendor as the service offerings and software products available, the personal data protection and the support to the customer are key aspects of the agreement that determined the decision for its execution by the customer.

### **3.7 Equilibrium**

From the analysis of the software licensing terms and conditions subject to review of Chapter 1, it was observed that their terms were difficult to comprehend and were in favour of the software company which in that case is also the contract writer. Those agreements subject to review, as they were downloaded from each software vendor website respectively, are the standard form contracts applied to all the customers, either business buyers or members of the general public.

The case study of Chapter 1 is confined to contracts between sophisticated parties, which lawyers typically negotiate and the starting point of such negotiation is the standard agreement available also at the vendor website. It is possible to presume that large companies with strong bargaining power may have the possibility of changing the agreement terms for having better conditions, but this is not applicable to small and medium enterprises.

Another empirical research done with standard contracts applicable to consumers concerns an extensive investigation done by professor Florencia Marotta-Wurgler of the New York University School of Law. She has explored this subject and reached important conclusions about it. In one article published in 2007, she examined 647 End-User License Agreements (EULAs) from 598 different software companies.

From each agreement in the sample, she collected data on 23 common and important standard terms that allocate rights and risks between licensor and licensee which includes Warranties and Warranty Disclaimers, Limitations of liabilities, Maintenance and Support, Conflict Resolution and assigned a negative point every time the term was considered “pro-seller”. Her conclusion was that “almost all licensed display a net bias” evidencing there is no equilibrium and the terms are in favor of the software company that wrote them. Furthermore, she found evidence that firms do not make any difference between the general public and larger businesses or corporate users which means the license terms are more “pro-seller” either in case of consumers or in the case of a business to business relationship.<sup>167</sup>

After this extensive research, concluded by Professor Marotta-Wurgler in 2007, things do not seem to have been improved in this area. She continued to investigate the subject-matter through different angles, as seemingly, too few customers read the standard forms and just “accept” them through the accept button. This hypothesis was confirmed by another extensive research described in the article “Does Anyone Read the Fine Print?” published in 2014<sup>168</sup>, where the web sites of 90 software companies were tracked in order to observe whether customers choose to become informed about the EULAs that govern the featured software. Furthermore, the research reviewed the browsing behavior of 92.411 households that have agreed to provide their computer records. The fraction of visitors who accessed the EULAs was on the order of 0.1 percent with the main result concluding that “EULAS are rarely read by anyone”.

As an example of consumer’s lack of interest in reading the contract terms, is the gag created by a British software company (Gamestation company). Gamestation placed to their standard form software contract the “immortal soul clause”, partially reported below, on April 1, 2010 (April Fool’s Day):

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<sup>167</sup> MAROTTA-WURGLER, Florencia. An Empirical Analysis of Software License Agreements. *Journal of Empirical Legal Studies*. Volume 4, Issue 4, December 2007. P. 677-713.

<sup>168</sup> MAROTTA-WURGLER, Florencia; BAKOS, Yannis; TROSSEN, David R. Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts. *The Journal of Legal Studies*. Volume 43. Chicago, January 2014.

*"By placing an order via this Web site on the first day of the fourth month of the year 2010 Anno Domini, you agree to grant Us a non transferable option to claim, for now and for ever more, your immortal soul."*<sup>169</sup>

The company included a simple tick box for any purchaser to opt-out of the clause, which included a 5 (five) pounds extra bonus for other purchases and the results were impressive; only 12% of the consumers refused the terms and received the £5 gift voucher.

Besides the humorous reference to a deal with the devil, the gag demonstrated the problems with reading and understanding software agreements that may be one of the reasons contributing for allowing software companies to include unfair conditions to their standard agreements.

The lack of readership, at least in the case of consumer contracts analysed by Professor Wurgler, may have an impact in allowing sellers to maintain the “pro-seller” biased agreements and therefore, what can be done to improve customers interest on becoming informed? Why so many customers do that? The problem is clear, but the remedy is not<sup>170</sup>.

Marotta-Wurgler research regarding the lack of readership suggests that “the primary cost facing consumers is in the reading and comprehending contract terms”<sup>171</sup> and that, according to her research is the main cause for customers to avoid reading the contracts. This suggestion is in line with the findings of the empirical analysis of the Chapter 1 of this thesis, as the difficulties imposed by the unclear content of these agreements are faced even by professionals trained to read and understand them.

Software license agreements can present several difficulties in the beginning of the contractual relationship but customers still have the power of taking or leaving in

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<sup>169</sup> <http://blogs.telegraph.co.uk/technology/shanerichmond/100004946/gamestation-collects-customers-souls-in-april-fools-gag/>

<sup>170</sup> Robert B. Cooter Jr. and Thomas Ullen. **Law and Economics**. 6th edition. Pearson Education, 2012. P. 359.

<sup>171</sup> MAROTTA-WURGLER, Florencia; BAKOS, Yannis; TROSSEN, David R. Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts. *The Journal of Legal Studies*. Volume 43. Chicago, January 2014. P. 18.

case the software provider leaves no space for negotiation. However, after an audit evidencing copyright violation (as demonstrated by the analysis of Chapter 1), the customer bargaining power is dramatically reduced and the software vendor might concentrate all the bargaining power leaving no options to the customer.

In that case, is there a possibility or sufficient reason for requesting relief from the contract struck in such situations? Disregarding the differences between jurisdiction and applicable laws as well as the legal system where the contract is being executed, two reflections might be taken into consideration in case of inequality in order to trigger the lack of bargaining power theory and take the contractual counterparty to court:

First, contractors routinely deal with bargaining cards of different strengths. Unless there is something out of the ordinary about the situation, inequality of bargaining strength arguably does not warrant intervention.

Second, regardless of whether the situation is routine or exceptional, it might be argued that there is not sufficient reason for relief unless there is either some unconscionable conduct by the party in the dominant position or a failure of free and informed consent on the part of the weaker contractor.<sup>172</sup>

According to Lord Scarman: *“It is unnecessary because justice requires that men, who have negotiated at arm’s length, be held to their bargains unless it can be shown that their consent was vitiated by fraud, mistake or duress. If a promise is induced by coercion of a man’s will, the doctrine of duress suffices to do justice”*.<sup>173</sup>

In the agreements sample analyzed in Chapter 1 and through the information obtained in the interviews, the customer does not have access to clear terms and conditions that allow them to make an unbiased decision and that can induce to

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<sup>172</sup> BROWNSWORD, Roger. *Contract Law: themes for the twenty-first century*. 2nd edition. Oxford University Press, 2006. P. 81.

<sup>173</sup> BROWNSWORD, Roger. *Contract Law: themes for the twenty-first century*. 2nd edition. Oxford University Press, 2006. P. 86.



mistakenly choose one product for another. The second finding concerns the fact that audit in that case, after presenting its findings, require the customer to either pay for the penalties applied or to buy for more licenses to cover the grey areas subject to different interpretation by the parties and arbitrarily imposed by the vendors. In this case the customer consent is again vitiated by external factors that do not allow the choice of the products that better fit for the customer needs.

Although perfect equilibrium is unlikely to be realized in the real world, the evidence obtained in Chapter 1 clearly presents a strong lack of equilibrium between the parties in the relationship between software vendors and customers. The vendors in one side concentrate more information, in most cases more bargaining power and the copyright protection provides the guarantee of control over the computer program which in many cases is needed by the customer and is not provided by other suppliers or do not present many choices.

The theory called the “Paretto efficiency” describes a situation where is possible to make one of the parties better off without making anyone worse off<sup>174</sup>. In case of software license agreements, the “Paretto-efficiency” change can be the term where the Provider gives the best possible solution to the customer without compromising its own resources – which could impede its business – neither compromise other customers and competitors. Although as stated previously, this degree of perfection is hardly visualized in practice, the qualitative research findings demonstrated that reality is far from this ideal example.

### **3.7.1 Aspects that can contribute for better equilibrium**

The obligation of protection of customers’ interests promote the improvement of the quality of services, as forecloses the opportunity to fail; it commits the service provider to improve its services foreclosed by the high cost of liability for breach<sup>175</sup>.

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<sup>174</sup> Robert B. Cooter Jr. and Thomas Ullen. **Law and Economics**. 6th edition. Pearson Education, 2012. P. 14.

<sup>175</sup> Robert B. Cooter Jr. and Thomas Ullen. **Law and Economics**. 6th edition. Pearson Education, 2012. P. 323.

The sample of 10 ICT agreements analyzed in Chapter 3 had a similar position in terms of liability: it was limited to the maximum amounts paid by the customer during one year. Is this cost high enough to foreclose the opportunity to fail? The answer is a potential no, as the software license agreements analyzed in Chapter 1 are not being protective for the promotion of the “equilibrium” between the parties and customers. This position is confirmed by the overview of internet blogs and magazines calling for support and sharing information, demonstrating that customers are searching for improvements of the equilibrium between the parties. The next Chapter describes one organization created for the support of these values as well: the association that advocate for the improvement of the conditions offered to software customers called *campaign for clear licenses* that will be subject to further review.

## CHAPTER 4

This Chapter will be dedicated to the discussion of findings of the qualitative research of Chapter 1 as well as the questions raised in the previous chapters, trying to promote an analysis of those findings and, if possible, presenting suggestions of improvements to allow a better and more collaborative relationship between counterparties as well as potential remedies to the problems presented in the first chapters.

The empirical analysis done in Chapter 1, which consisted on the qualitative review of 10 software license agreements chosen from the 10 independent software vendors with the biggest revenue, concluded that 7 out of the 10 software vendors analyzed include the audit rights in their agreements. Furthermore, the software license terms and conditions were not clear, grey areas were identified during the document content analysis and the agreements in general contained unclear and misleading information. These findings were confronted with the information obtained through interviews performed with professionals who deal with software agreements and software audit on a daily basis as well as with the publications found on professional blogs and magazines about this specific subject.

The fact that software license terms and conditions cannot be clearly understood or do not contain the complete information that allow customers to make informed decisions to contract, purport substantial difficulties during the execution of the agreement once it is necessary to comply with all the agreement terms. These difficulties are seriously faced in practical terms when customers are audited to verify

the compliance with the agreement and may be found in breach of the agreement or even worst, infringing the licensor copyrights. The customer in that case may remain without choice, having to sustain extra costs for buying more licenses or paying the damages requested by the vendor.

Other consequences described by the interviews and observed during the blog analysis consist on the fact that the licensor and licensee, after the audit, start a negotiation to settle the potential damages, and the licensee is offered, as an alternative to avoid litigation, the purchase of other products from that licensor, such as, cloud services or other licenses.

A practice apparently reasonable and legitimate like the audit applied to protect the software vendor intellectual property, may concern many problematic hidden aspects and currently there is no one definitive solution for this problem. Software vendors have the right to seek protection for their copyrighted work, they use audit rights to examine if the software subject to that license is being used within the terms agreed with the customer. However the empirical analysis done in Chapter 1 observed this apparently legitimate practice is purporting an abusive conduct from the software vendor side as the application of such rights, for some software vendors, is associated with tricky methods.

One common ground found in the Chapter 1 analysis was related to unclear contractual clauses or practices which preclude customer from having the knowledge regarding the product and how to use it, which may conduct to unintentional contract breach and/or copyright infringement. These potential violations, once subject to audit, may represent extra revenues to the vendor through the application of the penalties established by the software license agreement. The vendor rights create an occasion for abusive practices and it is about time to shed light on these subterfuges that threaten business customers who need to use certain systems and software to run their businesses.

#### **4.1 How a relationship, which is not customer oriented may preserve a productive partnership?**

This question, proposed during the empirical research of Chapter 1, has been raised after the analysis of the software vendor conduct in relation to its customers when it concerns the audit rights and the approach adopted to protect their copyright. The relationship between the software vendors and their customers in the cases analyzed in Chapter 1, do not promote a collaborative relationship between the parties with different interests. How can this relationship be preserved in the long run?

A collaborative relationship is beneficial for long term contractual relationships; long term relationships, on the other hand, promote return of investments, income-transfer, efficiency, among many other benefits. Hart and Holmstrom<sup>176</sup> research in the area of contracts summarized some general benefits of long-term contracts which could be applied to the field of the software license agreements: 1) if the relationship is repetitive, it may save transaction costs to decide in advance what actions each party should take rather than to negotiate a succession of short-term contracts; 2) avoiding bargaining inefficiencies caused by asymmetries of information arising during the course of the relationship; 3) for screening purposes like attracting the right business partner who will support and collaborate for a certain objective to be reached.

Software vendors applying punitive audit practices are focusing on short term revenues instead of a long term business relationship with the customers. Customers, on the other hand, depend on the software systems to manage their businesses and a change of the company software systems may represent an enormous burden which is neither simple nor cost effective. The collaboration between the parties might be good and beneficial for a long-term strategy for both parties.

In case the relationship between software vendors and business customers does not promote such collaboration, customers may start looking for alternatives that

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<sup>176</sup> HART, Oliver; HOLMSTRÖM, Bengt. The Theory of Contracts. MIT, March 1986. P. 89.

provide for a more balanced approach and there are some alternatives available. The following section will be dedicated to analyze some of these alternatives that promote freedom of choice to the software users either businesses or consumers and positive examples to be taken into consideration in case the problem continue to increase.

## 4.2 The open source and other movements

The traditional business models observed in Chapter 1 offer an unlimited power over the copyrighted work belonging to the software vendor while limit the user's freedom of choice or ability to enjoy the software in its full potential; in these business models copyright owners have the full control over the copyrighted work and a substantial part of the population do not have access to that work. These traditional business models, product of an artificial scarcity, may no longer be acceptable<sup>177</sup>.

A group of 180 Intellectual Property experts from 32 countries and six continents gathered in Washington for discussing the public interest dimension in intellectual property law and policy. The conclusions of this meeting are put together in a document called the *Washington Declaration on Intellectual Property and the Public Interest*<sup>178</sup>, where they call governments and international organizations to promote Intellectual Property systems designed to serve human values, not in conflict with other legal doctrines, which include but is not limited to human rights, consumer protection, competition and privacy law. The document suggests the legal systems should “use all available regulatory frameworks for controlling abuses of intellectual property rights, including mechanisms that protect consumers, control excessive

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<sup>177</sup> FROSIO, Giancarlo F. Resisting the Resistance: Resisting Copyright and Promoting Alternatives. 23(2) Richmond Journal of Law and Technology 4 (2017). P. 2.

<sup>178</sup> The document records the conclusions from the Global Congress on Intellectual Property and the Public Interest, organized in Washington on August 25-27, 2011, convened over 180 experts from 32 countries and six continents to help re-articulate the public interest dimension in intellectual property law and policy. The Global Congress was organized by American University Washington College of Law's Program on Information Justice and Intellectual Property, Fundação Getulio Vargas's Center for Technology and Society (Brazil), the American Assembly at Columbia University and the International Centre for Trade and Sustainable Development (Geneva). Washington Declaration on Intellectual Property and the Public Interest is available at: <http://infojustice.org/washington-declaration-html>. Consulted on April 17, 2017.

pricing, prevent anti-competitive conduct, regulate licensing and contractual terms and open access to essential facilities”.

The approach currently used in order to maximize the protection of intellectual property right holders is no longer sustainable because international intellectual property policy affects a broad range of interests within society, not just those of right holders but mostly customers, consumers and society in general. The preamble of the Washington Declaration explains the terms of the present struggle between traditional business models and the need for change and the need for governments and international organizations to further all actors in this system:

*The last 25 years have seen an unprecedented expansion of the concentrated legal authority exercised by intellectual property rights holders. This expansion has been driven by governments in the developed world and by international organizations that have adopted the maximization of intellectual property control as a fundamental policy tenet. Increasingly, this vision has been exported to the rest of the world.*

*Over the same period, broad coalitions of civil society groups and developing country governments have emerged to promote more balanced approaches to intellectual property protection. These coalitions have supported new initiatives to promote innovation and creativity, taking advantage of the opportunities offered by new technologies. So far, however, neither the substantial risks of intellectual property maximalism, nor the benefits of more open approaches, are adequately understood by most policy makers or citizens. This must change if the notion of a public interest distinct from the dominant private interest is to be maintained.<sup>179</sup>*

Apart from the business models observed so far but not completely distant in terms of concept, lies the fact that the younger generations use and interact through digitizing, sharing, mixing and sharing again their digital content and creative works, enabled by technology to expand creativity through many tools for mixing music with lyrics of other music, remixing films and creating new forms of digital art, and then, through the internet, sharing the creativity with others without considering the

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<sup>179</sup> Preamble of the Washington Declaration on Intellectual Property and the Public Interest is available at: <http://infojustice.org/washington-declaration-html>. Consulted on April 17, 2017.

potential copyright infringements being committed<sup>180</sup>. These younger generations ability to use technology to develop their creativity will not be stopped by the harsh control provided by large corporations owning the copyrights and different alternatives must be provided to allow the development of these new forms of expression.

Internet is setting different movements resisting authoritarian forms<sup>181</sup>, seeking access to knowledge and promoting public domain such as the Creative Commons<sup>182</sup>, the Pirate Party<sup>183</sup>, the A2K movement<sup>184</sup>, the Free Software Foundation and the Open Source Movement, searching for viable solutions to traditional business models of copyright management.

For this specific research, the Free Software Foundation and the Open Source Movement provide interesting alternatives to the business models studied in Chapter 1, and therefore, I will concentrate on those organizations and their suggestion of alternatives to avoid the lack of freedom proposed by the traditional copyright model which, among other things, collaborates for the problems evidenced by the empirical research of the Chapter 1.

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<sup>180</sup> LESSIG, Lawrence. *The Future of Ideas. the fate of the commons in a connected world*. New York: Random House, Inc., 2001. P. 9.

<sup>181</sup> STRANGELOVE, Michael. *The Empire of the Mind: digital piracy and the anti-capitalist movement*. University of Toronto Press, 2005. 320 p.

<sup>182</sup> The Creative Commons is a platform that proposes a different type of protection to works of artists, rendering more freedom than the traditional copyright model. This is possible through contracts where the creator sharing its content can decide how this content can be used, shared and protected. Information about the Creative Commons movement is available at: <https://creativecommons.org/policies/> Consulted on April 17, 2017.

<sup>183</sup> Pirate Party is a political movement first established in Sweden inspired by ideals of reforming IP laws to improve free sharing of knowledge (open content). After its launch in Sweden, the Pirate Party has grown and it is currently a label adopted by political parties also in different countries. Common themes supported by the pirate party include freedom of expression, communication, education; respect of privacy; free flow of ideas, knowledge and culture; reform of copyright and patent laws; use of free software, free hardware, open access, open data. FROSIO, Giancarlo F. *Resisting the Resistance: Resisting Copyright and Promoting Alternatives*. 23(2) *Richmond Journal of Law and Technology* 4 (2017). P. 8. REDA, Julia. *Pirate Party copyright report set for MEP vote*. *Managing Intellectual Property*. 2015, p2-2.

<sup>184</sup> A2K stands for "Access to Knowledge" and it concerns civil society groups, governments, and individuals supporting access to knowledge as a fundamental right related to the principle of justice, freedom, and economic development. Their major supporting document is the *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities*. The Berlin Declaration, in a rough description, proposes the promotion of the internet as a medium for distributing knowledge widely and readily available to society, through the open access paradigm in a sustainable, interactive, and transparent way, with content and software tools openly accessible and compatible. Available at: <https://openaccess.mpg.de/Berlin-Declaration> Consulted on April 19, 2017.



### 4.2.1 The Free Software Foundation

The Free Software Foundation is a non-profit organization founded in 1985 by Richard Stallman to promote the free software movement. It openly presents an alternative to the business models analyzed in Chapter 1, providing freedom to users for studying, modifying, creating and distributing the software, through an ideal of collaboration<sup>185</sup>. The Free Software Foundation promotes computer users rights instead of copyrights, the computer programs certified as free software allow users access to the source code and all the freedom necessary to use, copy, modify, adapt, translate, distribute the computer programs.

The free software definition determines what must contain in one particular software program in order to be considered free software. Free software is a matter of the users' freedom to run, copy, distribute, study, change, and improve the software. More precisely, it refers to four kinds of freedom, for the users of the software: freedom 0: The freedom to run the program, for any purpose; freedom 1: The freedom to study how the program works, and adapt it to the user's needs. (Access to the source code is a precondition for this.); freedom 2: the freedom to redistribute copies so there is collaboration; freedom 3: the freedom to improve the program, and release improvements to the public, so that the whole community benefits. (Access to the source code is a precondition for this.).<sup>186</sup>

Free software summons the ability to develop resources in commons, in a different way to manage those resources, constructing a commons with respect to executable computer code. The Free-software foundation encourages people to develop codes and put their material into commons. The philosophy for the production of software in commons is embodied in the GNU General Public License (GPL)<sup>187</sup>. The GPL is the cornerstone of free software, serving as its organizing document and

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<sup>185</sup> Available at: <http://www.fsf.org/> Consulted on 7 May 2017.

<sup>186</sup> STALLMAN, Richard M. Free software, free society: selected essays of Richard M. Stallman / intr. by Lawrence Lessig; ed. by Joshua Gay. Boston: FSF, 2002. P. 43.

<sup>187</sup> Available at: <https://www.gnu.org/licenses/gpl-3.0.en.html> Consulted on 7 May 2017.

providing the supporting structure for the development of the software<sup>188</sup>, where the basic rule allows any person to take the software at any time and copy, modify, redistribute; but in case of distribution, modified or unmodified, the same rights received must be given to the next person. In other words, users are permitted to do anything with the software with the exception of reducing anybody else's rights. The result is a commons that protects itself: Appropriation may be made in an unlimited way, providing that each modification of goods in commons are returned to commons. Anyone making non-commons use of the material is committing an infringement.<sup>189</sup> The free software movement believes software should have no owners, they support the argument that everyone should have the power to control the use of information, refusing every single argument in favor of copyright. Free software is a very interesting initiative, with great successes in more than 30 years it operates. It acknowledges the difficulties presented by software vendors to the users, and suggests an alternative. The free software movement promotes cooperation instead of copyrights in as open and free environment, as Richard Stallman said, “cooperation is more important than copyright. But underground, closet cooperation does not make for a good society”.<sup>190</sup>

There are many arguments in favour or against free software and this section does not intend to establish a position in relation to this argument or suggest the free software as the only alternative for the problems faced by users of proprietary software. This sub-section aims to open the discussion as the free software need the public interest to improve its content and to be able to succeed in supporting the management of information with the same level of efficiency as the proprietary solutions.

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<sup>188</sup> MCJOHN, Stephen. The GPL meets the UCC: does free software come with a warranty of no infringement? *Journal of High Technology Law*, Volume 15/1, 2014.

<sup>189</sup> MOGLEN, Eben. Freeing the Mind: Free Software and the Death of Proprietary Culture. June 29, 2003 Available at: <http://emoglen.law.columbia.edu/publications/maine-speech.html> Consulted on May 7, 2017.

<sup>190</sup> STALLMAN, Richard M. Free software, free society: selected essays of Richard M. Stallman / intr. by Lawrence Lessig; ed. by Joshua Gay. Boston: FSF, 2002. P. 50.

## 4.2.2 The Open-Source Software Movement

Another alternative to the business models presented in the review of Chapter 1, concerns the open-source software, which will be observed in this sub-section. The open source movements available give strong examples of how such movements often encourage innovation and creativity<sup>191</sup> and albeit they may appear similar and the Free Software Movement, in reality those are two different things.

The open-source software movement is a movement that supports the use of open-source licenses and shares the concept of open-source software with programmers voluntarily writing and exchanging programming code for software development. The open-source code allows access to everyone to use and modify the software, returning back to the developers within the open-source community, allowing the participation in the code modification, disclosing and transformation, all documented over time.<sup>192</sup>

Some examples of popular open source projects include the "*BSD*" - *Berkeley Software Distribution License*, where programmers at the University of California Berkeley were given free and open access to source code for improving an operating a computer system, the "*MPL*" - *Mozilla Public License* for internet browsing, the "*Apache*" web server project which began at the University of Illinois by the National Center for Supercomputer Applications and "*Linux*" the operating system most widely known and for some even considered as a synonym of open-source software<sup>193</sup>.

Open-Source supporters and Free-Software supporters may even collaborate in many aspects but the free software moment does not recognize the open source movement as an analogous option as they have different views and goals. For the Open Source movement, the issue of whether software should be open source is a practical

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<sup>191</sup> UNNI, V.K. Fifty years of open source movement: an analysis through the prism of copyright law. *Southern Illinois University Law Journal*, Volume 40, 2016. P. 282.

<sup>192</sup> LEVINE, Sheen S.; PRIETULA, Michael. J. *Open Collaboration for Innovation: Principles and Performance. Organization Science*, September 16, 2013.

<sup>193</sup> UNNI, V.K. Fifty years of open source movement: an analysis through the prism of copyright law. *Southern Illinois University Law Journal*, Volume 40, 2016. P. 274.

question, as open source is a development methodology where the source code is open for changes and adaptations without the restrictions of the traditional business models of proprietary software. The free software movement is, instead, a social movement claiming that non-free software is a social problem and free software is the solution.<sup>194</sup>

The advantages of the mass collaboration proposed by the open source movement enabled the creation of good quality products in many cases with the potential to provide users with a different solution and proposing the idea that proprietary software is not the only option. The open source, as the software is not proprietary, provides products with a much lower costs and a greater flexibility not available in 'closed' products.<sup>195</sup>

One aspect to take into consideration is, however, the fact that all the open source licenses disclaim warranties, and many attempt to limit liabilities. Is it possible in all legal systems that such exclusion may be valid and binding? Taking the Italian legal system example, the complete exclusion of liabilities and disclaim of warranties may be contrary the Italian Consumer Code (Legislative Decree of 6 settembre 2005, n. 206) and the Civil Code. When the parties in the agreement are professionals and the recipients are consumers, the complete exclusion of liabilities may be ineffective as clauses that: a) exclude the liability in case of death or injuries caused to the person of the consumer or b) exclude any possibility of starting any legal action or c) exclude any warranties that goods do not contain hidden defects, can be considered ineffective.<sup>196</sup>

Even though open-source software does not present the same warranties as proprietary software may be prepared to provide, it is still a valid alternative for users trying to avoid the risks presented in the business models analyzed in Chapter 1. As the problem with proprietary software continues to grow, the open-source software could

<sup>194</sup> STALLMAN, Richard M. *Free software, free society: selected essays of Richard M. Stallman* / intr. by Lawrence Lessig; ed. by Joshua Gay. Boston: FSF, 2002. P. 57.

<sup>195</sup> ROSS, Seth T. *The Benefits of Open Source*. Excerpt from *Unix System Security Tools*, 1999.

<sup>196</sup> MAUGERI, Maria Rosaria. *Licenze open source e clausole abusive, vessatorie o con abuso di dipendenza economica*. AIDA – *Annali italiani del diritto d'autore, della cultura e dello spettacolo*, Vol. XIII, 2004. P. 269 – 280.

be a feasible option for replacing the proprietary software and because of that, it should receive even more attention.

### 4.3 The Campaign for clear licensing and Free ICT Europe

The findings of empirical analysis and the problem with unclear licensing terms and conditions as well as all the negative consequences for customers, apparently is not new as evidences of the issue go backwards for more than 15 years<sup>197</sup>. One important effort, on the side of the software users and directed focused on this matter is called the “Campaign for clear licensing”. A legal entity created in 2013 (not-for-profit limited by guarantee) aims to unite efforts with the support of software buyers and end-users to promote a response to the harsh audit practices imposed by the copyright licensors.

The “Campaign for clear licensing” (CCL)<sup>198</sup> has an important role in advocating for the rights of software users and ICT buyers as an organization and lobby group. Its focus is not, however, sustaining the use of open source or free software; as the name “Campaign for clear licensing” states, they advocate for clear and transparent software licenses, proper protection of business buyers rights to, among other things, pay a fair price for the software.

The CCL mission is to be “an independent, not-for-profit organization campaigning for clear licensing, manageable license programs and the rights of business software buyers. The Campaign for Clear Licensing will, on behalf of its members, work with software publishers and the reseller community to reduce the indirect costs of using commercial software by improving the clarity and usability of

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<sup>197</sup> 2002 Article reporting criticisms against Oracle Corp. on pricing and licensing practices, explaining Oracle has been involved in a dispute with the state of California as lawmakers stated the state paid an excessive amount in licenses for Oracle databases. In response, Oracle published on their website an online guide trying to help customers in evaluating the licensing options and explaining the details of the licenses. HICKS, Matt. Oracle readies guide to clear up license issues. EWeek, Vol. 19 Issue 27. P. 7 - 8. August 7, 2002.

<sup>198</sup> Available at: <http://www.clearlicensing.org/> Consulted on 7 May 2017.

software license terms and conditions”.<sup>199</sup>

Among its activities, CCL organizes forums with questions to gather what are the key issues faced by license users, evidencing which are the software vendors and what are the problems posed by their licensing terms and conditions as well as commercial practices. Based on the issues raised by the end-users, CCL organizes workshops for the software users in order to gather more results and produce the documentation with such evidences. CCL then publishes in their website the results with the end-users key issues evidenced and organizes meetings with software vendors to present the issues and try to obtain some cooperation from the other side; the minutes of the meetings are published in CCL website as well to maintain the transparency of this organization.<sup>200</sup>

Another organization trying to work for software users is the “Free ICT Europe Foundation”, non-for-profit, actively working on promoting the ICT secondary market. Their objective is to secure the right of ownership and the freedom for consumers and businesses to choose their providers to trade, maintain and repair by: addressing the restrictive practices undertaken by Original Equipment Manufacturers (OEMs), ensuring serviceability is included as a key component of the EU Digital Agenda<sup>201</sup>, promoting common standards for reuse and resale of equipment and software, achieving contract transparency to protect end users against unfair business practices.<sup>202</sup>

CCL and Free ICT Europe Foundation started a partnership for a dialogue with the European Parliament, trying to raise awareness with the EU policy makers in

<sup>199</sup> Available at: <http://www.clearlicensing.org/> Consulted on May 20, 2017.

<sup>200</sup> Flynn, Mark. How the CCL works explained in a slides presentation. Available at: <http://www.bcs.org/upload/pdf/campaign-for-clear%20licensing-090914.pdf> Consulted on May 20, 2017.

<sup>201</sup> European Union Digital Agenda contains the strategy and targets proposed by the European Commission on 3 March 2010 which were and will be constantly monitored until 2020 for the economic development and growth of the European Union. It aims at bringing efforts to promote digital inclusion of a bigger amount of the population through better infrastructure, connectivity, consumer-friendly environment, promoting the rights skills for the population through education, driving prosperity through research development and innovation. More details at: <https://ec.europa.eu/digital-single-market/en> Consulted on May 24, 2017.

<sup>202</sup> Information available at the foundation website: <http://www.free-ict-europe.eu/about.html> Consulted on May 20, 2017.

relation to licensing practices. Their focus areas are, among others, the need to modernize laws and regulations in order to reflect new technologies, promote innovation and collaborative business models; create clear guidelines for the ICT market on how to create, protect, grow and consume IP; serviceability as a key feature of the Digital Agenda; creation of legislation requiring contract transparency in order to protect end users against unfair business practices<sup>203</sup>.

Software publishers have strong representation and can count on a solid protection provided by the copyright system. The software buyers, on the other side, do not have the same support. In this regard, the German professor and the copyright institute's researcher named Rumphorst, considers that the rise of the author's rights protection is heavily lobbied and the lobbyists advocating the strengthening of such protection are very powerful and influential (rich) 'players'. The same observation cannot be applied, according to Rumphorst, for the users of the work as society interests are much weaker and are not represented by influential rights holders. In the field of legislation, especially at the international level, the balance between rights holders and society interests is compromised. Rumphorst point of view expresses that globalization of intellectual property rights creates barriers for copyright users to use those intellectual property products that are made by strongly supported organizations and nowadays it is necessary to restore balance between copyright and product users' rights<sup>204</sup>.

The CCL group plans to gather with the main software publishers, users and resellers to promote better understanding of the contents and terms of the licensing and improve the clarity and usability of software. The CCL group does not intend to promote open source or free software however, the IP rights cannot support these practices applied for obtaining immediate short-term revenue that cause significant damages to customers. This initiative, although small compared to the power of the

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<sup>203</sup> Information about the activities of CCL with the European Parliament are available at: <https://www.itassetmanagement.net/2015/10/02/a-voice-in-europe/> Consulted on May 20, 2017.

<sup>204</sup> RUMPHORST, Werner. Quo vadis copyright? In W. Rumhorst (Ed.), The selection of articles and speeches (P. 161–170). Geneva: European Broadcasting Union, 2007. P. 161-170.

software vendors, represent an important attempt to find a remedy for the problems faced by software users and contains many elements that may help promoting the solution for the issues evidenced in Chapter 1.

#### 4.4 Attempts to regulate information transactions

After more than forty years from the arrival of computer products for mass markets, there are still many challenges to contractual law and IP law for providing guidance to customers and providers. There is a recurrent affirmation that information transactions need further rules and applicable laws to have a more certain and consistent environment for its development.<sup>205</sup> The assessment concluding for a lack of rules and regulations affect this subject as a whole and due to the trans-border character of these transactions, harmonization of the applicable rules between the different countries could be considered as well.

The expression “legislative void” has been applied to this particular case: one article from Ring Jr.<sup>206</sup> explicitly states: *“For Internet information transactions there has been a legislative void. No established rules exist in common law for the information highway, which means that each judge must create the rules in each case as it arises. This is likely to result in great inconsistency and uncertainty adversely affecting the realization of the full potential of the information age.”*

There is opportunity for more research in this field as the *legislative void* is not only a matter existing in the common law but something observed as well in other countries. However, is it possible that mandatory rules imposing the content of the contract may be the solution for the problems evidenced in the empirical research? It is an open field for discussion and it has not been explored fully yet.

The adoption of copyright contract rules could provide for a more regulated

<sup>205</sup> PALMIERI, Alessandro. *Autonomia Contrattuale e disciplina della proprietà intellettuale: pregi e misfatti della dimensione digitale*. Milano: Giuffrè, 2009. P. 17.

<sup>206</sup> RING JR., Carlyle C. *Virginia and Maryland UCITAs Filling a Legislative Void*. *Journal of Internet Law*, January, 2005. P. 24.



environment which can have either a positive or a negative outcome: the positive side of having more rules in relation to copyright contracts concerns, on one hand, a potential better protection for creators and a favourable environment for users where clear rules are applicable and abuses can in theory be avoided.

On the other hand, the negative impact of excessive regulations could be the reduction of the parties' freedom for contracting and managing their own interests with more flexibility, harming the freedom of contract as a fundamental principle of the European civil codes<sup>207</sup>. On top of that, with the fast pace in which technologies evolve, the creation of a static rule may not correspond to the need of flexibility required for the parties to evolve their relationship.

The increase of mandatory rules may sacrifice the freedom of contract to an extent the expression "petrification of the private law" has been used to indicate an overuse of mandatory rules. Finding the right balance in this case is essential as the lack of rules leaves to the stronger party a door open to commit abuses due to an unlimited freedom of contract.<sup>208</sup>

The American Law Institute's Principles of the Law of Software Contracts (the "ALI Principles")<sup>209</sup> supports the mandatory disclosure of contract terms as one regulatory measure that should be enforced and applicable to all software contracts. The ALI Principles promote increased contract disclosure to encourage better information among software users. Furthermore, many believe that regulations imposing better disclosure of the contract terms could help improve the readership of these agreements because *"in theory, disclosure is an ideal regulatory solution because it preserves consumer choice, does not interfere with market mechanisms, and is cheaper to implement than more invasive alternatives such as mandatory terms or*

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<sup>207</sup> STAMATOUDI, Irini. *New Developments in EU and International Copyright Law*. Wolters Kluwer, 2016. P. 185.

<sup>208</sup> PATTI, Salvatore. *Contractual Autonomy and European Private Law*. In: *Rules and principles in European contract law*. Intersentia, 2015. P. 132-133.

<sup>209</sup> Better described in Section 4.4.2. next.

*minimum standards.*"<sup>210</sup>

Another aspect that encourages the same reasoning was introduced by the economic analysis of standard-form contracts performed by Professors Schwartz and Wilde with the "informed minority" hypothesis in 1979<sup>211</sup>. As per the informed minority hypothesis, if a minority of the buyers read the agreement and understands it properly, sellers then feel inclined to provide all buyers with terms that efficiently reflect the true preferences of the majority of buyers. This reasoning, after Schwartz and Wilde research, has been repeatedly subject of further studies and supported the argument of proper disclosure as the unique provision without need of further regulatory supervision of the content of standard-form contracts<sup>212</sup>.

Professor Marotta-Wurgler and her co-authors empirical research, however, challenged the underlying assumptions of the informed-minority theory once the hypothesis can only be held if the informed minority indeed exists. Their research published in 2014<sup>213</sup>, evaluates the amount of buyers who read the EULAs and concludes that less than 0.1% of them actually read the terms they need to abide by. The reason for this lack of readership, according to this previous mentioned research, is due to the fact that software license agreements are incomprehensible, with the study suggesting that

*"Measures that reduce the cost of comprehending the contract terms are likely to be more successful in increasing the fraction of informed consumers. Thus, a regulatory approach focusing on shortening and simplifying online contracts, standardizing their terms, and providing standardized summary is more likely to*

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<sup>210</sup> MAROTTA-WURGLER, Florencia. Even more than you wanted to know about the failures of disclosure. *Jerusalem Review of Legal Studies*. Volume 11, No. 1, 2015. P. 63.

<sup>211</sup> SCHWARTZ, Alan and WILDE, Louis L. Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis. *University of Pennsylvania Law Review*, Volume 127, 1979, p. 630.

<sup>212</sup> MAROTTA-WURGLER, Florencia; BAKOS, Yannis; TROSSEN, David R. Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts. *The Journal of Legal Studies*. Volume 43. Chicago, January 2014. P.1.

<sup>213</sup> MAROTTA-WURGLER, Florencia; BAKOS, Yannis; TROSSEN, David R. Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts. *The Journal of Legal Studies*. Volume 43. Chicago, January 2014.

*increase readership than an approach focusing solely on disclosure."*<sup>214</sup>

In this regard, if buyers are enabled to become more informed, the software license agreements would have to improve their conditions and equilibrium, providing for a better solution for customers and improving the quality of the contract. The main idea in this field supports the fact that increase readership and informed shoppers may *prevent market failures that result from imperfect information*<sup>215</sup>.

Professor Marotta-Wurgler inquired this matter through different perspectives<sup>216</sup> concluding that more disclosure did not increase the willingness (or ability?) of software shoppers to read, comprehend and be informed about the EULA content. Her research evidence that EULAs disclosure barely influences the probability of reading even when individuals are required to click "I agree", because even if individuals wanted to read the agreements, they would be deterred by its length and complexity.

Her conclusions are of enormous value as they indicate the increase of regulations can be one possible remedy to the problems mentioned in Section 3.7 as well as the issues evidenced by the empirical research of Chapter 1. Her studies showed that while market competition robustly affects prices, it does not affect contracts' one-sidedness and, after one article published in 2014, even Professor Schwartz does not seem to believe in the existence of an informed minority anymore.<sup>217</sup>

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<sup>214</sup> MAROTTA-WURGLER, Florencia; BAKOS, Yannis; TROSSEN, David R. Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts. *The Journal of Legal Studies*. Volume 43. Chicago, January 2014. P. 18.

<sup>215</sup> BEALES, Howard; CRASWELL, Richard; SALOP, Steven C. The Efficient Regulation of Consumer Information *The Journal of Law & Economics* Vol. 24, No. 3., DecEMBER 1981. P. 491-539.

<sup>216</sup> MAROTTA-WURGLER, Florencia. Will Increase Disclosure Help? Evaluating the Recommendations of the ALI's "Principles of the Law of Software Contracts". *The University of Chicago Law Review*. Volume 78. P. 165-186. MAROTTA-WURGLER, Florencia. Does Contract Disclosure Matter? *Journal of Institutional and Theoretical Economics*. Volume 168. 2012. P. 94-119. MAROTTA-WURGLER, Florencia. What We've Learned From Software License Agreements: A Response to Comments. *Jerusalem Review of Legal Studies*. Volume 12, Number 1. 2015. P. 171-182.

<sup>217</sup> Schwartz, Alan; AYRES Ian. The No-Reading Problem in Consumer Contract Law. *Stanford Law Review* Volume 66 /545. 2014.

Professor Wurgler research supported as well by other scholars<sup>218</sup> guides policy to sustain that simple enforcement of mandatory disclosure of contract terms is not sufficient to promote buyers to be informed and therefore the increase of regulations in that sector may not be sufficient to create informed consumers able to reduce pro-seller biased terms and conditions.

Many proposals have been presented for the procedural reform of consumer contracting – from requiring licensees to slowly scroll through each term to requiring licensees to separately initial each material term, to testing licensees to ensure comprehension. None of these proposals seemed to have a good outcome but it cannot hold the effort to search for a solution, as an effective regime must find some way to ensure that users actually understand the disclosures.<sup>219</sup>

A proposal by Ian Ayres and Alan Schwartz appear to be more promising, carefully promoting users' attention. Their proposal concerns a method for identifying which terms require enhanced disclosure associated to a technique that compel users to specifically read or assent to each and every of these identified terms. On that basis, they suggest to implement a “warning box” requiring special disclosure of those terms only, as they are presumed to be less beneficial to the consumers.<sup>220</sup>

As the regulatory approach seem to be a good response to the issues raised by Chapter 1, a review of some alternatives can be interesting and add value to these conclusions. Attempted initiatives to reduce the substantial uncertainty involving software transactions have emerged in different places and, although not one single project seemed to bring a definitive solution, reviewing the different projects in this area can support the development of future proposals.

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<sup>218</sup> BEN-SHAHAR, Omri. The Myth of the "Opportunity to Read" in Contract Law. *European Review of Contract Law* 5/1, 2009. P. 13-21. BEN-SHAHAR, Omri; SCHNEIDER, Carl E. The Failure of Mandated Disclosure. U of Chicago Law & Economics, Olin Working Paper No. 516, March 2010. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1567284](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1567284) Consulted on November 11, 2017.

<sup>219</sup> ARD, B. J. Notice and Remedies in Copyright Licensing. *Missouri Law Review*, Vol. 80/Number 2, 2015. P. 372.

<sup>220</sup> SCHWARTZ, Alan; AYRES Ian. The No-Reading Problem in Consumer Contract Law. *Stanford Law Review*. Vol. 66. 2014.

#### 4.4.1 Uniform Computer Information Transactions Act

In the United States, The Uniform Computer Information Transactions Act (UCITA) was drafted by the National Conference of Commissioners on Uniform State Laws<sup>221</sup> and promulgated in 1999. A joint-effort was made for the creation of this specific law for supporting computer information transactions, intended to clarify how the law can be applicable to relationships between software providers and consumers.

The UCITA, after promulgation, is valid only when enforced by each state legislation. At the beginning of 2002, the UCITA has been subject of continued criticism and, even after the efforts of redrafting it in relation to sections that allowed vendors to install disabling devices into the software that may be activated when licenses are not paid or kept up, the majority of states did not enforce the Act, with the exception of the States of Virginia and Maryland<sup>222</sup>. Therefore, despite the years of work invested in this matter, the UCITA was not successful in filling the information technologies transactions legislative void.

#### 4.4.2 Principles of the Law of Software Contracts

Another project in the United States of America with particularly different approach, starting from 2004, concerns the Principles of the Law of Software Contracts. The American Law Institute, an independent organization in the United States that work with law reform and legal research for the development of diverse subjects related to laws, worked for approximately 5 years on this project and

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<sup>221</sup> The Uniform Law Commission (ULC, also known as the National Conference of Commissioners on Uniform State Laws), established in 1892, provides states with non-partisan, drafted legislation to critical areas of state statutory law. ULC members are practicing lawyers, judges, legislators and legislative staff and law professors, who have been appointed by state governments as well as the District of Columbia, Puerto Rico and the U.S. Virgin Islands to research, draft and promote enactment of uniform state laws in areas of state law where uniformity is desirable and practical. ULC organization is made up of representatives from each state, appointed by state government. The ULC website provides information on ULC work and legal documents: <http://www.uniformlaws.org/> Consulted on August 14, 2016.

<sup>222</sup> BOND, Robert. Software Contract Agreements: Negotiating and Drafting Tactics and Techniques. 3 ed. London, Thorogood, 2004. P. 114.

approved in 2009 the Principles of the Law of Software Contracts.<sup>223</sup> The five years drafting process of the Principles included the collection of inputs from users and providers of software, in an exercise that tried to balance both perspectives<sup>224</sup>.

The Principles can be enforced in any jurisdiction of the United States once a court adopts them as a rule of decision in a case. Once that happens, the Principles can apply to software transfers supported by consideration which includes all sorts of software contracts, regardless of whether the parties called their transaction a license, sale, lease, or something else<sup>225</sup>. Digital media and digital databases are out of the of the project scope.

The ALI's purpose was "to clarify and unify the law of software transactions"<sup>226</sup>, attempting to furnish a solution for the unresolved gap left by the failure of UCITA to be widely adopted. The content of the Principles is not purely legislative oriented and represents a more flexible solution with the objective of recommending guidelines. They suggest, among other things, freedom of contract, morality, fairness, reasonableness, efficiency and if followed, they may be an interesting arm to police against abusive practices as their goal includes balancing the interests of the parties.<sup>227</sup>

The ALI Principles are divided into four chapters. The first chapter is related to the scope of the Principles and the general terms. The Chapter 2 covers the formation of contracts and provisions of enforcement, with specific rules for standard-form transfers. The Chapter 3 comprise contract performance with a focus on indemnification and warranties as well as software contract interpretation. Many of the provisions of Chapter 3 closely track UCITA and the Article 2's rules of the United

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<sup>223</sup> Further information about the American Law Institute is available at: <https://www.ali.org/> Consulted on May 20, 2017.

<sup>224</sup> O'ROURKE, Maureen; HILLMAN, Robert A. Law and Technology – Principles of the Law of Software Contracts. Communication of the ACM. Vol. 53. No. 9. September 2010. P. 28.

<sup>225</sup> O'ROURKE, Maureen; HILLMAN, Robert A. Principles of the Law of Software Contracts: Some Highlights. Cornell Law Faculty Publications, 2010. Paper 192.

<sup>226</sup> American Law Institute, Principles of the Law of Software Contracts (Proposed Final Draft, March 16, 2009)

<sup>227</sup> HILLMAN, Robert A. Contract Law in context: the case of software contracts. Wake Forest Law Review 45/669.

States Uniform Commercial Code (UCC), but there are some significant differences. One important aspect guided to protect software users in commercial transactions, require software makers to warrant that their software contains no “material hidden defects of which the transferor was aware at the time of the transfer and such warranty provision cannot be disclaimed<sup>228</sup>”.

I believe the these Principles could bring a positive effect if applied to the cases observed in Chapter 1, however, this project determines a certain level of abstraction that may not provide the assertiveness and the straight-forward approach necessary for businesses. Unfortunately, after its creation, not much has been heard about these Principles and their applicability in court decisions related to software transactions did not become popular within the ICT market.

#### **4.5 Advances and opportunities at the European Union level**

Substantial harmonization of copyright laws in Europe has been reached in more than 20 years of work resulting in ten directives – a *heterogeneous but interlinked body of legislation*<sup>229</sup>. Progress has been made in the last twenty years, however, due to the constant growing and development of the digital economy, a considerable amount of work still has to be done to promote a more favorable business environment for business customers and consumers.

Mario Monti, in his report of 9 May 2010 to the president of the European Commission<sup>230</sup>, dedicated one chapter to the digital single market as an area where the single market had to improve its strategy. According to Monti’s report, the

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<sup>228</sup> RUSTAD, Michael L. Software Licensing: Principles and Practical Strategies. Legal Studies Research Paper Series Research Paper 14-5 February 10, 2014. P. Available at: <http://ssrn.com/abstract=2393693>. Consulted on November 16, 2017.

<sup>229</sup> Martin-Prat, Maria. An Introduction – The EU Copyright Agenda. In: New Developments in EU and International Copyright Law. Wolters Kluwer, 2016. P. 183.

<sup>230</sup> MONTI, Mario. A new strategy for the single market at the service of Europe’s economy and society. Report to the President of the European Commission José Manuel Barroso. 9 May 2010. Available at: [http://ec.europa.eu/internal\\_market/strategy/docs/monti\\_report\\_final\\_10\\_05\\_2010\\_en.pdf](http://ec.europa.eu/internal_market/strategy/docs/monti_report_final_10_05_2010_en.pdf) Consulted on May 21, 2017.

“complexity and lack of transparency of the copyright regime creates an unfavourable business environment”. Monti states it is “urgent to simplify copyright clearance and management by facilitating pan-European content licensing, by developing EU-wide copyright rules, including a framework for digital rights management. (...) To maintain the trust of right-holders and users and facilitate cross-border licensing, the governance and transparency of collective rights management needs to improve and adapt to technological progress”.

Seven years after Mario Monti’s report, the problem seems to continue to present challenges and a definitive solution does not appear to have been reached. Currently, a few issues were identified in the European Union in respect of copyright licensing<sup>231</sup>:

- No uniform contract law
- Divergences in copyright licensing rules
- Convergence in the licensing practices

The shaping of copyright policy is complex for various reasons but the most important are probably the speed of change in technology, modes of content distribution, users habits and on top of all that the fact that these changes transcend national borders. Copyright law seemed to adapt to these changes overtime, however, the current unrelenting speed of changes seem to challenge laws and regulations in an unprecedented way, which requires legislators and law makers to work on rules and regulations that “better withstands the test of time”<sup>232</sup>

#### **4.6 Specialized Court for resolving Disputes**

One of the last sections found in every agreement sample of the empirical research, concerned the terms involving conflict resolution. The choice of law and

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<sup>231</sup> STAMATOUDI, Irini; TORREMANS, Paul. EU Copyright Law. Elgar, 2014. P. 1138.

<sup>232</sup> Martin-Prat, Maria. An Introduction – The EU Copyright Agenda. In: New Developments in EU and International Copyright Law. Wolters Kluwer, 2016. P. 181.



forum clauses proposed by the vendors were different in each agreement as they may allow a series of things: they may increase the predictability of the results for the seller, they may be used strategically to direct disputes toward business-friendly jurisdictions, they may favour the cost-saving and expedience in the case of arbitration.<sup>233</sup>

As one of the most important aspects regulated by the license agreement, the dispute resolution clause can determine the possibility for obtaining a proper and fair result in case of conflicts. Given that disputes are in many cases inevitable, having appropriate dispute resolution mechanisms may be critical for license agreements as well as for any other technology transactions and it should always be the result of an informed inquiry on the part of the contract drafter<sup>234</sup>.

A survey about Technology, Media and Telecoms Disputes (also known as TMT Disputes) published by the University Queen Mary in 2016 collected information through an online questionnaire completed by 343 respondents which included lawyers, in-house lawyers, arbitrators, mediators and academics who work with TMT related aspects. The questionnaire was followed also by 62 interviews used to supplement the quantitative questionnaire data, and inter displayed a series of trends related to TMT conflict resolution. One question proposed concerned which types of dispute the respondents encountered in the last 5 years and “licensing” disputes corresponded to 37 percent of the answers<sup>235</sup>.

As licensing disputes could become a significant burden for companies, can the improvement of specific dispute resolution mechanisms help addressing the disputes between licensors and licensees in a better way?

In the previously mentioned survey, the results can drive the conclusion that

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<sup>233</sup> MAROTTA-WURGLER, Florencia. An Empirical Analysis of Software License Agreements. *Journal of Empirical Legal Studies* Volume 4, Issue 4, December 2007. P. 701.

<sup>234</sup> NACHTRAB, Kevin. To arbitrate or to litigate: that is the question. *Les Nouvelles*, March 2007. P. 295-300.

<sup>235</sup> Pre-empting and Resolving Technology, Media and Telecoms Disputes. International Dispute Resolution Survey of the Queen Mary University of London. 2016. Available at: <http://www.arbitration.qmul.ac.uk/docs/189659.pdf> Consulted on April 11, 2017.

respondents believe in an affirmative response to this question. Among the participants, 92 percent of the respondents indicated that international arbitration is well suited for TMT disputes due to its attractive features such as enforceability, the ability to avoid a foreign jurisdiction, expertise of the decision maker and confidentiality/privacy. The respondents indicated the most used institutions for TMT disputes as the dispute resolution services of the International Chamber of Commerce (ICC)<sup>236</sup>, the World Intellectual Property Organization (WIPO) Arbitration and Mediation Center<sup>237</sup>, the London Court of International Arbitration<sup>238</sup> (LCIA) and the Singapore International Arbitration Center (SIAC)<sup>239</sup>.

The same classic problems of private international law implicate the complex litigation in intellectual property disputes: jurisdiction, governing law, enforcement of foreign court decisions; furthermore, the perceived advantages of international arbitration, such as confidentiality, expertise, global enforceability of the awards support the decision of the parties in that regard and may explain why commercial arbitration has emerged as an alternative for solving IP disputes.<sup>240</sup>

The possibility of having a TMT specialized forum could be an important remedy to avoid abuses in the case of license agreement. The technical knowledge of the industry aggregated to the expertise in the arbitral process could be a good choice for obtaining a fair approach in case of disputes related to licensing and audit.

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<sup>236</sup> The International Chamber of Commerce provides support for solving disputes through its International Court of Arbitration administering ICC Arbitration and the International Centre for Alternative Dispute Resolutions (“ADR”) providing mediation and other forms of ADR. Found at: <https://iccwbo.org/dispute-resolution-services/> Consulted on April 12, 2017.

<sup>237</sup> In the above mentioned survey, WIPO was mentioned as the more favored institution in relation to Intellectual Property matters. The WIPO Center provides services of mediation, arbitration, expedited arbitration and expert determination to enable private parties settling both domestic or cross-border IP and technology disputes out of court. Found at: <http://www.wipo.int/amc/en/> Consulted on April 12, 2017.

<sup>238</sup> The LCIA, as the name says, is located in London but is an international institution for commercial dispute resolution with a wide range of expertise in arbitration and mediation. Found at <http://www.lcia.org/LCIA/introduction.aspx> Consulted on April 12, 2017.

<sup>239</sup> The SIAC, located in Singapore, may facilitate dispute resolution when the agreement is performed in Asian countries. It is not specialized in one specific subject, but it was appointed by the survey as one of the main choices for resolving conflicts. Found at <http://www.siac.org.sg/> Consulted on April 12, 2017.

<sup>240</sup> DE WERRA, Jacques. Arbitrating International Intellectual Property Disputes: time to think beyond the issue of (non-) arbitrability. *Revue de Droit des Affaires Internationales/ International Business Law Journal* N.3, 2012. P. 299-300.

In litigation cases, it is not possible to choose the judge with the adequate background skills and knowledge for better understanding and solving a dispute. Whether or not the judge has the capability for understanding technical matters, which is one of the main aspects in disputes related to Intellectual Property, that certain judge, once designated, will be in charge of deciding the case and the parties have few remedies with the exception of appealing to a higher court. The arbitration systems, in most cases, provide for a list of arbitrators where their expertise has been pre-screened and the parties themselves can actually agree on the arbitrator to be used. Thus, the parties can be aware of, prior to initiating the case, that the person(s) hearing the case have the knowledge and competences to provide a proper outcome decision.<sup>241</sup>

As IP legislation has not yet been harmonized on a European or international level, several different jurisdictions with different laws could potentially bring different outcomes. It is not unusual for litigants to find themselves litigating the same issue and/or the same dispute in several different jurisdictions as courts may be reluctant to recognize the decisions of other jurisdictions.<sup>242</sup> An alternative dispute resolution method such as mediation or arbitration can avoid that problem by bringing the parties into one unique procedure enforceable in other jurisdictions and avoiding multi jurisdictional litigation.<sup>243</sup>

This section intends to open the discussion about the possibility of using alternative dispute resolution methods for solving IP licensing disputes. After this brief analysis, I believe this subject deserves more attention in the future as resolving the conflicts related to technology transactions through arbitration and alternative dispute resolution methods can be an interesting prospect: the complexity of the cases require a specialized court with deep knowledge of the industry, a good understanding of the subject involved and expedience in providing solutions.

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<sup>241</sup> NACHTRAB, Kevin. To arbitrate or to litigate: that is the question. *Les Nouvelles*, March 2007. P. 298.

<sup>242</sup> NACHTRAB, Kevin. To arbitrate or to litigate: that is the question. *Les Nouvelles*, March 2007. P. 296.

<sup>243</sup> JOLLY, A. and PHILPOTT, J. Efficient alternative dispute resolution (ADR) for intellectual property disputes. *The Handbook of European Intellectual Property Management*. 2.ed. London: Kogan Page, 2009. P. 4.

#### **4.7 The practices observed in the empirical research give rise to competition concerns?**

The empirical research of Chapter 1 brought up the conclusion that the software license agreements analyzed present grey and unclear areas and the practice of audit has the scope of finding non compliances or copyright infringements in order to impose penalties on customers and increase leverage for compelling the licensee to remain attached to the products. Customers interviewed and the stories observed during the blog analysis of Chapter 1, demonstrate that license users remain powerless in relation to their choice of terminating the agreement or remaining part of the relationship.

The practice of audit with the scope of finding copyright infringements (involuntarily committed by the licensee due to misleading information present in the agreement or in the software product during installation and usage) and the use of such findings as leverage to maintain the customers related to a certain product or reduce its capacity of decision and choice demonstrates the case where IPR's are "used as a lever to expand market power beyond their (normal) anti-free-riding function"<sup>244</sup>.

The commercial practices observed in Chapter 1 can be considered abusive because users in many cases cannot freely search for a different product from another competitor; however, on top of that, can those practices give rise to competition concerns? Can these practices limit competition?

Copyright law is designed to protect single firms or single authors; competition law, differently, is designed to protect the market and in particular the 'relevant market(s)', ensuring single firms do not act anti-competitively and prevent the market from functioning optimally.<sup>245</sup> It establishes rules for protecting the process of competition, aiming to maximize consumer welfare as the possibility of making good

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<sup>244</sup> GHIDINI, Gustavo. *Innovation, Competition and Consumer Welfare in Intellectual Property Law*. UK: Edward Elgar, 2010. p. 217.

<sup>245</sup> JONES, Alison; SUFRIN, Brenda. *EU Competition Law*. 6.ed. Oxford University Press, 2016. P. 1.

choices among different alternatives cannot be denied from customers by the monopolistic power of a dominant company and the protection of IPR cannot contradict the free market competition.

The agreements subject to review by the Chapter 1 qualitative analysis were chosen from the list of “Software and Programming” enterprises, published by Forbes Magazine and the sample analyzed concerns the 10 biggest revenue enterprises of 2015 in that area. Presumably, many of those companies concern substantial market power or even hold dominant positions which enable them to behave as if they were a monopolist. It is likely these companies are leaders in their sector. The definition of a dominant position, however, does not depend only on those factors, dominance relates to a certain undertaking’s market power and the assessment of market power is difficult and cannot be based on market shares or revenues alone but on a comprehensive review of all the factors affecting competitive conditions; each practice needs to be evaluated separately: “There are now virtually no practices that could be described as ‘per se’ unlawful under Article 102 TFEW”<sup>246</sup>

The analysis in depth of competition aspects and mostly, the assessment of market power for the identification of dominance cannot be performed at this point and could be an opportunity for future developments for the present study. The activities and practices used by technology sector companies to remain on top of sales and gain market share have been analyzed closely by the European Commission for a long time<sup>247</sup>. The complex instruments used by software vendors, such as the present study related to audit practices, can have different nuances and is very difficult to determine whether or not an infringement of Article 102 has been committed. A first glance to the problem leads to conclude that it enclose contract law and copyright law issues,

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<sup>246</sup> O’DONOGHUE, Robert; PADILLA, Jorge. Second Edition. The Law and Economics of Article 102 TFEU. Oxford: Hart Publishing, 2013. P.

<sup>247</sup> Examples include but are not limited to: EU Commission case number 37792 – the Microsoft case of 2004; EU Commission case number 37990 – the Intel case of 2009; EU Commission case number 39574 concerning smart card chips and involving Hitachi Ltd / Infineon Technologies / Koninklijke Philips N.V. / Mitsubishi Electric Corporation / Philips France S.A.S / Renesas Electronics Corporation / Renesas Electronics Europe Limited / Samsung Electronics Co Ltd / Samsung Semiconductor Europe GmbH – 2014.

although, if consumers are affected because the choices are limited, if businesses cannot prevent risks and costs are elevated with reflection on price increases for consumers, these practices could promote loss of consumer welfare and foreclose competition<sup>248</sup>, giving rise to competition concerns.

The behavior of the dominant enterprise(s) cannot subject the other players (smaller competitors as well as consumers, subcontractors and customers of the dominant company) to significantly worse market conditions (in terms of weaker bargaining power or the ‘foreclosing’ of opportunities for competition) than they would have ‘naturally’ enjoyed, in the presence of a higher degree of effective structural competition.<sup>249</sup>

The case law is rich in terms of material and information related to violation of anti-competitive rules perpetrated by Information Technology companies. The recent case law between Oracle and HP ruled by the Spanish High Court<sup>250</sup> “Audiencia Nacional” considered that Oracle Corporation and Oracle Ibérica S.r.L. (“Oracle”) abused its dominant position and annulled one previous decision of the Spanish Antitrust Authority “Comisión Nacional de los Mercados y la Competencia (CNMC)”. The complaint alleging that Oracle abused its dominant position in the markets for high-end servers and high performance databases was started by Hewlett Packard Company and Hewlett-Packard Española S.L (“HP”).

In specific this case, Oracle database software has been used by customers and installed in HP servers for many years and the collaboration between HP and Oracle has lasted for more than 25 (twenty five) years. Initially, in 2010, Oracle increased the

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<sup>248</sup> O’DONOGHUE, Robert; PADILLA, Jorge. Second Edition. The Law and Economics of Article 102 TFEU. Oxford: Hart Publishing, 2013. P. 214-217.

<sup>249</sup> GHIDINI, Gustavo. Innovation, Competition and Consumer Welfare in Intellectual Property Law. UK: Edward Elgar, 2010. p. 12

<sup>250</sup> Audiencia Nacional, Recurso: 168/2013 Madrid, 24/09/2015 Hewlett Packard Company y Hewlett Packard Española s.r.l. (claimant) and Oracle Corporation y Oracle Ibérica s.r.l. y Oracle Ibérica S.r.l. (defendant). Available at: <http://www.poderjudicial.es/stfls/SALA%20DE%20PRENSA/NOTAS%20DE%20PRENSA/AN%20Cont%20S6%2024-09-2015.pdf>.

price of licenses to make it compatible with HP servers; in 2011, however, Oracle announced its database software would no longer be compatible with the technology and hardware made available by HP and initiated some commercial actions to bring HP clients to possibly use the Oracle server. The court also found in the ruling that customers using high-performance databases find very difficult and demanding to change the database software, and therefore, the customer prefers changing the servers – hardware.

The preparatory inquiry judges concluded that in the segment of high-performance database, Oracle occupies a market share ranging between 70 and 80%. As the high-performance Oracle database was no longer compatible with servers X86 (produced by HP), customers were coerced to start using only Oracle servers for the installation and running the Oracle software. The Court ruled also that even though a company cannot be obliged to develop software capable of running in all different platforms and servers, Oracle, due to its dominant position, shall not make the market conditions worse for minor competitors, damaging other companies.

Therefore, on September 24, 2015, the Spanish High Court<sup>251</sup> has considered Oracle guilty as per Article 2 of Spanish Law 15/2007 and 102 of TFUE in relation to Article 62.3b of the Spanish Law 15/07 as determined by the investigation management (Dirección de Investigación)<sup>252</sup>.

The Spanish High Court Decision as well as the latest decision regarding SAP license subscription to Diageo mentioned in Chapter 3, are recent developments regarding this subject and will certainly promote more debate in the future

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<sup>251</sup> Sala de lo Contencioso-Administrativo de la Audiencia Nacional, Sección Sexta.

<sup>252</sup> Freely translated from the Court decision which ruled the following: “entendiendo igualmente producida la existencia de una infracción por abuso de posición de dominio contemplada en el art. 2 de la LDC y 102 del TFUE en relación con el art. 62.3b de la ley 15/07, reservando a la Sala de competencia de la CNMC la decisión acerca del juicio culpabilístico procedente y en su caso, de la aplicación de la pertinente sanción”. Audiencia Nacional, Recurso: 168/2013 Madrid, 24/09/2015 Hewlett Packard Company y Hewlett Packard Española s.r.l. (claimant) and Oracle Corporation y Oracle Ibérica s.r.l. y Oracle Ibérica S.r.l. (defendant). Available at: <http://www.poderjudicial.es/stfls/SALA%20DE%20PRENSA/NOTAS%20DE%20PRENSA/AN%20Cont%20S6%2024-09-2015.pdf>.

In November 2016, the previously referred lobby group called “Campaign for Clear Licensing” published a survey among 170 software licensing professionals from different countries observing the average amount of time dedicated to manage audits and the approach of software vendors where audits are used in many different ways to promote other sales of products from the vendor<sup>253</sup>. The lobby group calls upon the authorities to review the software vendors practices as “By regularly inflicting time consuming audits and opaque license programs, customers are prevented from making free market choices to more innovative alternatives. Licensing complexity is limiting innovation both in terms of customer development and freedom of choice”<sup>254</sup>.

This section 4.7 aimed at opening the discussion as the reflection of the findings of Chapter 1, to be considered anti-competitive, need to be further investigated. There are not much evidences of academic research in this area and the subject is constantly changing and evolving, challenging IP Law and Contract Law and maybe, in case these two branches of law fail to promote the necessary control over the stronger party, competition law rules may have a positive influence as stated: “Competition rules should serve as a safety net in cases where IPR System does not deliver the desired results in terms of innovation and consumer welfare”<sup>255</sup>

## 4.8 The Copyright misuse defense

### 4.8.1 Origin and application of the copyright misuse doctrine in the United States

According to the equitable doctrine of unclean hands, a party who is asking for a judgment cannot have (an otherwise meritorious) help of the court if he/she has done

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<sup>253</sup> “The average audit taking an average 194.15 working hours to resolve with a duration of 7.13 months. IT departments are wasting time trying to interpret licensing terms and defending audits rather than exploring competitive solutions or reviewing their true requirements”. <http://www.clearlicensing.org/2016/11/24/audit-report-nov-2016/> Consulted on April 13, 2017.

<sup>254</sup> Article published at the Campaign for Clear Licensing website, available at:

<http://www.clearlicensing.org/2016/11/24/audit-report-nov-2016/> Consulted on April 13, 2017.

<sup>255</sup> VILLAREJO, Cecilio Madero; KRAMLER, Thomas. Intellectual property rights and competition rules, a complex but indispensable coexistence. In: ANDERMAN, Steven; EZRACHI, Ariel. Intellectual Property and Competition Law. Oxford University Press, 2011. P. 278-281.



anything unethical in relation to the subject of the lawsuit. The wrongful actions of the claimant with "unclean hands" can be more important than the defendant's unlawful conduct and therefore an unclean plaintiff should not obtain relief<sup>256</sup>.

The unclean hands doctrine provided the concept that originated the theory of intellectual property misuse, applying the same principles: a plaintiff requiring the enforcement of its intellectual property right must not be helped by the court if that plaintiff can be considered guilty of misconduct in relation to that same right. It started with the patent misuse doctrine which first appeared in the 1917 Supreme Court decision known as the Motion Picture Patents case<sup>257</sup>, where the patent owner licensed the patent under the condition that it could be used only with films manufactured by the same patent owner. In that occasion, the court held that the restriction violated patent policy, by imposing a license restriction falling outside the scope of the patent.<sup>258</sup>

Although the concept already appeared in 1917, the United States Supreme Court articulated the patent misuse doctrine in 1942 in *Morton Salt Co. v. G.S. Suppinger*. This case is considered to be the foundational patent misuse case even though courts recognized the defense as early as 1917 in *Motion Picture Patents Co. v. Universal Film*. The Us Congress later narrowed the defense in 1988 with the Patent Misuse Reform Act.<sup>259</sup>

The misuse doctrine, created in the field of patent law as a defence to patent infringement suits, was extended to copyright law, representing the maxim that "whenever a copyright or patent holder uses his monopoly grant in a way that

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<sup>256</sup> CHAFEE JR., Zechariah. Coming into equity with clean hands. *Michigan Law Review*, Volume 47, 1949. P. 1065 – 1097.

<sup>257</sup> U.S. Supreme Court *Motion Picture Patents Company v. Universal Film Manufacturing Company* No. 715 Decided April 9, 1917. Available at: <https://supreme.justia.com/cases/federal/us/243/502/case.html> Consulted on November 18, 2017.

<sup>258</sup> LEAFFER, Marshall. Patent misuse and innovation. *10 Journal of High Technology Law* 142, 2010.

<sup>259</sup> SCHER, David. The Viability of the Copyright Misuse Defense. *Fordham Urban Law Journal*, Vol. 20, 1992. P. 93.

undermines the grant's underlying public policy, the court may and should deny the copyright holder relief when his exclusive rights are infringed".<sup>260</sup>

Copyright Law in the US is stated in the Constitution as Article I provides that "Congress shall have power (...) To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."<sup>261</sup> The analysis of this language, observed in depth in the previous chapters, have identified three purposes of copyright law: to promote learning, to preserve the public domain, and to protect the author. These three purposes may be in conflict between each other, however, the US Supreme Court has preferred the public benefit as the main purpose of copyright law. In that regard, this purpose led to the creation of the (now well established) patent misuse doctrine which was followed by the copyright misuse doctrine<sup>262</sup>.

The landmark case for the application of the copyright misuse doctrine in the US is found in *Lasercomb America, Inc. v. Reynolds* in 1990. Lasercomb is a manufacturer of steel rule dies used to cut and score paper and cardboard for fabricating boxes and cartons. Lasercomb has created a software program to direct the production of a steel rule die in compliance with a cardboard template created on a computer screen. After that, Lasercomb licensed copies of the software to one of its competitors, named Holiday Steel. After producing unauthorized copies of Lasercomb software, Holiday Steel created its own program that was almost a direct copy of Lasercomb's original software. Once Lasercomb realized Holiday Steel infringement, it started a lawsuit against Holiday Steel. In its appeal, Holiday Steel affirmed the copyright misuse defense, claiming that Lasercomb's standard licensing agreement, which prohibited licensees from producing their own software, was a misuse of

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<sup>260</sup> APOSTOLOPOULOS, Haris. The copyright misuse doctrine on computer software: a redundant doctrine of US copyright law or a necessary addition to EU copyright law?. *Journal of Computer and Information Law*, Vol. XXIV, 2006. P. 572.

<sup>261</sup> U.S. Constitution Article I, § 8, cl. 8

<sup>262</sup> ZINDA, Stephen. Preserving the copyright balance: why copyright misuse should invalidate software licenses designed to prohibit resale and oust service market competition. *Houston Law Review*, Vol. 48, 2012.

Lasercomb's copyright<sup>263</sup>.

While considering the case, the court concluded that a "misuse of copyright defense is inherent in the law of copyright just as a misuse of patent defense is inherent in patent law." Although the Congress has not acknowledged the copyright misuse defense through legislation, Lasercomb applied the rationale behind the patent misuse defense to extend the doctrine to copyrights and explained that because "copyright and patent law serve parallel public interests, a 'misuse' defense should apply to infringement actions brought to vindicate either right." In its decision, the court explained that the relevant question to find copyright misuse is "whether the copyright is being used in a manner violative of the public policy embodied in the grant of a copyright" and furthermore found that Lasercomb attempted to use its copyright in its software in an area outside the limited monopoly provided by its copyright.<sup>264</sup>

Several federal circuits in the United States have adopted the copyright misuse defense, however, it has never been expressly adopted by the Supreme Court. The central concepts applied to recognize copyright misuse by the federal circuits reside in two conditions: the copyright scope has been broadened so as to undermine competition or public policy.<sup>265</sup>

As there is no uniform approach to the copyright misuse analysis in the US Federal Courts, the misuse of copyright defense based on an anti-competitive conduct of the copyright owner is advocated by some circuits but it comprises variations. In an oversimplified perspective, a test for antitrust based copyright misuse defense concerns two steps: (i) the verification of whether the restraint is within the scope of rights

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<sup>263</sup> Lasercomb America Inc. v. Reynolds. U.S. Court of Appeals, Fourth Circuit. August 16, 1990. Available at: <http://digital-law-online.info/cases/15PQ2D1846.htm>. Consulted on November 18, 2017.

<sup>264</sup> MARDON, Lesley. Cloudy with a Chance of Gray Market Goods: The Nebulous Application of the Copyright Misuse Defense. *Temple Journal of Science, Technology & Environmental Law*, Vol. 32/61, 2013.

<sup>265</sup> AZER, Sandy. A Three-Tiered Public Policy Approach To Copyright Misuse In The Context Of Tying Arrangements. *Fordham Law Review*, Vol. 82, 2014. P.

granted by copyright law, and in case such restraint expands this scope, (ii) the evaluation of the anti-competitive effects of such expansion.<sup>266</sup>

The case law regarding antitrust based misuse that may be useful to support a potential remedy to the problems presented in the case study of Chapter 1 involve (a) licensing agreements with anti-competitive clauses and (b) tying practices where a sale of copyrighted work – e.g.: computer software – is conditioned upon the purchase of other commodities, such as computer hardware or maintenance services. In both cases, the methods used by the copyright owner exceed the copyright scope of rights while restricting consumer choice and harming public welfare.<sup>267</sup>

Actions that give rise to an antitrust violation may constitute a counter-claim giving rise to damages while copyright misuse constitutes a defense against copyright infringement<sup>268</sup>. The misuse of copyright defense does not required proof of market power, competitive injury, intent to monopolize that are necessary to configure an antitrust violation; the defendant must meet a much lower standard and prove only that plaintiff has extended his property right beyond the scope of copyright, as better explain in the next paragraph.<sup>269</sup>

The public policy based misuse was adopted by the Fourth Circuit in the previous mentioned case of Lasercomb and followed by other circuits but unfortunately not all of them. A misuse does not need to be a violation of antitrust law in order to comprise an equitable defense to an infringement action. The question, in a

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<sup>266</sup> ZINDA, Stephen. Preserving the copyright balance: why copyright misuse should invalidate software licenses designed to prohibit resale and oust service market competition. *Houston Law Review*, Vol. 48, 2012.

<sup>267</sup> APOSTOLOPOULOS, Haris. The copyright misuse doctrine on computer software: a redundant doctrine of US copyright law or a necessary addition to EU copyright law?. *Journal of Computer and Information Law*, Vol. XXIV, 2006. P. 574.

<sup>268</sup> SCHER, David. The Viability of the Copyright Misuse Defense. *Fordham Urban Law Journal*, Vol. 20, 1992. P. 97.

<sup>269</sup> *Lasercomb America Inc. v. Reynolds*. U.S. Court of Appeals, Fourth Circuit. August 16, 1990. Available at: <http://digital-law-online.info/cases/15PQ2D1846.htm>. Consulted on November 18, 2017.

public policy based misuse, resides in whether the copyright is being used in a manner violative of the public policy embodied in the grant of a copyright.<sup>270</sup>

It is a very broad defense without a clear specific rule limiting its application which brings some difficulties but also leaves space for interpreting and adapting to the different prospects of legal issues arising from technological innovation. Its roots must be based in the intent of the US Federal Constitution: copyright law is to first and foremost encourage innovation in science and the arts; but the key issue in this case is whether allowing the suspect licensing activity affects creativity and public access to the work.<sup>271</sup>

#### 4.8.2 Copyright misuse and its application in the European Union

Although the Copyright Misuse Doctrine has never emerged in the EU as a potential solution for several rightholders' abusive or dysfunctional conducts like in the United States, the concept of abuse has emerged between the lines in some ECJ decisions specifically in cases involving uncontrolled expansion of exclusive rights beyond their statutory core and in particular when such expansion conflicted with the Community freedoms or with antitrust rules<sup>272</sup>.

One example of ECJ decision that limited the use of copyright to its sole scope of rights was already reviewed in detail on subsection 2.5.1 of this thesis Chapter 2: the Oracle and Usedsoft case. The Court stated that Oracle's freedom of contract could not override the principle of exhaustion and block the secondary market of used

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<sup>270</sup> SCHER, David. The Viability of the Copyright Misuse Defense. *Fordham Urban Law Journal*, Vol. 20, 1992.

<sup>271</sup> ZINDA, Stephen. Preserving the copyright balance: why copyright misuse should invalidate software licenses designed to prohibit resale and oust service market competition. *Houston Law Review*, Vol. 48, 2012.

<sup>272</sup> SCALZINI, Silvia; SGANGA, Caterina. From Abuse of Right to European Copyright Misuse: A New Doctrine for EU Copyright Law. *IIC - International Review of Intellectual Property and Competition Law*, June 2017, Volume 48, Issue 4. P. 405–435.

software, limiting this way Oracle in its attempt of misusing its copyrights to create further encumbrances for users that go beyond the scope of Oracle statutory rights<sup>273</sup>.

While the ECJ has demonstrated its capability of reacting against dysfunctional exercises of copyright, the EU copyright development has not been uniform and effective in safeguarding the "fair balance of rights and interests" and the occasions of possible misuses of copyright have increased in the last years.<sup>274</sup> This current lack of remedies against the abuse of copyright in the EU calls for stronger and effective mechanisms to counterbalance the expansion or the distorted use of exclusive rights.

### 4.8.3 Inference

The case study of Chapter 1 evidenced problems related to software licenses and abuse of rights committed by software vendors whose expanded control goes beyond the scope of copyright through measures created within the ambit of their EULAs. The copyright misuse doctrine applied to software may concern two different forms of misuse: (1) a copyright owner does not have the right to use his copyright in violation of antitrust laws (antitrust-based misuse) or (2) the copyright owner does not have to right to use it in violation of the public policies underlying copyright law (public policy-based misuse).

The case law *Lasercomb Inc. v. Reynold* is an important landmark in the United States and, even if it concerns a different case, it clarifies many aspects that can be applied to the case study of Chapter 1. *Lasercomb* attempted to extend its legal rights by including clauses in the license agreement that went beyond the scope of copyright; the abusive audit clauses included in the license agreements studied in Chapter 1 are

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<sup>273</sup> *UsedSoft GmbH v. Oracle International Corp.*, presented to the European Union Court of Justice - Case C-128/11.

<sup>274</sup> HUGENHOLTZ, Bernt. *Is harmonization a good thing? The case of the copyright acquis*. In: PILA, Justine; OHLY, Ansgar. *The Europeanization of intellectual property law: towards a European legal methodology*. Oxford: Oxford University Press, 2013. P. 57–73.

HUGENHOLTZ, Bernt; SENFTLEBEN, Martin R.F. *Fair use in Europe: in search of flexibilities*. 2011. Available at: <https://research.vu.nl/ws/portalfiles/portal/2943008> Consulted on November 20, 2017.

one example where the software owner uses the rights inherent to copyright outside its original scope: to create disruption to the customer and increase its revenues beyond the legitimate retribution it should be receiving for the fruit of its labour.

Despite the well established copyright misuse doctrine in the United States, copyright owners increasingly "use contracts to circumvent the statutory exceptions to their exclusive rights under the Copyright Act". They use such contracts "to structure agreements that give them more rights with respect to the licensee than the general Copyright Act gives them with respect to the world. The licensee agrees to forego these statutory exceptions presumably because the protections they provide have less value to the individual licensee than access to the copyrighted work."<sup>275</sup>

Although in some cases the licensee may freely agree with this dysfunctional and unbalanced relationship, remedies must be improved to provide a more fair approach. Copyright law exists in a balance: on one side, authors are granted exclusive rights to incentivize creation; on the other side, the public receives access to enjoy the results of such work.<sup>276</sup> The case study presented in Chapter 1 demonstrates a situation where this balance is disrupted, and such disruption diminishes the purpose of copyright: to promote the progress of science and useful arts.

#### **4.9 How law can serve its purposes in this ever changing technology and adapt to the pace society has acquired?**

Law, as a social construction, is historically evolving with societies in different ways and is a form as well of social control administered by institutions. Law is a system of primary rules that direct and appraise conduct together with secondary social rules about how to identify, enforce and change the primary rules<sup>277</sup>. More than a system of rules, law is a system that serves various purposes and must evolve with

<sup>275</sup> KNIGHT, Jennifer R. Copyright Misuse v. Freedom of Contract: and the winner is. *Tennessee Law Review*, Vol. 73, 2006.

<sup>276</sup> SHINALL, Michael A. Software and copyright exhaustion: a proposal to amend §117 & restore balance to the copyright system. *Albany Law Journal of Science and Technology*, Vol. 24/365, 2014.

<sup>277</sup> HART, H.L.A. *The concept of Law*. 3.ed. Oxford University Press, 2012. 333 p.

society in order to serve its purposes. Historically, the evolution of society and the technology changes have challenged the law, however, technology has never changed and evolved so fast as in the last decades, promoting improvements but also creating disruptions requiring the laws to adapt in order to promote the “social control”.

Technology changes fast and the law in many cases do not follow such evolution. *Traditional contract law is insufficient to address modern contracting needs. The rigid rules of traditional contract law simply ignore the reality of modern day transactions. Realizing the limits of playing by formalistic rules, courts have twisted contract doctrine to uphold certain agreements that made sense given a particular business environment.*<sup>278</sup>

A simple change in technology may represent the fact that a law to regulate that specific subject is no longer needed. The findings related to the harsh audit practices of the empirical analysis of Chapter 1 do not have one unique legal remedy, however, as the business models are changing and the information system may be moved to the cloud based services, the need for audits may no longer present a harm to customers. In case the same software products, with similar functionalities will be fully replaced by cloud computing services, a remedy will no longer be necessary to impede those harsh audit practices, however, other risks and potential problems related to security and personal data protection may become vital.

Software license agreements are, like many other aspects related to Information and Communication Technology agreements, not strongly regulated environment. The subject matter of these agreements as overviewed in the Sections of this Chapter 4, involve different branches of law which include but is not limited to copyright law, consumer law, contract law and civil law, in some less common cases criminal law and competition law.

One final reference must be made though, to the core reason why laws are made: the promotion of justice. Not justice in a sense of legal positivism but justice as

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<sup>278</sup> KIM, Nancy S. *Wrap Contracts*. Oxford University Press, 2013. p. 5.



fairness. The practices overviewed in Chapter 1 may not disrespect the law and are even protected by laws and regulations, but as stated by John Rawls, “the principles of justice are agreed to an initial situation that is fair”<sup>279</sup> At a certain moment the relationship between software vendors and customers cannot be considered fair, because their position cannot be considered equal and concerning this aspect, John Rawls ideas concerning the principles of justice can involve the same process:

*“The principles of justice for the basic structure of society (...) are the principles that free and rational persons concerned to further their own interests would accept in an initial position of equality as defining the fundamental terms of their association (...) This way of regarding the principles of justice I shall call justice as fairness”*

The positive law theories of Austin, Kelsen and Ross, in circumstances like those described in the findings of Chapter 1, can be considered incomplete, as they concern only the rule of law and do not consider that legal systems are formed of rules and principles. The principles exist to justify the rules, they give meaning to rules and can guide conducts when applying the rules. Illicit acts are acts against a written rule but there are also conducts against principles. When there is an abuse of rights, the act is initially permitted by law, however, once all the factors are analyzed, this status can change: rules, when considered alone, can be under-inclusive and in that case, principles of law have a greater importance once a broader interpretation is necessary.<sup>280</sup>

The application of copyright protection needs to be carefully evaluated, considering all the aspects demonstrated by the empirical research of Chapter 1 in these specific cases and in a broader perception as well, on every possible occasion an interpretation is required. It cannot be attached to a simple legal methodology where the cold word of the law is applied as a major premise to ensure undisputed rights. As

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<sup>279</sup> RAWLS, John. Theory of Justice. Harvard University Press, revised edition, 1999. P. 11.

<sup>280</sup> COMANDUCCI, Paolo. Abuso del diritto e interpretazione giuridica. VELLUZZI, Vito. L'abuso del diritto: teoria, storia e ambiti disciplinari. Firenze: Edizioni ETS, 2012. P. 19-25.

stated by Robert Alexy, “In many cases the singular normative statement which expresses a judgment resolving a legal dispute is not a logical conclusion derived from formulations of legal norms presupposed valid taken together with statements of fact which are assumed or proven to be true. There are at least four reasons for this: (1) the vagueness of legal language, (2) the possibility of conflict between norms, (3) the fact that there are cases requiring legal statement which do not fall under any existing valid norm, and finally (4) the possibility, in special cases, of a decision which is contrary to the wording of a statute.”<sup>281</sup> At least points 2 and 3 described by professor Alexy can be observed in this research: the conflict between norms is found when the protection of authors rights surpasses consumers rights and competition law principles. Point 3 can be viewed when some facets of the problem do not fall under any existing valid norm but represent a mere perception of unethical or unfair approach, which later on may be subject to legislators review but currently are representing a potential damage to companies and society in general.

Any copyright system should consider the balance between at least two different interests to society: the rights that are envisaged for copyright owners and the reasonable demand rights of an organized society<sup>282</sup>. These two different interests apparently are not considered as their importance in general equal and the powers acting and supporting one or another are unbalanced. As observed by Professor Gustavo Ghidini, the paradigms of IP rights have to be rebalanced: the horizons must be expanded and the laws interpreted through open values and principles of free competition and dissemination of culture and information and the promotion of research and creativity<sup>283</sup>.

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<sup>281</sup> ALEXY, Robert. *A Theory of Legal Argumentation: The Theory of Rational Discourse as Theory of Legal Justification*. Oxford University Press, 1989. P.1.

<sup>282</sup> Stewart, M. S. *International Copyright and Neighbouring Rights*. London: Butterworths, 1983.

<sup>283</sup> GHIDINI, Gustavo. *Innovation, Competition and Consumer Welfare in Intellectual Property Law*. UK: Edward Elgar, 2010. P. XVII.

## CONCLUSION

This empirical qualitative analysis of software license agreements concluded, as a first observation, that the software license terms and conditions in the sample analyzed, were not clear. Each agreement from the sample analyzed presented aspects that are not clear nor well explained, relevant complexity in the licensing metrics and in some cases lack of information in relation to end-user rights and obligations. These findings were compared with the information obtained through interviews performed with professionals who deal with software agreements and software audit on a daily basis as well as with the publications found on professional blogs and magazines about this specific subject, whose contents confirmed the findings of the document analysis and added additional information supporting the presumption that this issue deserves more attention due to its impact on business customers.

The fact that software license terms and conditions cannot be clearly understood or do not contain the complete information that allow customers to make informed decisions to contract, purport substantial difficulties during the execution of the agreements once the business customers seek to comply with all the agreement terms. These difficulties are seriously faced in practical terms when customers are audited to verify the compliance with the agreement and may be found in breach of the agreement or even worst, in violation of the licensor copyrights.

Unclear contractual clauses preclude customer from having the knowledge regarding the product and how to use it, which may conduct to unintentional contract and/or copyright infringement. These potential infringements, once subject to audit,

may represent extra revenues to the vendor through the application of the penalties established by the software license agreement. The software license agreement creates an occasion for abusive practices and it is about time to shed more light on these subterfuges that threaten business customers who need to use certain systems and software to manage vital information for their companies.

The triangular analysis applied for this research, with the interviews and blog analysis, evidenced that the practice apparently reasonable and legitimate like the audit, applied to protect the software vendor intellectual property, may concern many problematic hidden aspects: users in good faith are may receive the same treatment as others which apply willful misconduct directed to commit an offense. Customers, in front of the audit reports, may remain without choice, having to sustain extra costs for buying more licenses or suffering the consequences which may include - among others - denied access to information, problems in running their businesses, damage to the company image and reputation.

The agreements subject to review in the empirical analysis encompass several different fields of law for safeguarding the parties' interests, which include but are not limited to Commercial Law, Contract Law, Civil Law, Consumer protection Law, Competition Law, Tort Law. On top of all rights and obligations concerning the parties' interests, the protection of the software creator's work is the main objective of such agreements: the Intellectual Property rights of the Software Vendor are in the forefront of those transactions. It is important to promote the protection of software vendor's rights but it is even more important to promote a proper balance between licensors' rights and customers' rights.

Since its first steps, the recognition of Intellectual Property Rights is not exclusively related to the fair compensation for merit and talent, but is historically associated with the incentive for progress and development, and ultimately with the sense of public interest. Part of it can be already observed in the first copyright act in the world, the British Statute of Anne, from 1710, entitled "An Act for the

Encouragement of Learning”, followed by the United States Constitution of 1790, which, in its Article I, Section 8, states “The Congress shall have Power (...) To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”; as well as the French Law of 1793 and the “legge della Repubblica Cisalpina” of 1801 which comprehend that protecting Intellectual Property Rights not only refers to the protection of authors but envisage the progress of humanity<sup>284</sup>.

As stated by Montagnani and Flanagan (2010), “*Intellectual property is deemed grounded in economics incentives and societal balancing of rights to fruits of one’s own labour, personality and good name with others’ interests in knowledge, progress and their by-products*”. The reason for recognizing rights to fruits of one’s labor goes beyond the merit but envisages progress and development and ultimately the public interest; however, it cannot support deceitful practices that damage not only other companies or business but the society in general.

IP Rights shall be enforced, above all, to protect the public interest and as the concept of public interest has been intrinsically related to IP Rights for around 200 years, therefore, the IP system cannot support harmful practices that provide illegitimate revenues for the software industry while causing excessive indirect costs to users, damaging customers as well as businesses.

The unfair conducts of the licensor may consist on an abuse of rights. The licensor is protected by a well-established IP system and the licensee (another business customer), on the other side, did not receive the same degree of protection. There are not enough legal instruments for providing adequate protection for customers. After the analysis of the potential remedies available for protecting the licensee, the conclusion is that better instruments are necessary in order to protect software users in general and one of these instruments could be to improve the regulation in this area.

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<sup>284</sup> MONTAGNANI, Maria L. e BORGHI, Maurizio. *Proprietà digitale: diritti d'autore, nuove tecnologie e digital rights management*. Milano, Egea, 2006. P. X.

Legislators have an important role in supporting the legal development as a reaction to the technological development but also courts need to draw near technology related subjects and take the lead on influencing the emergence of certain new technologies. If technological progress threatens legal rights the first instance of protection needs to be found in court and judges and therefore, arbitrators and mediators must be prepared for the constant transformation of the technological environment.

Other potential suggestions for the protection of software users are listed in Chapter 4 and include the fact that users, including businesses, could give preference to software certified by the Free Software Foundation or software developed within the scope of the open-source movement. Open-source software is a valid alternative for users trying to avoid the risks presented in the business models analyzed in Chapter 1. As the problem with proprietary software continues to grow, the open-source software could be a feasible option for replacing the proprietary software and because of that, it should receive even more attention. Another suggestion for improving the outcome in case of disputes may concern the use of specialized courts for resolving disputes related to technology.

Currently, one of the main tools in terms of protection for licensors and licensees is the creation of robust, well-established binding agreements to promote the collaboration between vendors and customers. Contracts are an essential part of modern society: they help different parties with opposite interests to be cooperative and trusting when they would be otherwise disoblging and distrusting. Oliver Hart and Bengt Holmström stated that “any trade — as a quid pro quo — must be mediated by some form of contract, whether it be explicit or implicit”<sup>285</sup>. Contracts are part of every aspect of life and they became as well one of the main tools for parties with different interests to collaborate in exchanging information technology.

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<sup>285</sup> HART, Oliver; HOLMSTRÖM, Bengt. *The Theory of Contracts*. MIT, March 1986. P.1.

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