

Intellectual property: authors' rights and copyright



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1. Intellectual property: authors' rights and copyright

Intellectual Property Rights, or IPR, are a series of rights that protect intangible (intellectual) works of human creation. While the term *IPR* in Anglo-Saxon countries confusingly covers several types of rights, including Authors' rights (copyright), patents and trademarks, in the continental tradition, IPR is limited to **Authors' rights, or copyright**, with the concept of "*Industrial Property Rights*" to cover other types of rights.

In this Module 2 we look at IPR in the continental tradition, Authors' rights, and its special relationship with software, while Industrial Property Rights are covered in Module 3.

1.1. The traditional concept of Authors' rights

Authors' rights is a legal term describing the certain specific rights granted to creators in their original works. In the legal system of most English-speaking countries, the term *copyright* is used, as we shall see later. In this section we shall see how the law establishes and regulates these rights.

Neighbouring rights

In the general theory of Authors' rights, there are also certain rights attached to a work that are granted to certain persons who are not authors, such as interpreters and performers on the one hand, and producers, broadcasting entities on the other. Thus a recorded musical work (e.g. a song) will be concurrently protected by several different rights:

- The authors' rights of the composer of the music and the lyricist.
- The performers' rights of the singer and the musicians.
- The producers' rights of the person or corporation which made the recording.

1.2. Origin of Authors' rights/copyright

Protection by Authors' rights stems from the historical moment when works were initially exploited economically by reproduction in hard copies. First, by medieval copiers and, especially, further ahead, with the appearance of the printing press. Publishing houses, as a whole, benefited directly from the invention of the press, as works were transformed into commercial objects that could reap them economic benefits. However, at the same time, the use of the

press simplified the reproduction of the works by third parties and publishers exerted pressure on lawmakers to obtain protection and secure their returns. By doing so, the first objective of Authors' rights/copyright was to regulate and protect publishing houses and presses by granting privileges, although they were also used by governors to control and censure works.

Origin of copyright

It seems that the first law on Copyright was the English Statute of Queen Anne (1710), which granted publishers exclusive rights to print and distribute their works for a limited period. These rights evolved over time towards greater recognition and protection of the actual author's rights in his/her creations, leading to the 1889 Berne Convention commented below and today's framework.

The evolution of Authors' rights/copyright bears a direct relation to their extension to new types of works and greater time periods, and the adaptation of the rules to the characteristics inherent in each type of new work that has been granted protection. Adapting Authors' rights/copyright to computer programs and to new technological means of broadcasting works has generated an unprecedented revolution in the traditional legal framework of Authors' rights/copyright.

1.3. Authors' rights or copyright?

We have used the term *Authors' rights/copyright* when we refer to the generic concept of the legal protection of works of authorship. The expressions *Authors' rights* and *copyright* are often used as translations of the same concept, however this dual denomination responds to two different conceptions of these rights that coexist today.

Simply put, the system of *Authors' rights* is more personalised and protects creations as extensions of the author's persona. On the other hand, the *copyright* system of Anglo-Saxon countries is more collective and tends to protect the economic interest in a work so as to encourage authors to create more, as a general-interest benefit for all.

Nowadays, there is a high degree of coincidence in the regulation of the two legal philosophies, due in great part to the internationalisation of intellectual property law and the harmonising function of international treaties on the matter. There are nonetheless some relevant differences, such as, for instance, in relation to the moral rights of authors, which we develop later on. In this text, we will use the term interchangeably, except where specifically indicated.

Copyright

If we wish to study the copyright system, we must focus in most part on the study of the United States legal system and the British legal system. In the United States, the most important copyright legislation applied to software is based on the Copyright Act of 1976 and the Computer Software Copyright Act of 1980. In the United Kingdom, the legislation currently in force is the Copyrights, Designs and Patents Act of 1988. These laws consolidate the legal provisions contained in several laws and case law.

1.4. Regulatory framework

In this section, we will briefly review the main legal frameworks providing the protection of Authors' rights, beginning with an international perspective and including European and national regulation.

1.4.1. Authors' rights at international level

The international framework for the protection of Authors' rights is made up of certain *international treaties* or *conventions* (treaties between countries mainly aimed at harmonising the legal regime) and certain *international organisations*, who monitor and develop new laws, among other functions. Let us start with the organisations.

- **Organisations.** The most important source of regulation of Authors' rights at the international level is now the *World Intellectual Property Organization* (or WIPO). Created in 1967, WIPO is a specialised agency of the United Nations whose main purpose is to develop an international intellectual property system rewarding creativity, fostering innovation and contributing to economic development, while at the same time protecting public interests. As such, it sponsors international treaties to harmonise the legal framework and remove barriers to the exploitation of works.
Another international organisation interested in Authors' rights is the *World Trade Organization* (known by its initials WTO), an international organisation in charge of the rules governing trade among countries. The WTO began to show interest in Authors' rights in the mid nineties, due to the growth in international trade in services and works susceptible of copyright protection.
- **Treaties/Conventions.** The first and foremost treaty on Authors' rights is the **Berne Convention for the Protection of Literary and Artistic Works of 1886**, with its most recent revision having been drawn up in 1979. The Berne Convention is based on three main principles:
 - National treatment. Works originating in any of the contracting states must receive in each of the other contracting states the same protection as granted to the works of their own citizens.
 - Automatism and simplicity. Protection shall be automatic and shall not be subject to the compliance of any formality.
 - Moral rights. The Convention encompasses moral rights, i.e., the right for an author or his/her family to claim authorship of the work and to oppose any damage to its integrity.

The Berne Convention establishes the basic framework for Authors' rights, including the works that are protected, the scope and duration of rights and their limits, and certain specific provisions for developing countries. Chronologically, the next international treaty related to IPR is the **Agreement regarding the Trade-Related Aspects of Intellectual Property of 1994**, known by its acronym "TRIPS", sponsored by the WTO (see above). The agreement covers various broad issues such as how basic principles of the trading system and other international intellectual property agreements should be applied and how to give adequate protection to intellectual property rights. It also regulates how countries should enforce those rights adequately in their own territories and how to settle disputes on intellectual property between members of the WTO.

The most relevant contributions made by the TRIPS Agreement as to Authors' rights in the information society are:

- It compels signatory states to observe the provisions of the Berne Convention, with the exception of the requirements pertaining to moral rights.
- It protects computer programs as literary works, and outlines the protection for databases. For the signatory states of the TRIPS Agreement, the provisions of the Berne Convention are applicable to computer programs, regardless of whether they are signatories of the Berne Convention.
- It imposes upon the signatory states the obligation to grant the owners of Authors' rights to a computer program the right to authorise or prohibit the rentals of its products.

The legislative work at the international level did not end with these two treaties, and in 1996, two new treaties were subscribed under the WIPO framework, to adapt Authors' rights to the technological evolution, mainly the internet: the **WIPO Copyright Treaty (WCT)** and the **WIPO Treaty on Interpretation or Performance and Phonograms (WPPT)**.

The WCT entered into force on 6 March 2002 and provides protection to authors of literary and artistic works, including original computer programs and databases. As we shall see, the European Union and the United States have pioneered the application of the provisions of this treaty in adopting the Copyright Directives in the European Union and the Digital Millennium Copyright Act (DMCA) in the United States.

The most relevant aspects of the WCT are:

- It universalises the Berne Convention and redefines its concepts within the new technological context, guaranteeing to rights holders that their rights will continue to be protected when their works are disclosed through new technologies and communication systems, such as the internet, creating new rights applicable to the internet environment.

- It introduces the legal protection of the technological measures of protection, which we will comment on later.

Complete texts of the treaties

The complete text of all WIPO treaties and a list of their signatories are available on its website. The complete text of the TRIPS Agreement, along with its signatories and an explanation of its provisions, is available on the WTO website.

1.4.2. Authors' rights/copyright in European Law

Traditionally, in Europe, Member States have regulated intellectual property (copyright), leading to a huge casuistry in the regulation of the subject. Nonetheless, at this time, the centre producing legislation on intellectual property in Europe is no longer formed so much by the states as it is by the European Commission.

The function of the European Commission is complex inasmuch as, besides harmonising national legislations in the matter (where the copyright based system coexists with the Authors' rights system), it must attend to the international commitments acquired mainly, as we have seen, within WIPO and WTO.

The European regulations on Authors' rights and computer programs is based on **Directive 91/250/CEE** of the Council, of 14 May 1991, regarding the legal protection of computer programs, modified by Directive 93/98/CEE of the Council, of 29 October 1993 and restated in 2009 by **Directive 2009/24/EC** (the *Computer Programs Directive*). This Directive establishes that computer programs shall be protected by Authors' rights as literary works, as provided by the Berne Convention.

As regards Authors' rights more generally, **Directive 2001/29/CE**, of 22 May 2001, was adopted, regarding the standardisation of certain aspects of Authors' rights and neighbouring rights in the information society (the *Copyright in the Information Society Directive*, of EUCD). This new Directive seeks to bring all current regulations up to date, complying with the commitments assumed under the WCT. The negotiation of this Directive was controversial and implied a protracted debate on how to regulate copyright in a digital world.

The **Principles of the Copyright in the Information Society Directive (EU-CD)** are as follows:

- It broadens the concepts of reproduction and public communication (now including the right to make the work available to the public, e.g. by internet download), applied to all works, including software and to the complementary documentation distributed over the internet.

- It established legal protection for technological protection measures (TPMs – see below).

Finally, **Directive 2004/48/CE**, of 29 April 2004, regarding the enforcement of intellectual property rights, establishes harmonised measures, procedures and resources required to guarantee the respect for intellectual property rights within the EU, including rights of entry, seizure, injunctions and awards for damages.

Additionally, databases are granted protection under a special system with rights parallel to Authors' rights under **Directive 96/9/CE**, regarding the legal protection of databases (see below).

These Directives harmonise to a certain extent (but not fully) the Authors' rights/copyright regimes of EU Member States, providing broad brush similarity between the national legal regimes. There are notable differences, particularly between copyright and Authors' rights regimes with respect to fair use and moral rights, as we will see later.

- **National law**

At national level, these international treaties and, in the EU, Directives have been implemented or legislated via statute. Without going into the complexities of international private law, it is important to remember that copyright law is national law, for while the protection is "international", courts apply the law of the country to works created in that country and disputes arising there in relation to other works.

Recommended links

- Spain: Ley sobre la Propiedad Intelectual.
- UK: Copyright, patents and designs Act 1988.
- France: code de la propriété intellectuelle, codified in laws of 11 March 1957 and 3 July 1985.
- Germany: German copyright law or Deutsches Urheberrecht is codified in the Gesetz über Urheberrecht und verwandte Schutzrechte (abbreviated UrhG).

2. Protected works

In this section we shall attempt to understand the specific object of protection under Authors' rights (generally speaking, i.e. including thus copyright), especially as regards their applicability to software.

2.1. Works

Authors' rights protect or grant rights over "works". A work may be defined as the formal expression of an idea or feeling wished to be communicated to the public, expressed by any means or in any form, whether tangible or intangible, known now or invented in the future.

The type of work covered by Authors' rights or copyright includes **literary, artistic and scientific works**, including therefore novels, poems and plays, paintings, reference documents, newspapers, movies and audiovisual works, musical compositions and choreographies, sculptures, photographs, architectural works, advertising, maps and technical drawings, computer programs, databases, and many more works.

It is essential to understand that protection by Authors' rights cover the form, the container, the expression of the creative idea, but not the content or idea in itself. Neither the subject of inspiration (facts, dates...), nor ideas are protected by Authors' rights.

Computer Programs

A "computer program" is not defined, but we can use the following definition, variations of which are used by several EU Member States: *a sequence of statements or instructions expressed in words, codes, schemes or in any other form, which is capable, when incorporated in a machine-readable medium, of causing a computer (a device with information processing capabilities) to perform a task or achieve a particular result*. [WIPO Model provisions on protection of software, 1978/re-stated 1991]. Under the Computer Programs Directive, protection is extended to the preparatory design material, but not to certain interface information required for interoperability.

To understand the legal protection of software –as any other work susceptible of protection by Authors' rights– we must take into account the characteristics of its protection:

- Only the expression of a computer program is protected, the source and object code, not the ideas or algorithms they implement.

- A program is protected as an intangible good, regardless of the medium in which it is embodied.

The definition and scope of protection of computer programs means that all stages of preparation of a program are covered, from the time that there is an initial description, in graphic form (flowchart) or verbal form (recorded), sufficiently detailed to determine a set of instructions. It includes the expression in any programming language and also covers the series of instructions in semiconductors (microcode and firmware).

Accordingly, Authors' rights mainly protect the following elements of software:

- The computer program itself (source code, byte code, object code).
- The preparatory documentation, including architecture documents flowcharts, data models, UML diagrams, etc.
- User manuals and technical support documentation.
- Human interfaces, including graphic elements, sounds, fonts and other audiovisual elements.

2.2. Requirements for protection

To be susceptible of protection by Authors' rights, a work must meet certain conditions that may be summarised as follows: "works that are the original creations of man, expressed by any means or in any medium". Three conditions therefore apply:

- **Creation by man.** The program must be the fruit of the intellect of an author, as a consequence of his/her activity.
- **Expressed by any means and through any medium.** Intangible property requires an instrument or means of being perceived by the outside world. Therefore, works must be contained in a tangible or intangible means of expression, either known now or invented in the future. For software, the means of expression may be a hard drive, a diskette or CD-ROM, flash card, etc.
- **Original.** To be protected, works must be original. Merit or quality, destined use, degree of manufacture, lawfulness or unlawfulness and priority in time are all meaningless.

Supplementary content

Computer programs created by machines are generally not deemed susceptible of protection, with the exception of compiled software (created by a compiler), which is assimilated to software created by the person who configures and runs the compiler.

It is not easy to define originality. Indeed, it constitutes the most disputed matter over recent years in the continental tradition. The most orthodox tradition of the system of Authors' rights requires a "trace of persona or personality" of the author, although there is no unanimity in national legislations in terms of the degree of originality that may be required.

The test of the originality of a work tends to have two aspects: the first is that the work must be original of the author, in the sense that it truly should have been created independently thereby, not copied from other work; the second is that the work must contain enough creativity to not be susceptible of being considered something mechanical.

In software, it is difficult to define when originality exists, as it is a utility creation, where sometimes there is little room to manoeuvre. A low-level criterion has been chosen and, in general, it is deemed sufficient for the software to be the result of a personal effort, i.e., that it not be a copy, for it to be considered original.

The copyright system generally requires a lower level of originality and solely requires that the creation should be the result of a personal effort, i.e., that it should not be copy. To the extent that the origin of the software may be attributed to the author, i.e., that it has been created independently and has not been copied from other works, it would be considered original.

2.3. Author's rights and software

Initially, computer programs were not marketed separately, as they were sold with the hardware and their protection was confused with that of the overall product sold, the computer (a phenomenon known as bundling, which has once again acquired importance with mobile devices and other such items). Furthermore, there were no technologies that could be used to copy them or use them outside of the computer in any general way, so there was no great concern for their protection.

The need for protection began to be seen in the late seventies, when, by reason of the United States antitrust legislation, IBM was forced to separate its hardware and software businesses. Consequently, computer programs began to be marketed in separate mediums and the autonomous protection of this technology, extremely vulnerable to copy, was warranted to protect the investments made in its creation and also as a means of encouraging the dissemination of computer programs to larger numbers of people.

Supplementary content

In the United States, for instance, a work is required to be incorporated in a tangible means of expression, from which it may be perceived, reproduced or communicated by any means, whether directly or with the aid of a machine or device.

History

The feeling of a need to protect computer programs gave way to a debate in terms of the most appropriate legal means of doing so:

- In the beginning, the position was sustained that programs could be subject to protection by the legal precept of patents (the computer program as an invention), and this was upheld by the case law of the United States on several occasions. Nonetheless, in the late sixties and early seventies, various national lawmakers and international treaties began to reject the protection of software by patent. Consequently, more industrialised countries (subject to great pressure by large computer companies) sought alternative means of protecting their software.
- A possibility arose to create specific or "*sui generis*" protection (the computer program as a new type of creation) with a duration of four to nine years and mandatory registration, although such initiative never took off (see, for example, the WIPO Model Provisions for Software Protection of 1978 and the Draft International Treaty for the Protection of Computer Programs of 1983).
- Another possibility was also seen to protect software through the precept of Authors' rights and copyright (the computer program as a literary work), and this was the successful option.

Finally, a generally accepted principle was reached whereby **computer programs would be protected by Authors' rights**, while the hardware using computer programs or other inventions relating to such programs would be protected by patents.

The choice of the system of Authors' rights for the protection of software was based in good part on the advantages posed by the protection of any work with the Authors' rights system:

- Automatism. The right of the author derives from the mere original creation. No novelty is required.
- Simplicity. The protection of a work does not require registration at registries, the compliance with formalities or the prior examination of conformity.
- Economy. The protection does not require substantial economic investments.
- Coverage. The protection is extended to the accessory documentation.
- Internationalisation. The protection is granted, through international treaties, throughout almost the entire world. The standardisation of Authors' rights at the international level is at a very advanced stage.

Notwithstanding these advantages, the application of Authors' rights to software has not been easy. The standardisation of protection at international level, equating computer programs to literary works and their protection under the system of Authors' rights are complicated matters, applying provisions that were originally devised for quite different works. Additionally, the laws of the continental countries have incorporated in their Authors' rights systems

this solution for the protection of software that is ultimately conceived for the copyright system of Anglo-Saxon countries, giving rise to difficulties with the traditional characteristics of the continental system, especially the recognition of moral rights.

3. Authorship and works created in open collaboration

This section explains the various actors that may be involved in the process of creation and distribution of works and the various types of recognised authorship. Due to the numerous factors involved in the process of creation of software, and especially free software, this section is especially relevant.

3.1. Authors

The author is the individual or human person creating a work. In general, ownership of rights in the work corresponds to the author due to the mere fact of his/her own original creation, by the principle of automatism, without requiring any additional formality or registration.

The status and recognition as author of a work (a moral right) is inalienable; it cannot be transmitted between the living or *mortis causa*, and is not extinguished with the passing of time. It does not become a part of public domain and is not subject to any statute of limitation.

- **Multiple authors**

Works, including in particular software, may be created through the effort and labour of a single person or may be the result of a combined effort of several. This second scenario is more and more common in practice and, in these cases the attribution of authorship may prove more complex. The legal framework has established various figures to deal with these situations, which are not completely satisfactory, and vary significantly between jurisdictions. The following provides a very general summary.

- **Collaborative or joint works.** A collaborative or joint work (work of joint authorship, in the copyright tradition) is that which results from the collaboration of several authors to create a single work, often where the contributions may not be distinguished. In this case, rights correspond to all authors in the proportion that they determine. In the absence of agreement, the authors are equal-part owners. While legal systems vary, usually the dissemination and modification of the work requires the consent of all authors. Nonetheless, once the work has been disclosed, none of the co-authors may unjustly refuse their consent to its exploitation as disclosed. Co-authors may exploit their contributions separately (if separable), provided no damage is caused to the joint exploitation of the whole.
- **Collective works.** A collective work is generally a work created at the initiative and under the coordination of an individual or legal person, who publishes and disseminates the work in his/her or its own name.

Example

Extreme programming, online wiki text contributed by several authors.

Example

Encyclopaedia, anthology, certain free software distributions such as Mozilla code.

It represents the gathering of the contributions of several authors, in such a manner that it would be impossible to attribute to any of them the right to the overall work and each contribution is merged into a single, autonomous creation. The result is work with value added to the mere aggregation of contributions.

The rights in the collective work are owned by the sponsor or "editor", who publishes the work, without prejudice to the rights of each contributor in his or her contribution. Copyright in each separate contribution to a collective work is distinct from copyright in the collective work as a whole, and vests initially in the author of the contribution.

The concept of collective work needs to be treated carefully, as there are variations on how the term is used among different legal traditions. E.g. within the US system it refers to a combination of previous works assembled into a collective whole, usually arranged in such a way that the resulting work as a whole constitutes an original work of authorship. This in certain European systems is called a "composed work" or "compilation"¹ (indeed, in the US this term is also used).

⁽¹⁾One important difference seems to stem from whether there is an "editor" who coordinates the work, and whether contributions are expressly made for the collective work (commissioned), or merely combined by a person into a compilation (e.g. using software libraries).

These figures do not necessary cover all forms of collaboration, especially in the world of collaborative creation of free software as we comment below.

- **Employee works and works for hire**

Another situation to consider is the creation of works within the context of a legal entity or organisation, by employees. In this case, the general rule – and the specific rule for software (EUCPD – Art. 2.3) – is that when an employee creates a work in the exercise of his or her assigned duties or following instructions from the employer, the ownership of the economic rights corresponding to the work corresponds exclusively to the employer, unless otherwise agreed.

Note that the employee is still the author, but the economic rights in the work are presumed to be held by the employer.

As regards works created on commission, or "work for hire" within the US tradition, the EU frameworks have chosen not to regulate the subject matter and it has been the case law that has established that, except as otherwise agreed, there shall be no automatic transmission or assignment of rights from the original author to the person who commissioned the work. The ownership is vested in the creator and not the person (individual or legal person) commissioning the work (the client). As an exception, if the client is involved in the creative process of the software, authorship may become joint or collective.

Usually, for an employer to be considered the rightsholder in a computer program, two requirements must be met:

- The labour relation must be materialised by an employment contract.

- The program must have been created by the employee in the exercise of their duties or following instructions from the employer.

Such legal assignment of the equity rights to the employer does not preclude the moral rights from continuing to be the inalienable property of the programmer, in continental systems.

- **Rightsholders and free software**

The particulars of the free software development models, where the contribution of several programmers to a single work is common, add difficulties to traditional authorship models. To determine who the author is, who has the rights to the work and thus who can determine the license and has the legitimate right to bring actions for infringement, it is necessary to determine the type of work created and its owners. The answer will depend on the specific development model used, the existence or not of a coordinator, the possibility of separating the various contributions or not and, clearly, the specific agreements reached.

In a collaborative or joint authorship model, for example, each author is the owner of their contribution and of the whole, the work being exploited collectively. This implies that if a development model of the software of this type were chosen, it would be essential for the authors to reach an agreement, as soon as possible, with respect to the licence that would be applied to the software (as a whole) and the system of exploitation for the resulting work. In collective works, where there is a coordinator, the rights and exploitation of the work as a whole should be clearer and it is the editor who may protect the rights in the collective whole (but not necessarily the contributions).

Example

Examples of free software applications that could be considered collective works (if developed and disseminated under the Authors' rights system) include the Mozilla programs, coordinated by Mozilla.org, or certain applications of the GNU project of the Free Software Foundation. There are also "business" applications, such as JBoss, Jasper Reports, OpenOffice.org, SugarCRM, Openbravo, etc.

To prevent possible future problems, the projects for the development of free software electing this option often ensure that each author-contributor licenses or assigns their rights in writing, exclusively or non exclusively, to the coordinating entity, so that it may correctly manage the intellectual property rights to the application, specifically, determine the licence system, guarantee the defence of any infraction, etc.

Example

An example of this preventive policy may be found in the conditions of the FSF for any contribution made by programmers providing more than ten lines of code for a project coordinated thereby: they must transfer ownership of the code to the FSF. A Fiduciary License Agreement has been drafted within the EU for this purpose. Other established projects (Mozilla, OpenOffice.org, Apache, Eclipse, etc.) require a license or assignment of rights of one type or another. See the sites of Apache Software Foundation and Eclipse.

3.2. Ownership of rights in a derivative work

As we have already studied, an original work is a work of autonomous and independent creation, even if published collectively with others. A derivative work, on the other hand, is a new work resulting from the transformation of pre-existing work, usually without the collaboration of the author of the latter, but with his/her permission (see below).

As the derivative work constitutes a new work, even if it is based on another, there are therefore two different works and two sets of rights: in the original work and the derivative work. We will see below that the author of the derivative work needs the permission of the original author or rightsholder in order to create this new work, and must exploit the new derivative work in accordance with the licence granted by the original rightsholder.

We will also see below that copyleft (in the GPL or other copyleft license) is a free software licensing mechanism enabling others to create works based on existing software, but forcing the new author, if he/she redistributes the new work, to do so under the terms of the same copyleft free software licence – i.e. maintaining the freedom of the work.

3.3. Identifying the author and/or rightsholder

As the original authors or rightsholders to a work are those that can first exploit or authorise the exploitation of a work, and may also assign the rights thereupon (by licence) to a new rightsholder, it is clearly important to know the methods of identifying the copyright holders.

The © symbol, intellectual property registration and authorship recognition notices in the work itself are the most common instruments for identifying the owner of the Authors' rights to any work, although such formalities have not been mandatory since the Berne Convention.

Generally speaking, copyright law provides that:

- The author shall be presumed to be whoever appears as such in the work by name, signature or mark identifying them (notice of authorship: © Jane Smith, 2007).
- If the work has been disseminated anonymously or under a pen name, the exercise of the rights shall correspond to the person disseminating the work with the consent of the author.

- The assignment of rights by the author, as a general rule, is not presumed: it requires a specific act in writing. In the absence of such act, the owner reserves all rights.

For free software, the identification of the author may be problematic, for instance, in the event that there are several anonymous authors contributing code to a particular application (Mozilla, GNOME, KDE, etc.). Such difficulty in identifying the author may cause problems when requesting consent for a change in licence or for active authentication in the event of an infraction.

To deal with this type of problem, the coordinators of certain free applications maintain lists of contributors and have established lists of unidentified authors. For instance, the Free Software Foundation requires that each contributor should identify themselves with the project coordinator. MySQL AB only accepts contributions to its free database engine from those that have signed its developer's agreement.

One requirement common to all free software licences is the compulsory mention of the ownership of the original work by maintaining the copyright notice. Nonetheless, each licence establishes different requirements in respect of the public notices of authorship (for instance, in the documentation).

Along these lines, the Apache licence requires that the mention should be maintained in derivative works of the authorship of the original software, while the GPL requires providing indications that the work has been modified, when and by whom. The MPL requires indication or description of the changes (e.g. with a diff file).

Supplementary content

Look at the second printed page of any book, and you will generally see the copyright information, with a note of the rights of the original author in the text, and the rights of the publisher in the printed or edited edition.

4. Rights in protected works

In this section we will study the core of Authors' rights: the rights invested in the author or owner of the rights to the work. In the continental system, two types of rights are distinguished: personal or moral rights and patrimonial or economic rights.

4.1. Personal or moral rights

The continental system of Authors' rights supports the intimate connection between the author and the work and, as opposed to the copyright system, declares that authors have a "moral right to limit the modification and manifestation of their work", even after having transferred its economic rights to a third party. The moral right of authors to their work is made up of several rights and that, to simplify, serve to "protect their name and the integrity of the work" and prohibit any modification without their prior consent.

While national regimes vary, the following moral rights are generally granted to the creator:

- To decide in respect of the dissemination of the work.
- To determine how the dissemination is to be made, in their name, under a pen name or anonymously.
- To the recognition of their name and the respect for their status as authors.
- To demand that the integrity of their work be respected and to prevent any alteration thereof that could imply any damage to their legitimate interests or undermine their reputation.
- To modify the work, respecting the rights acquired by third parties and the requirements for the protection of goods of cultural interest.
- To withdraw the work from the market for changes in their intellectual or moral convictions, upon prior indemnification for damages to the owners of the exploitation rights (right to repentance).
- To access unique or rare copies of the work, when in hands of another, in order to exercise dissemination rights or any other of their vested rights.

These personal rights accompany the author during his/her entire life, being non-waivable, non-transferable, inalienable and some are even perpetual (i.e. inherited by heirs of the author).

When regulating Authors' rights applied to software, in the Computer Programs Directive of 1991 there is very limited mention to moral rights and there is no mention to the other equity rights of authors (compensation rights, as we shall discuss). Nonetheless, the majority of the doctrine understands that moral rights do apply to software.

The recognition of the moral rights granted under the continental system to the authors of computer programs may prove inconvenient for companies engaged in the manufacture of software (think of the repentance right). Doctrine sustains that a way to avoid them is to strip individuals of the authorship of programs. In the development of proprietary software, companies may take over all the rights as employers or as publishers or coordinators of a collective work.

In the development of free software, the matter is more complex. To determine the existence and the possible owners of moral rights, it is necessary to study the specific development model and the agreements reached by the various programmers involved in the creation.

What is interesting, however, is that nearly the ONLY requirement common to all free software licences is that of maintaining the original copyright notices, and for many licences that of identifying if a work has been changed. This is a documentary form (if not necessarily contractual) of respecting moral rights.

4.2. Economic or patrimonial rights

Economic or patrimonial rights are based on the conviction that authors should be compensated for exercising their unique creative abilities, thus promoting the creation and dissemination of new works. The law therefore grants certain exclusive rights to rightsholders enabling them to obtain pecuniary benefits derived from the work, through exclusive use or assignment or licensing to third parties. In exchange for the transfer of rights, the author shall receive compensation (or not), which is generally proportional to the income generated by the exploitation of such work.

In some jurisdictions, like Spain and France, these rights are conceptually divided into the rights to the exploitation of the work and rights that are merely compensatory in respect of others' use. These are discussed in further detail below.

Exclusive exploitation rights are those recognised by law to their owner and grant an exclusive power to exercise or authorise (and, accordingly, to prohibit) beforehand certain forms or acts of exploitation with respect to their work. Acts of exploitation include, without limitation, reproduction (copy), distribution, public communication and transformation.

EU Computer Programs Directive, Article 4

Subject to the provisions of Articles 5 and 6, the exclusive rights of the rightholder within the meaning of Article 2, shall include the right to do or to authorise:

- (a) The permanent or temporary reproduction of a computer program by any means and in any form, in part or in whole. Insofar as loading, displaying, running, transmission or storage of the computer program necessitate such reproduction, such acts shall be subject to authorisation by the rightholder.
- (b) The translation, adaptation, arrangement and any other alteration of a computer program and the reproduction of the results thereof, without prejudice to the rights of the person who alters the program.
- (c) Any form of distribution to the public, including the rental, of the original computer program or of copies thereof.

As may be seen, the exploitation rights of the author of a computer program are basically the same as those for any other work, although they must be adapted to its own characteristics.

4.2.1. Reproduction right

Reproduction consists of incorporating a work or any part thereof on a medium allowing for its communication and obtaining further copies, directly or indirectly, provisionally or permanently, by any means or in any form. Even short-lived copies are considered reproductions.

EUCD, Article 2. Reproduction right

Member States shall provide for the exclusive right to authorise or prohibit direct or indirect, temporary or permanent reproduction by any means and in any form, in whole or in part...

Acts requiring authorisation

In principle, the following acts require authorisation, as they constitute reproductions:

- Downloading from the net and storage to a local hard drive or flash card.
- Making copies on CDs, DVDs, or flash memory (subject to the right to make private copies or fair use).
- Transmission: the delivery to another system by telecommunication, local network, etc. or uploading of files onto a web server, or their download to a local computer (for instance, P2P transfers) or attaching a file to an email and sending it.
- Loading a program to execute it: introducing the program into the RAM.
- Presentation: on-screen visualisation of the graphic interface.
- The integration or incorporation of the code lines of a third party in a new development.

Supplementary content

Note that the EUCPD does not apply the public communication right (e.g. transmissions in digital format via the web) to software, however it is generally understood (either by doctrine or case law) that software is subject to this exclusive right.

The right to copy or reproduce (except for backup or security copies and private copies, the former being permitted and the latter prohibited in relation to software, as we shall see) is fundamental in licences, as it is necessary to have it to be able to run/use the program. We should nonetheless note that a "legitimate user" (say a user with a "usage licence" that does not necessarily specify the relevant rights, as is the case with many poorly-drafted licences) does not require such authorisation merely to use the program (Article 100.1).

The subject of reproduction is quite controversial and difficult to resolve in relation to the software, due to the diverse nature of a program: it is made up of the elements of design (its architecture and structure), code lines (which may be object code or source code) and the result of its performance. A reproduction may take place at any level or in relation to any element.

A **verbatim reproduction** of the code lines without authorisation (cut and paste) is the most common infraction in relation to computer programs. However it is considered that there are other forms of reproduction, known as **non-verbatim reproduction**, which may also constitute breaches of the reproduction rights. Non-verbatim elements of a program can include its structure and architecture, data input and output formats, API format, graphic interface (look and feel), etc. Defining whether or not a copy exists in the case of two programs that are similar in non-verbatim elements is a complicated matter.

Examples of non-verbatim copies

An interesting element for study in relation to non-verbatim copies would be the case of two different programs that have similar results. It could be the result, for instance, of the re-engineering of the first (the creation of a new expression of the underlying ideas), which would generally be permitted by law, provided the result of the re-engineering were not done through studying and reviewing the code of the first software.

Another scenario would be that in which, although no verbatim copy of the lines of the code of the original were used in the development of the second program, it could be argued that the second is a copy of the first due to the functions, structure, data organisation and/or the result of its process (the graphic interface, for instance) being –too– similar.

There is a certain amount of case law on non-verbatim copies of computer programs, especially in the United States, although unfortunately, for the time being, there is no final and unanimous answer to the question. In the United Kingdom, for instance, the test currently accepted by the courts is that a copy exists if, in the development of the second program, there has been use of the "*skill and judgement of the original authors*" in reference to the data structure, the system architecture, the development and implementation methods, the graphic interface, etc. Therefore, to defend from unauthorised copies, it is not always necessary to prove the existence of a verbatim copy (a task that is usually difficult due to the lack of access to the source code of the infringing program and its development documents).

These elements are especially relevant in the development of free software as several free applications imitate, and often improve on, proprietary applications. Additionally, proving the existence of copying is easier with the free software, as its source code is distributed openly.

4.2.2. Right to distribution

Distribution is understood as the making available to the public of the original or copies of the work by sale, rental, loan or any other means.

EUCD Art 4: Distribution right

EUCD Art 4: Distribution right. 1. Member States shall provide for authors, in respect of the original of their works or of copies thereof, the exclusive right to authorise or prohibit any form of distribution to the public by sale or otherwise.

This right covers for example the sale of books or magazines in shops, the distribution of software in boxes (via ecommerce or on the shelves of computer shops), or the distribution of works on CDs with magazines.

Distribution requires the use of tangible copy, therefore, in cyberspace the concept of distribution is distorted and, as we shall see, that of public communication is reclaiming its relevance.

One of the most complex issues in this matter is the **exhaustion of distribution rights**. This basically means that once a copy has been distributed, the rightsholder can no longer control the exploitation (sale, redistribution) of that copy.

The exclusive distribution right of the owner "is exhausted" with the "first sale in the European Union of a copy by the owner of the rights or with their consent", except as regards the rentals/leasing of the program (in this case, there is no exhaustion for distribution outside the EU). Facing this possibility, software suppliers are careful to clearly establish in their end user licence that they are not "selling" any copies to the user, as this would imply their waiver of the exclusive right to control the distribution of the copies and the user could freely distribute their copy (although they could not make any subsequent copies for distribution), at least in the European Union.

Accordingly, in most licences, the owner/supplier "sells" the software medium (the CD-ROM), but with respect to the software it solely grants the user the right to use it by licence, prohibiting their transmittance of the usage right.

Unauthorised software copies loans? There is certain discussion as to whether the owner of the exploitation rights may prevent certain users from "lending" the copy of the software. A loan is distinguished from rental in that, although in both cases the user temporarily assigns the copy to a third party, the loan is free of charge.

Example of Spain

In Spain, the law provides a general exception (for literary and artistic works, etc.) to the distribution right for certain cultural institutions of general interest (museums, libraries, etc.) who are allowed to make loans without having to obtain authorisation from the owners or pay them any compensation. It is understood that this exception does not

apply to software. Therefore, although we may believe that such prohibition is often excessive, under a strict interpretation of the law, libraries or teaching institutions cannot lend software without express authorisation.

4.2.3. Right of public communication

The concept of public communication is originally conceived for theatre, movies or traditional radio, i.e., for acts of public broadcast of a work without the distribution of hardcopies.

EUCD Art 3: Public Communication

Member States shall provide authors with the exclusive right to authorise or prohibit any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access them from a place and at a time individually chosen by them.

With the implementation of the 2001 EU Copyright in the Information Society Directive, public communication was extended from "*any act whereby a plurality of persons may access the work without the prior distribution of counterparts to each of them*" (except within a strictly-domestic environment), to "*making available to the public through wired or wireless procedures, so that anyone may access them from the place and time of their choice*", a term devised for the distribution of works over the internet.

Breach of the right to public communication

A practical example of the breach of this right is the uploading of a program onto the internet on a given site (Warez, for instance) or making it available to third parties from the computer itself, using P2P programs such as eDonkey, eMule, Kazaa, etc.

Two clarifications:

- This right does not encompass private communications and, therefore, it is not considered to be a public communication or making available when made within a strictly domestic environment, not integrated or connected to a broadcast network of any sort.
- There is no exhaustion (Article 3.3 of the Directive).

The problem is how to separate what are public communications from what are private communications on the internet. For instance, is there a private communication if we send a document to fifty friends? What if we set up a "private" peer to peer program and solely open our computer up to certain people?

4.2.4. Transformation right

The transformation of works includes their translation, adaptation and any other modification by which a different work is created. Should the transformation be made without authorisation (express or implicit through the collaboration of the author of the pre-existing work), the Authors' rights of the rightsholder of the original work shall have been violated.

As we have already noted, the Authors' rights or copyrights in the work resulting from a transformation correspond to the new author. This author will nonetheless require authorisation from the author of the pre-existing work during the entire term of protection of their rights to the original work, to exploit the results by any means (e.g. directly or by distribution to third parties) and, especially, through its reproduction, distribution, public communication or new transformation.

There are certain limits to this right in relation to software, as we will see below.

Transformation rights and free software

As we have explained in the section on original works and derivative works, the model commonly used for the development of free software often implies the transformation of pre-existing works.

Therefore, free software licences consider the licensing of such transformation right one of the bases of software freedom. In other words, if a licence does not grant any transformation rights, it is not a free licence.

While there is significant debate about the scope of a derivative work, it generally results from a modification of the original work (adding, eliminating or modifying elements from the prior work) and/or, more arguably, its integration into a greater work that is based on the component (however, this depends on its form of integration).

Derivative works require the authorisation of the rightsholder in the prior work (express via licence, or implicit through the collaboration of the author), and a work incorporating pre-existing work without authorisation would infringe upon the Authors' rights of the owner of the original work, as we will see below.

Derivative works are a controversial subject with respect to free software, due to the difficulties in distinguishing between derivative work, collaborative or joint work and collective or composed work and what authorisations are required to create a work including third party components, libraries, etc. The difficulties arise basically in two respects:

Binary software

For example, binary software is defined as a transformation of the source code, and an implementation of the code for other hardware/devices.

- In relation to the **process of creation** of free software, this distinction is quite relevant for, as we have seen, free software is based on the incorporation, adding and modification of pre-existing work. The usual free software development model implies a substantial amount of contributors to the same application. Some authors provide new code (thus creating collaborative or collective works); others correct or improve an existing code (thus creating derivative work). Some authors also add a notice of authorship, while others do not.
A key to the prevention of authorship conflicts in a free software development project may lie in the "*contributive intent*" of each author and in the proper management of intellectual property:
 - In the absence of an express agreement in terms of the conditions for collaboration, those managing software must rely on an implicit assignment of rights (which is not legally valid) or on the absence of claims by the contributing programmers facing any form of exploitation.
 - Good management of the process of collaborative creation requires an assignment or express license of rights by a specific agreement, such as a contribution agreement, or through the requirement that contributions should be made under a "project licence" or a compatible licence.
- Regarding the **use and exploitation of free software**, this distinction between original and derivative work is also important. All free software licences allow for the modification (adaptation, translation, etc.) of applications and, therefore, the creation of derivative works. Some free software licences impose conditions on the redistribution and use of such derivative works (the GPL for instance), while others do not (the BSD).

It is thus important to properly understand the definition of derivative work to know whether a development made based on a free application (for instance, integrating it, modifying it, using it, etc.) may be considered work that is derived from the original (and, therefore, to have respected the conditions of the licence with regard to modification and redistribution) or an original work using it without modifying it (an independent work, with its own licence).

4.2.5. Strictly-compensatory rights

Strictly-compensatory rights are basically the right to participate in the resale price of plastic works (*droit de suite*) and the right to compensation for private copies. The right to compensation for private copies is held to be an inalienable right of the authors and artists, interpreters or performers, compensating the intellectual property rights not received for the reproduction of the protected works or services to be used exclusively privately by the copyist.

The levy on blank CDs

It is important to know the impact that the right to compensation for private copies due to the consequences that the application of a levy to virgin CDs will have for users of computer programs. In Spain, for example, the levy has been imposed to compensate the private copies of music that may be made by private persons. But the same CDs are

used to make security or backup copies of computer programs, leading to the argument that this solution is unfair, and the courts have on several occasions required the levy to be returned.

These levies are managed by collecting societies, bodies like the PPL in the UK, SACEM in France, or SGAE in Spain, which we comment on below.

4.3. Other rights protected

The legal framework also restricts certain "secondary" acts, in the sense that they are not direct breaches of exclusive rights, but indirectly affect them, associated with software, and may constitute intellectual property violations:

- Putting into circulation a copy of a computer program knowing, or having reason to believe, that it is an infringing copy (this could arguably be extended, for instance, to companies basing their business on distributing P2P software expressly stating its use for sharing music files).
- The possession, for commercial purposes, of a copy of a computer program knowing, or having reason to believe, that it is an infringing copy.
- Putting into circulation, or the possession for commercial purposes of, any "*means*" the sole intended purpose of which is to facilitate the unauthorised removal or circumvention of any technical device (a Technical Protection Measure, or TPM) which may have been applied to protect a computer program (e.g. rippers and cracks).

In certain circumstances, the general regime of copyright law also punishes those who aid and abet the commission of a breach (e.g. by providing services of transmission, broadcasting or distribution of illegal works with knowledge); and the manufacture, marketing or distribution of articles destined for the illegal copying of protected works.

Supplementary content

Any infringing copy of a computer program and any illegal means for eluding technical protection mechanisms (TPM) shall be liable to seizure in accordance with the legislation of the Member State concerned.

5. Limits of authors' rights/copyright – fair use

As we have seen, the author or rightsholder of a work has virtually absolute control over its use. Nonetheless, general interest imposes temporal and substantive limits on such monopoly of the author or rightsholder, recognised in the legislation on Authors' rights. Set out next are the exceptions or limitations recognised by law with respect to the rights that we have seen in the preceding section.

5.1. Time limitations: duration

Ownership is eternal; nonetheless, intellectual property is subject to a term. Throughout the entire European Union, the general rule applies that after seventy years have lapsed from the death of the author or the declaration of their death, the work becomes part of the public domain. Works in the public domain may be used by anyone, provided their authorship and integrity are respected.

Notwithstanding the general seventy-year rule, there are special terms for certain types of work. For instance:

- Exploitation rights for anonymous or pseudonymous works shall endure seventy years from their lawful dissemination.
- Exploitation rights for collaborative works shall endure the entire lives of the co-authors, plus seventy years from the death of the last surviving co-author.
- Exploitation rights to collective works endure seventy years from the lawful disclosure of the protected works.
- The rights to "business" works endure seventy years from the 1st of January immediately following their first publication.

Authors' rights in the United States

The duration of Authors' rights in the United States is complex, as it is dependent on various factors, including whether or not the work has been published. The general rule for works created after 1 January 1978, is that they are protected by intellectual property rights during the life of the author, plus an additional seventy years. For anonymous, pseudonymous or commissioned works, copyrights last ninety-five years from their first publication, or one hundred and twenty years from their creation, whichever term expires first. For computer programs, the duration of copyright in the United States is fifty years after the death of the author or seventy-five years from the publication of commissioned works.

It is also necessary to bear in mind that neighbouring rights have shorter terms and that moral rights, such as paternity and integrity, are perpetual.

5.2. Substantive limits: exceptions

As we have seen, exploitation rights are not absolute, inasmuch as the law specifies, as exceptions, certain acts which may be performed without express authorisation and sometimes even without compensation.

The purpose of the exceptions in most works is to protect the public interest, such as education, access to culture, freedom of information and criticism, and free competition. All limitations must be applied in accordance with the Berne three-step test, i.e. in certain specified cases which do not conflict with a normal exploitation of the work and which do not unreasonably prejudice the legitimate interests of the rightholder.

This is not the place to enter into a long discussion on the exceptions, much of which took place during the drafting of the EUCD, however we find it of use to present the (summary) list below. The list seems long, however they are often limited in manners which make their use difficult (e.g. public education – what about private or charity-based education?).

EUCD Article 5 – Exceptions and limitations (summary)

- Temporary acts of reproduction which are transient or incidental [and] an integral and essential part of a technological process and whose sole purpose is to enable (a) a transmission in a network between third parties by an intermediary, or (b) a lawful use...
- Reproductions on paper or any similar medium, effected by the use of any kind of photographic technique or by some other process having similar effects, with the exception of sheet music, provided that the rightholders receive fair compensation...
- Reproductions on any medium made by a natural person for private use and for ends that are neither directly nor indirectly commercial, on condition that the rightholders receive fair compensation...
- Specific acts of reproduction made by publicly accessible libraries, educational establishments or museums, or by archives, which are not for direct or indirect economic or commercial advantage...
- Ephemeral recordings of works made by broadcasting organisations by means of their own facilities and for their own broadcasts; the preservation of these recordings in official archives...
- Reproductions of broadcasts made by social institutions pursuing non-commercial purposes...
- Illustration for teaching or scientific research, as long as the source, including the author's name, is indicated...
- Uses, for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature...
- Reproduction by the press, communication to the public or making available of published articles on current economic, political or religious topics... in cases where such use is not expressly reserved, and as long as the source, including the author's name, is indicated.. or reporting of current events, to the extent justified by the informative purpose...

- Quotations for purposes such as criticism or review, ...
- Public security or to ensure the proper performance or reporting of administrative, parliamentary or judicial proceedings...
- Political speeches as well as extracts of public lectures or similar works...
- During religious celebrations or official celebrations organised by a public authority...
- Use of works, such as works of architecture or sculpture, made to be located permanently in public places...
- For the purpose of caricature, parody or pastiche...
- In connection with the demonstration or repair of equipment...
- Communication or making available, for the purpose of research or private study, to individual members of the public by dedicated terminals on the premises of [public libraries, education] establishments...
- Other cases of minor importance where exceptions or limitations already exist under national law, provided that they only concern analogue uses and do not affect the free circulation of goods and services within the Community...

We note that many of these limitations are qualified by "*to the extent justified by*" the purpose in question and "*use is in accordance with fair practice, and to the extent required by the specific purpose*", and often provided compensation is given to the rightsholder.

Exceptions in relation to computer programs

The above list does not apply to computer programs, whose exceptions are set out in the 1991 EU Computer Programs Directive.

The purpose of software copyright exceptions is to ensure that the legitimate user of software (who has validly acquired a licence) may use it in accordance with its purported use. Otherwise, the right of use would be deemed distorted and to not correspond with what could legitimately be expected by the user. In non-free software licences, the owner of the exploitation rights to the program grants few rights. Exceptions therefore play a key role, although the absolute exclusion of the use of the program has no exception with respect to who is not a "legitimate user" of such program.

The Authors' rights system has elected to establish a closed system with a specific list of exceptions. Exceptions to Authors' rights applicable to software are developed in Article 5 EUCD and may be summarised as the authorisation of the **legitimate user** to:

- Reproduce and transform the program when necessary for its use, including debugging (limitable by contract).
- Making a security or back-up copy (absolute right).

Supplementary content

In free software licences, the granting of exploitation rights is so broad that it breaks the monopoly of the author and often makes such exceptions irrelevant.

- Analysis of the program to determine the ideas and principles on which it is based, while loading and running the program.
- Reproduce and transform certain necessary parts of a program to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs, on certain conditions.

This last is considered a reverse engineering or quasi decompilation right, however it may not be exercised if the owner of the program has provided the relevant information.

A "legitimate user", while not defined, is understood to mean a person with a "use right", such as under and EULA or other form of software licence.

Supplementary content

In contrast, the copyright system contains an open clause for fair use, allowing a certain margin to the judges for each specific case. This subject shall be explained further ahead, in the section on copyright.

Acts of reverse engineering

Reverse engineering may be defined as all operations necessary to determine the ideas underlying the computer program. It is not limited to decompiling. The establishment of an authorisation to perform acts of reverse engineering is intended to guarantee the development of a non-monopolistic industry and interoperability, and at the same time to battle against the reverse engineering that is intended to discover the source code through the object code. This includes therefore the rights of:

- Analysis during normal use.
- Decompilation for interoperability, subject to the following conditions:
 - Only the legitimate user or anyone authorised to use the computer program, or a person duly authorised in their name (such as the company), may perform acts of decompiling.
 - The owner of exploitation rights has not made a version of the source code (at least the part that can allow interoperability) or interface information readily available.
 - The decompiling must be limited to the parts of the program that are necessary to achieve interoperability.

Once the information is lawfully obtained, restrictions are established on its use:

- The information cannot be used for purposes other than those of acquiring interoperability for a computer program created independently.
- It cannot be communicated to third parties, except as necessary to achieve the interoperability of the program created independently. Along these lines, the person that has decompiled a program has a legal obligation to confidentiality.
- It cannot be used for the development, production or marketing of a program that is substantially similar in its expression or any other act infringing upon the Authors' rights.

Finally, a general limitation exists that indicates that the provisions relating to decompiling cannot be construed in a manner such that their application causes "unjust damage to the legitimate interests of the owner of the rights or is contrary to the normal exploitation of the computer program". This limitation, seemingly theoretical, has some practical application: when the decompiling operations to obtain interoperability with other programs may damage the rights and expectations of the owner of exploitation rights (exclusively marketing software, issuing new releases, etc.), the user must also refrain from performing them, which implies that this right of the user may be impracticable.

5.3. Fair use

In the United States copyright system, one of the most important limitations is the "fair use" doctrine. The referred doctrine provides that the exclusive rights granted to the owner of the Authors' rights do not include the right to prevent others from fairly using the registered work. The doctrine has been developed based on a substantial number of judicial decisions over the years and has been coded in section 107 of the current Copyright Act. This contains a list of the various purposes for which it may be considered "fair to reproduce any work in particular, such as for purposes of critique, commentary, news, information, teaching, academic studies or research".

Section 107 US Copyright Act

Section 107 US Copyright Act establishes four factors that must be considered to determine whether a particular use is fair or not and, therefore, if it is excluded from copyright violation:

- 1) The purpose and nature of the use, including whether it is commercial in nature or has educational, non-profit purposes.
- 2) The nature of the work protected by Authors' rights.
- 3) The amount and degree in which the portion used is important in relation to the overall work protected by Authors' rights.
- 4) The effect of such use on the potential market or the value of the work protected by Authors' rights.

A significant amount of case law has developed this concept and applied it to a variety of cases, including in relation to software.

6. Copyright

Now that we have seen the basic tenets of Authors' rights, which are also those of copyright, we can comment briefly on the differences between the two protection regimes.

- The object. The copyright system revolves around the work and the benefit that it provides to the common interest. The authors and their rights therefore assume a secondary role, as opposed to the tradition of Authors' rights.
- The absence of formalities. Traditionally, the copyright system established certain formalities for works to be protected, specifically their registration, and it was not until the Berne Convention that such requirements were eliminated. The copyright system currently is completely devoid of formalities and procedural requirements, similar to the system of Authors' rights. The United States nonetheless continues to demand that its own citizens, but not foreign authors, register their works at the Copyrights Office to be able to defend themselves at the federal courts.
- Low level of originality. The threshold of originality (novelty, creativity) required for works to be protected by the copyright system is quite low: it is solely required that the work should be new and should have been created by its author, i.e., that it should not be a copy.
- Moral rights. The copyright system does not recognise the existence of moral rights in computer programs, and therefore allows the complete transfer of the Authors' rights to an application or a code line to a third party.
- Duration. In the copyright system, the duration of protection of the works is generally longer. In the United States, for instance, duration is a complex issue, which may be seventy, ninety-five or one hundred and twenty-five years. In the United Kingdom, as the matter has been harmonised at a European level, its duration is the same as in Spain: generally seventy years from the death of the author.
- Authorship systems. In the copyright system, when there are several authors, and their contributions cannot be distinguished (which is equivalent to collective works), authors are considered co-owners under a joint-ownership system. There is nonetheless no concept of collaborative work when the contributions to works may be distinguished from one another, and in such cases, we would be dealing with a mere compilation of

individual works. If the compilation is original in any way, it is deemed collective work.

- Permitted acts. In addition to the aforementioned limits to the exclusive rights of software owners, copyright provides a "fair use" defence that we have commented on above.
- Transmission or transfer of rights. The copyright system allows several means of transmission of rights to protected works:
 - Full and exclusive assignment: contrary to that established in continental law, the copyright system allows the transfer of all the rights of the owner of a work. The assignment must be made in writing and be signed by the assignor. The assignee shall have all rights to the work, without restriction.
 - Additionally, the assignment of future works (although not "all" future works) is possible (for instance, under a service agreement between a client and an autonomous programmer): upon creation, the ownership of the work shall be vested automatically in the client.
 - Licence: the most common means of transmission of rights.
 - Work for hire: an automatic assignment of rights applies in favour of the person commissioning a third party for the development, as opposed to the Spanish system. The agreement must indicate that the commission is of such nature.
- Databases. To date, in the United States legislation similar to the European for the protection of databases has been rejected due to the pressure by the scientific and educational community, which claim that protection such as that granted in Europe would prevent free access to information. Nonetheless, the effort (sweat) devoted to databases is protected, without the formality of the European regime.

7. Database / *Sui Generis* Rights

To obtain a broader vision of all aspects of Authors' rights relating to software, we believe it is convenient to briefly address the legal protection of databases. **Directive 96/9/CE by the European Parliament and the Council, regarding the legal protection of databases**, regulates the matter within Europe.

To understand the various protections existing, it is necessary to take into account that databases may or may not be considered original works.

7.1. Databases deemed original works

The basis for the protection of databases lies in the right of the author to protect not only absolute originality, but also derivative originality, i.e., creation based on other creations. Intellectual property and originality may be in the selection of content and its layout.

Therefore, a database may be considered original work and be subject to Authors' rights (assignment IP, which we studied above). In this case, the structure (choice and arrangement) expressing the creativity of the author in the database is protected, not its content.

7.2. Databases that are not original

Is there any originality in a list of telephone numbers or of associates in an organisation? Hardly. Not if the selection is based on criteria of comprehensiveness and arrangement is based on functional criteria (alphabetic or chronological order, for instance). This does not mean that such databases, created with great effort, should not be protected, but it seems clear that it should not be through Authors' rights.

Protection may be provided by unfair competition regulations or the granting of exclusive rights, arguing that the risk of copy is too high and that it is necessary to have the rights to exploit such databases. We should note that unfair competition law does not protect the acts of private parties with no commercial purpose or of non-rival companies. Below we shall see that the *sui generis* rights to databases and intellectual property are not affected by such limitation.

Sui generis rights to databases

The option of creating a special, *sui generis* right in favour of the "manufacturers" of databases is embraced by Directive 96/9/CE, regarding the legal protection of databases.

To date, legislation similar to the European for the protection of databases has been rejected in the United States due to the pressure by the scientific and educational communities, which claim that protection such as that granted in Europe would prevent free access to information. Europe defends the *sui generis* right to databases at the WIPO through an international treaty, which has nonetheless been faced by opposition from the United States and the developing countries.

This specific regulatory framework has the following characteristics:

- Object of protection. The *sui generis* right does not protect creativity, but a **substantial investment**, whether it be economic or in effort, made by the manufacturer of a database.
- Rights and infractions. The manufacturer of the database is attributed what is known as a *sui generis* right, consisting of the power to prohibit:
 - The extraction and/or the reuse of all or a substantial part, evaluated quantitatively and qualitatively, of the content of such database.
 - The repeated or systematic extraction and/or reuse of non substantial parts of the content, representing acts contrary to the normal exploitation of the aforementioned database or causing unjust damage to the legitimate interests of the manufacturer.
- Duration. In appearance, we are dealing with a short-term right (fifteen years from the completion of the database), although considering the legal framework, any substantial new investment would open a new fifteen-year term.

8. Collective management organisations and digital levies

We have seen that authors are granted exclusive rights in their works. These rights enable them to market the work, by assignment or licence, to third parties, in exchange for remuneration. This commercialisation and regulation of the use of works needs to be managed, and this can be done either individually or collectively.

When rightsholders manage the rights themselves, they license the works to commercial users such as publishers or producers or such as distributors. This is usually done by way of contractual licence (exclusive or non-exclusive), which may authorise a type of use only or all uses. However, due to the number of uses and users as well as rightholders involved, licensing certain rights individually has been impractical, particularly rights of remuneration.

The following is just a very brief overview of a complicated and controversial topic, which we only summarise as collective management does not apply to software, our main theme in this work.

8.1. Collective management

Collective rights management is the system under which a "collecting society" jointly administers rights and monitors, collects and distributes the payment of royalties on behalf of rightsholders. This system is used in particular to manage remuneration rights, such as compensation for private copies, and commercial use of works entrusted to the societies (broadcasting, public performance, use in bars and hotels, etc.).

While the collective management of rights is not at all harmonised at international level (though most national legislation provides for some form or other of collective management), the system is touched upon in international treaties. E.g.: the Berne Convention states that Member States may determine the conditions under which certain rights may be exercised and managed through collecting societies. Directive 92/100/EEC, when harmonising the right to equitable remuneration, provides for collective management as a model for its management in Article 4. Under Article 9 of the Directive 93/83/EEC collective management is obligatory for cable redistribution rights.

At national level, significant differences exist with respect to both legislation and practice, and the framework is in constant development. Several legislatures (e.g. Spain) require mandatory collective management, i.e. such rights may only be administered by collecting societies.

With the advent of the digital environment, there is more and more cross-border trade in goods and services based on copyright and related rights, notably for the rights of reproduction and communication to the public and the mak-

Supplementary content

In France, Belgium, the Netherlands, Luxemburg and Portugal, for instance, new legislation has been adopted or initiated with the aim of rendering rights management by collecting societies more transparent and of improving their accountability.

ing available right. This has led to self-organisation of collective societies with an international framework (e.g. *International Federation of the Phonographic Industry*, *Business Software Alliance*).

8.2. Collecting Societies

From the rightsholders point of view, collecting societies are agents to manage the licensing of their works. From the users' point of view, they are a single point of contact when seeking a licence to exploit a variety of works (audio-visual, etc.).

Collecting societies usually administer, monitor, collect and distribute the payment of royalties for an entire group of rightholders, on the basis of the national law of its territory, with respect to that territory. They enter into agreements with other collecting societies at an international level for the mutual payment of levies to artists represented by foreign societies (cross-licensing).

Collecting societies manage rights in relation to music, literary and dramatic works as well as audiovisual works, productions and performances. The rights that are managed cover a variety of acts that a user may wish to exercise, such as mechanical reproduction and reprography (e.g. printing to a CD), communication to the public in general (shops, gyms, bars, hotels, terrestrial TV), cable retransmission of broadcasting programmes (cable TV, internet broadcasting), public lending, artist's resale rights, private copying or certain educational uses.

- From a rightsholders point of view, often only one society operates for each group of rightholders in the territory in question (authors, performing artists, directors and producers) and it is the sole access in the market to purchase a licence to use the works. In other countries, they may be represented by competing societies (e.g. Spain).
- From the users' viewpoint, collecting societies are a one-stop shop, representing a wide, if not worldwide repertoire and have an exclusive mandate for the administration of rights in relation to their field of activity. They enable the licensing of a variety of rights and providing access to a global portfolio of works.

A number of models exist for establishing a collecting society, which may be corporate, charitable, for profit or not for profit entities. They may also be mandatory (Spain) or recommended (UK). In exchange, collecting societies may be subject to control by public authorities or specific bodies, covering the behaviour of the societies, their functioning, the control of tariffs and licensing conditions and also the dispute settlement. With respect to the licensing

conditions, in some Member States the obligation of collecting societies to grant licences is combined with the rule that such licences should be granted under appropriate or reasonable conditions.

8.3. Criticism

There is broad criticism of the collective management system.

- Criticism from users is aimed at the tariffs and the inefficient supervision of collecting societies and access to the courts or arbitration to protect users' rights. It has also focussed on administrative fees charged by the societies, the length and difficulty of negotiations with respect to licences, alleged deficiencies in their internal decision-making process and an apparent lack of transparency regarding the pricing policy.
- Rightholders are also complaining. Those with a certain degree of bargaining power, such as major record and film producers, increasingly seek not to depend on collecting societies to manage their rights, and directly license their rights to third parties. This has been enabled by technology, with watermarking, rights information identification and tracking of the use of works, potentially enabling powerful companies to control the royalty payment process. Smaller rightholders complain that the distribution of levies is not transparent. All in all, rightholders would like collecting societies to be more flexible in respect of the membership contracts (acquisition of rights) and for themselves to have more influence in the distribution of royalties.

Supplementary content

The levy on blank hard disks, CDs and DVDs is specifically seen as unfair, as these items are often used to copy private photos or enterprise's own software, which is not subject to remuneration right.

8.4. Collective management and software

There is no collective management of rights in software products, and no collecting society for developers. Privately, the Business Software Alliance represents the major private software manufacturers such as Microsoft, Adobe, etc. and engages in the monitoring and private policing of use of their products.

9. Legal protection of authors' rights/copyright

The information society, with digitisation and instant transmission of works over public and private networks, has set the scenario for greater access to information, culture and knowledge. But it has also led to greater levels of infringement of Authors' rights/copyright. In particular, use of software by someone other than its owner, without their express permission, is a use that is prohibited by the law itself.

When Authors' rights were conceived as a means of protecting works and, even currently, in the world of distribution on paper format, publishing houses and Authors' rights had a function, as authors needed their infrastructure to broadcast their works and copies were virtually nonexistent or were limited to the private scope of the copyist.

Over the years, the technological evolution has broadened these horizons and other types of works, languages and means of exploitation have appeared, requiring the adaptation of Authors' rights. Nonetheless, the information society and the new technologies have caused a radical change by making the traditional works (text, music, photographs, etc.) available to all, using a new medium, and by training everyone to become a publisher and distribute works without the need for middlemen, in great part thanks to the internet.

That same technological revolution implies that the capacity to copy and reproduce, for profit or otherwise, has become generalised. A few years ago, a CD recorder was only available at a recording studio, but today we almost all have one at home, on our personal computer. Not to speak of peer-to-peer systems for sharing files.

Therefore, the system of distribution of works and the elements upon which the authors and middlemen base their profits has been questioned. This has implied an irreversible change, in the face of which all intellectual property legislation must be redefined to return the balance to the parties at conflict.

The owners of the affected exploitation rights (mainly the music, movies and software industry) seek to use Authors' rights, no longer as a weapon of one business against another, as they were originally devised, but as a defence by a business/owner against the public violating their rights.

P2P

A case of particular interest is P2P file-sharing. It is a common perception that it is lawful to copy a CD to another CD or flash card/hard disk, or to convert a song from CD into MP3 format, and in particular to share them with third parties on P2P file sharing systems. In fact, these actions are often in breach of copyright, and, at least in theory,

Supplementary content

Purchasing a music CD from a street vendor, downloading software from the internet or installing computer programs without paying for licences are examples of practices that may infringe upon the intellectual property rights of others.

⁽²⁾See on ACTA, the EU site at European Commission Trade as well as Prof. Michael Geist's blog at Michael Geist blog (Michael Geist blog)

give grounds for civil action. Depending on the jurisdiction, certain defences may be available, in particular that of private copy.

P2P software and networks are themselves perfectly legal, as they have legitimate functions for sharing works among users – works that may have no copyright protection, works under free software or content licences, etc. What is not so clear is the sharing of protected works on these networks, especially as regards the public communication right.

In the middle of this debate is the position of the ISPs in relation to P2P networks or other sharing mechanisms (rapidshare, etc.), who – for the moment – do not police or monitor the activity and data that is being transmitted in their networks. They have access to the names and addresses (including IP addresses) of file-sharers, and are the target of the content and software industry either for providing evidence as to who is responsible for illegal online activity, but also as private "policemen", warning and shutting down network access when they have sufficient evidence of such illegal activity. This is the aim of ACTA² (Anti-Counterfeiting Trade Agreement), a proposed international treaty to reinforce the protection of IPR on the net, and oblige ISPs to take this role.

This position is awkward for ISPs as regards the privacy of internet users, their rights of access to the network (not yet considered a universal right, but getting there) and imposing on them quasi-judicial obligations as to policing the network.

In this section, therefore, we look at the means and measures provided to defend copyright holders' rights against abuse: the legal measures of protection for works and the reactions in possible infractions of Authors' rights. To clarify the subject, we will divide them into preventive measures (legal and technological) and reactive measures or solutions to infractions to copyrights. We shall also briefly reference criminal and administrative legislation.

9.1. Legal measures of protection

We refer here to the – preventive – mechanisms that the law recognises to protect the rights of the owners of Authors' rights. As we have studied, in countries party to the Berne Convention and the TRIPS Agreement, copyright protection does not require any formality. There are nonetheless formalities or mechanisms that, although not mandatory, are often convenient to prevent the infringement of Authors' rights or for subsequent use as evidence of authorship.

- **Registration of intellectual property**

Although the registration of the work is not mandatory, in most countries it is a quite direct and economical procedure, granting important additional benefits as regards the burden of proof of authorship and date of creation (or at least, registration). In Spain, for instance, registration generates a legal presumption whereby those appearing as authors of a registered work are to be deemed by the courts to be its authors, unless proved otherwise.

Some countries, such as the United States, may require that their own citizens, but not foreign authors, register their works at the Copyright Office (for instance, to bring a claim before the federal courts). In some countries, a registration of Authors' rights also represents *prima facie* evidence of the validity and ownership of Authors' rights.

- **Notarisation**

As an alternative or complementary option to registration with the Intellectual Property Registry, it is sometimes advisable to have the complete

source code notarised in magnetic medium (CD, DVD) containing the object code, the user's manual, design of screens, analysis, preparatory documentation and other elements identifying the program, which may be of vital importance when offering expert evidence.

Notarisation may provide official evidence in a trial on the date of creation or deposit of a work. It has also been seen as a system that is more appropriate than registration, as it is more confidential and faster, involving less bureaucracy and providing a better description of the program.

- **The use of the © symbol or indication of reserved rights**

By application of the Berne Convention, in most countries, a notice is no longer required for the work to be protected by Authors' rights. Nonetheless, it is common to use symbols or notices to warn users that the information is protected. The proper form of such notice is as follows: "[copyright [date] by [author/owner]". The © symbol is sometimes used as a reference to the copyright system.

9.2. Digital Rights Management

The aforementioned digitalisation and advances in new technologies not only pose risks for the owners of intellectual property rights, but also make it easier to manage and control acts of exploitation through access, identification and copy prevention systems. Thus on top of these fairly weak measures for protecting a work, the larger content owners (including both software and audiovisual industries) have started to rely on technology to do so: the implementation of **technological protection measures** (TPM), as part of "Digital Rights Management" systems (DRM).

These new systems for the management of intellectual property rights are supposed to revolutionise the relations between users and owners of exploitation rights to musical works, audiovisual works and software, mainly.

DRMS are technological processes for the management of Authors' rights allowing a certain control by the owner over their work. They are used to identify the works and their owners, to request prior consent from the owners by users or to make micropayments for à la carte services, among other functions. DRM systems can be used to clear rights, to secure payment, to trace behaviour and to enforce rights.

Below we shall discuss the main technological measures of protection of works and their legal treatment.

Supplementary content

These management systems clearly also carry implications for the free software community. A very current example lies in a free student program on DVD that could allow the capturing of the original data for copy onto the hard drive.

9.2.1. Technological Protection Measures

Various technologies and methods have been invented to protect works, including computer programs and the associated computerised objects (databases, etc.).

From a legal viewpoint, measure of protection may be defined as "*any device or medium destined for preventing or restricting copies of a work or reducing the quality of any copies made*".

Protection measures

Some examples that are already found on the market are:

- Access codes: often, to install a program, a unique identification key is required. Additionally, to access databases, especially online, it is usually necessary to introduce a user name and code (password).
- Unique identification systems: watermarks.
- Ciphering and encryption of works.
- Copy protection systems: measures to prevent the copying of digital works (for instance, the CSS system for DVDs).
- The systems used by Adobe in its e-books, preventing printing or copying. Currently, to face the proliferation of technologies and groups seeking to avoid or break such devices (DeCSS, for instance), the law covers technological measures for the protection of intellectual property rights, as we shall see hereafter.

Using these mechanisms, a rightsholder can control the access and use of a work: technology can substitute and even exceed the law in the protection of the works. "Exceed" the law as this technology can also deny legitimate users and individuals the exercise of the rights under the exceptions provided by copyright law.

But TPMs, to be lawful and truly useful, also requires the protection and recognition of the right. To face this situation, one of the key reasons of the WIPO Copyright Treaty (WCT) in 1996 is the legal protection (against elusion, or cracking) of TPMs.

The WCT Treaty requires that countries subscribing to it should modify their legislations to provide two types of legal protection of technological measures:

- The first requires that the countries should provide appropriate legal protection and effective resources against the elusion of the technological measures used by owners to protect their rights.
- The second requires that the countries should prohibit the modification or deliberate suppression of electronic information regarding the management of rights, i.e., the information accompanying any protected materi-

al and that permits identifying the work, its author, interpreting artist or performer or owner, and the conditions for its use.

The WCT Treaty has been implemented in the Software and Copyrights Directives and now national laws. The legal framework in which DRM systems are administered is set out in the EUCD (Directive 2001/29/EC). Articles 6 and 7 deal with the protection of technological measures and rights management information respectively.

9.2.2. Legislation

Section 1201 of the Digital Millennium Copyright Act (DMCA) of 1998 in the United States and, later, Articles 6 and 7 of the European Authors' rights Directive in the Information Society have elected to make legitimate and offer legal protection to the DRMS systems by prohibiting devices and practices that allow for their elusion (deactivation, cracking, whatever).

This is a controversial subject as the result of the legal protection of these technological measures may be abusive if the owners of exploitation rights may completely control the use of the content rather than only intellectual property rights. Additionally, the technological measures protected by law not only increase the capacity of control of the owner of the rights to the work, without limitations, but may also affect the rights of the users as regards the interoperability capacity of the computer programs or private copy or educational use.

9.3. Measures of defence against the infringement of rights

Once the preceding preventive measures have proven unsuccessful and the Authors' rights to a work have been infringed upon, what we refer to as "measures of defence" come into play. Facing these infringements of Authors' rights, the legislation of both Spain and most of the states signing the international treaties offer a series of mechanisms for the protection of intellectual property rights, with the possibility existing of appealing to administrative, civil and criminal actions.

In the EU, national legislation usually provides civil protection of intellectual property, based on the idea of the repairing of a private right, rather than articulating an exclusive protection under criminal law, although this protection is notwithstanding any other action corresponding to the owner. Pressure from industry has widened actions to the criminal jurisdiction, as we shall see next.

Generally speaking, the national laws of EU Member States regulate the infringement of the rights in copyright protected works and action must be taken in national courts against copyright infringement: claim for breach of copyright, damages and interest. A rightsholder who wins this claim may request

seizure and destruction of the infringing work, and damages on the basis of earnings lost due to the illegal activity (often seen as a % royalty on the income of the infringing party).

In addition, the 2004 Enforcement Directive has increased and harmonised the measures at the disposal of rightsholders.

Note

The Directive is interesting because it also provides that Member States can be sanctioned by the European Court of Justice if their civil procedures on the infringement of intellectual property rights are "unnecessarily complicated or costly, or entail unreasonable time-limits or unwarranted delays".

The Enforcement Directive, now implemented in the EU jurisdictions, basically provides for the following:

- All Member States must apply effective, dissuasive and proportionate remedies and penalties against those engaged in counterfeiting and piracy.
- The collecting and preservation of evidence of breach: rightsholders can ask – both at trial but also as a preliminary measure, and without the defendant being present – for evidence regarding infringements to be collected, preserved and provided in court, including, if on a large scale, financial and bank documentation.
- At the request of a rightsholder, the courts may issue an interlocutory injunction (prohibition or order to do something) against the alleged infringer and relevant intermediaries, to prevent an "imminent infringement" of IPR or to prevent a continuing infringement, with penalty payments. This includes seizure of goods, freezing of bank accounts and other assets.
- Once a decision on the merits of the case has been obtained (inter partes, i.e. with the alleged infringer having presented his/her defence), the court can order destruction of the infringing products, recall and removal from commercial channels, and prohibition regarding future conduct, damages and costs.
- These rights can be exercised by rightsholders, collective management societies, and "professional defence bodies which are regularly recognised as having a right to represent holders of intellectual property rights" (e.g. BSA).

This directive was hotly debated during its drafting, due to a variety of reasons, not the least because many of the measures were deemed exorbitant and it sought to impose obligations on intermediaries to cooperate with authorities for providing evidence (e.g. evidence of online uploads and downloads of protected works).

9.4. Additional measures in relation to software

In relation to computer programs in particular, the EUCPD establishes certain specific acts that without the authorisation of the owner, are deemed to infringe upon Authors' rights:

- Placing in circulation one or more copies of a computer program, knowing or having the possibility of presuming their illegitimate nature.
- Having one or more copies of a computer program for commercial purposes, knowing or having the possibility of presuming their illegitimate nature.
- Placing in circulation or having for commercial purposes any instrument whose sole use is to facilitate the unauthorised suppression or neutralisation of any technical device used to protect a computer program.

The law provides for actions and procedures that not only may be applicable to cases of infringement of exclusive exploitation / patrimonial rights, but also cover and encompass moral rights; additionally, protection is offered both if the rights in question correspond to the author and if they correspond to a third party that has acquired them (exclusive licensee, assignee).

The owner of the rights may demand that the unlawful activity by the offender cease, request protective measures and claim compensation for the material and moral damages caused.

9.5. Other measures of defence

Apart from the protection under copyright law, the owner of the exploitation rights to a work whose rights are breached by a third party may have other courses of action.

The most relevant among these are:

- **Contractual law.** In the event of a breach of the Authors' rights derived from a breach of a software user licence agreement (e.g. an EULA), it is also possible to resort to the law of contract (obligations), as sue the licensee for breach of contract. The court will thus not only look at the breach of copyright, set out in the law, but also the wording and interpretation of

the contractual dispositions (e.g. express prohibitions on copying, distribution, reverse engineering, or obligations to make payments).

- **Criminal law.** Doctrine has traditionally considered that the Authors' rights, recognised to the author or owner, are also susceptible to criminal law protection. This has been reinforced with the implementation of the EUCD. While provisions vary among jurisdiction, criminal law establishes both fines and prison time for breaches of copyright for lucrative (commercial) purposes.

Examples in Spain and the UK

Article 270 of the Spanish Criminal Code expressly establishes penalties of up to two years in prison for those that "for a profit and to the detriment of a third party, reproduce, plagiarise, distribute or publicly communicate works without the authorisation of the owners of the relevant rights".

In the UK, penalties range from imprisonment for up to two years, to fines and forfeiture of infringing material and equipment for making infringing material. The relevant provision in relation to public communication states: "A person who infringes copyright in a work by communicating the work to the public (a) in the course of a business, or (b) otherwise than in the course of a business to such an extent as to affect prejudicially the owner of the copyright, commits an offence if he knows or has reason to believe that, by doing so, he is infringing copyright in that work."

The same penalty is applied to those that "import, export or store copies of such works" and to those "manufacturing, placing in circulation or possessing mediums specifically destined for facilitating the unauthorised suppression or neutralisation of any technical device used to protect computer programs", as we have seen above.

The activity in question seems now solely to require that a profit be sought, i.e., the pursuit of a monetary advantage, which may be simply not having to pay market price for such products. It should also be noted that it is also unnecessary to pay a price to incur the crime. It may be a matter of a mere exchange or free assignment.

This is a subject that should not be underestimated, as the public powers are beginning to act against practices infringing upon Authors' rights due to the pressure exercised by groups of rightsholders.

Example

For instance, in 2008 there were thirty arrests in Spain of purchasers of illegal programs distributed on CD-ROM. The operation has been the result of the investigation of the lists of clients obtained by the police following the dismantling of a network that offered unauthorised copies of software over the internet and that was denounced by the BSA (Business Software Alliance).

10. Conclusion

Throughout this module, we have reviewed the concept of Authors' rights and copyright, and its specific application to software as work with very particular characteristics. We have introduced concepts, analysed authorship models and studied in detail the rights granted by the system to authors. Versus the monopoly of the author or rightsholder, we have commented on the exceptions and limitations inherent in software. We have also commented on the measures against infringements of Authors' rights.

Throughout this journey, we have conducted an analysis in parallel of the implications that the Authors' rights have for the free software development model. Remember that free software, and copyleft in particular, is a means of licensing that becomes a "patch" on the copyright system, devolving to users the freedom that the exclusive rights granted under copyright regimes take away.

However copyright is fundamental for the protection and safeguarding of copyleft: only on the basis of Authors' rights/copyright will a free software developer be able to prevent the misuse of his/her work, in breach of the licence terms (e.g. privatising GPLed software).

Legal actions taken by the rightsholders of Netfilters or Busybox against infringers are fully grounded in copyright law and the defence of the authors' exclusive right to determine how a work is exploited. See: gpl-violations.org and [Second Round of GPL Infringement Lawsuits Filed on Behalf of BusyBox Developers](#)

We hope that, upon completing this module, the objectives set at its onset have been met: mainly, acquiring a comprehensive vision of the current system of protection of works – and software in particular – by Authors' rights and copyright. Although this is not all: it is of special importance to us that not only theoretical knowledge have been acquired, but also the understanding of the philosophy underlying the method of protection of works by the Authors' rights system and the enormous relevance it has for studying the whole free software and content movement.

Finally, we believe that the reader must bear in mind that Authors' rights/copyright are not isolated from the large changes affecting the modern world. As we have seen throughout the module, but especially in the section on legal protection of technological measures and rights management systems, Authors' rights are being adapted to the technical revolution, and TPMs are becoming an essential element in the protection and management of the rights of the owners to the works.

The future of Authors' rights/copyright as a protection system for software is difficult to predict. As we shall study in further detail in relation to patents, in Europe the large multinationals (who are in practice the main owners of exploitation rights) consider that the copyright protection system is not appropriate and are requesting the application of the software patents system. They believe that the problem lies in the very nature of the Authors' rights/copyright system, which, as we have seen, does not protect the underlying ideas and inventions of a computer program, allowing for the coexistence on the market of computer programs with different source codes but with identical functions.