Copyright

1. Introduction

Intellectual property rights or copyright are the right recognized by law and granted to the owner of the idea such as the author, composer or inventor and his partners such as the publisher or distributor of the publication or producer or distributor of a literary, musical or artistic work. Therefore, authorship or creativity of any kind is legally protected from the day of its production.

To benefit from rights protection, the creation must simply be original, that is, it must bear a personal mark (this requirement is widely appreciated in the case of programs for example).

Intellectual property grants its holder two types of rights:

The first **is a moral right:** it allows its owner to uphold the integrity of its achievement and object to its disclosure or disposition without permission. This right is subject to permanent protection. It is inalienable.

The other is a **right related to financial disclosure (inheritance):** where economic or financial exploitation remains the monopoly of the owner of the property and his heirs after him. The term of legal protection expires 70 years after the death of the employer. At the end of this period, this work enters the public right.

What types of business can be protected under IP laws?

- All writings of an original nature. Example: brochure, website.
- Designs, models, and under certain conditions, industrial objects known as "applied art."
- Software (source codes or executables), including preparatory design materials.
- Database structures.

2. . Copyright in the digital environment

1.2. Introduction:

The introduction of the Internet has revolutionized the ways in which business is consumed (visual, audio, written, etc.....), but copyright still applies even online, so judges don't hesitate to convict users of infringement.

On the Internet as elsewhere, these copyright principles can be applied without difficulty: for example, a digital work is analyzed as a copy within the meaning of the material. L122-3 of the Intellectual Property Law.

2.2. Protection of software creations:

Software consists of all the programs, procedures, rules, and possibly documents, related to the operation of a set of data. Today, software occupies an important place in the digital economy, and is an integral part of many devices, and it has become a necessity. For this reason, it seemed necessary to work to protect the rights of programmers, and it was not clear in which law to limit

this protection, as it can be adapted between the protection granted through patent or copyright law or even the establishment of a software system. In the end, copyright protection was chosen.

Protected software can be basic software, operation, or application. This can also be generic or custom-made. Copyright protection covers software architecture, instruction sequence, source code, and logical interfaces. The software is protected for 70 years of publication.

Copyright Protection:

The software is protected by literary and artistic property rights. (PLA) However, special terms have been designed for programmers.

Moral Rights:

The right to disclose or disclose software in relation to software content is restricted. This is because software is often created for an employer (programmed on demand), so the employer must be able to use it as they see fit.

However, the programmer can object to any disclosure, but is then subject to penalties based on contractual liability. As with any other intellectual work, the programmer has the right to claim his rights. Where it is able to see its name mentioned in the program in any connection made by users.

Finally, restricting the right to work safety. It applies only in two cases:

- If the program is modified in a way that harms the honor or reputation of the programmer.
- If the program is damaged, regardless of the method and consequences.

Rights related to financial disclosure:

For software, copying is subject to licensing, like traditional copyright. The license of the user allows him to perform all the operations necessary to use the software. Another advantage is that the license holder can make backups. Access to the source code of the software is granted to the licensee, and thus interoperability with other software.

Protection objects:

Some internal elements of software are protected by copyright, namely:

- Preparatory design materials.
- The source code and target code of the program.
- User documentation.
- Screen page: The graphic appearance of the software, including graphics, icons, etc.

Copy Protection of Programs:

The main software protection systems are:

Devices are protected by electronic keys assigned to systems. The software can be copied, but without the electronic key (anti-copy and anti-intrusive device) it cannot work.

Also using methods, software is installed that makes copying impossible. For example, by applying the technology of modifying hard drive chips, it makes it possible to refer to a specific part of the hard drive as defective, the program will then have to check this part to ensure proper performance.

Detecting the hardware profile of the software and the usage patterns of its owner can also be a way to determine whether the software is being copied or used by its rightful owner.

3.2. Database Creation Protection:

A database is a collection of works, data or items, arranged between them in an organized or systematic manner (address index, dictionaries and encyclopedias of all kinds, websites, etc.), that can be accessed individually by electronic means or by any other means. means. For example, it can be a bibliographic database.

The rights of database producers protect the content of this database since its inception. The product right protects the database for 15 years from the completion of the database or from making it available for the first time to the public. If the database is the subject of a new major investment, for example to update it, it is protected for 15 years from this new investment.

Features of protection:

Under this specific system, and under Article L342-1 of the Intellectual Property Code, "the database producer has the right to prohibit the following:

1. Extraction: by permanent or temporary transfer of all or a qualitatively or quantitatively significant part of the content of a database on another medium, everywhere and in any form.

2. Reuse: by making all of this available to the public or to a qualitative or quantitative part of the content of the base, whatever its form. These rights may be transferred, assigned, or subject to a license. Public lending is not an act of extraction or reuse."

On the other hand, a producer who has made his database publicly available cannot clearly oppose the extraction or reuse of a non-material part, quantitatively or qualitatively assessed, of the content from the base, by the person who has legal access to it (Article L 342-3 1 of the Intellectual Property Code). This is the case, for example, with a short quote from the author's work. Similarly, a qualitatively or quantitatively significant portion of the content of a non-electronic database is allowed to be extracted for special purposes, with Respect for copyright or rights related to works or elements incorporated into the base.

4.2. Protection of personal data:

Personal data corresponds to any information relating to an identified natural person or can be identified, directly or indirectly, by reference to an identification number or one or more of his or her own elements.

Personal data that allows identification (or nominal) corresponds to names, first names, addresses (physical and electronic), telephone number, place and date of birth, social security number, payment card number, vehicle license plate, photo, fingerprint, DNA, etc.

Basic principles of personal data protection:

The Data Protection Law sets out the principles that must be considered when collecting, processing and storing personal data. It also guarantees a number of rights, including:

Principle of finality:

The collection and processing of personal data can only be made for a specific and legitimate use that corresponds to the tasks of the institution responsible for processing. Any misuse is punishable by criminal penalties.

Principle of Relevance:

Only the data necessary to achieve the specified goal and the project can be collected: this is the principle of minimizing collection. So, the data controller should not collect more data than he really needs. He should also pay attention to the sensitive nature of some data.

Conservation principle:

Once the purpose of collecting the data has been achieved, it is no longer necessary to retain it and must be deleted. This retention period must be determined in advance by the controller, taking into account any obligations to retain certain data.

Principle of Rights:

Data on individuals can be collected with the prerequisite that they are informed of this process. These persons also have certain rights that they can exercise with the body that holds these data concerning them: the right to access this data, the right to have it rectified, and finally the right to oppose its use.

Security Principle:

The controller must take all necessary measures to ensure the security as well as confidentiality of the data he has collected, to ensure that only authorized persons have access to it. These measures are determined according to the risks affecting this file (data sensitivity, processing target, etc.)

5.2. Special case of free software:

The choice of a free license or proprietary license to publish the software developments implemented within the framework of the doctoral project depends on the expected use of this program and on the evaluation, strategy planned by the doctoral student and the mentor.

The software is considered free if the user is free to use it, access their source code to understand how it works, modify it, and distribute the software and its modifications. In order to access the free software, the user accepts the license terms that define the scope of the user's rights and obligations. GNU GPL, LGPL, and CeCILL licenses are examples of free licenses.

The content of the license should be read carefully because it may force the user to distribute under a free license all software that includes the free software building block concerned with the license. It is also possible that the software may include two versions of the free software subject to incompatible user licenses. In this case, it is advisable to rewrite the building code in question so that it is not subject to the obligations of these licenses.

Finally, all free licenses contain a disclaimer stating that the software is provided as is and that the author does not guarantee the performance of the software or its suitability for the needs of the user. The CeCILL license also states that the author "does not guarantee [...] that the software does not infringe any intellectual property right of a third party [...]".

Thus, the user will not be able to sue the author of the software if he is accused of infringing after using, modifying or redistributing the software.

3. Copyright related to the Internet and e-commerce:

1.3. Domain Name Law:

Every computer connected to the Internet has an electronic address, which is represented in a series of four numbers separated by dots. However, a system has been created that allows each IP address to correspond to a symbolic address made up of words interspersed with dots: this is **the Domain Name System** (DNS), organized in national and international naming zones.

1**. Prefix:** Its structure is slightly different: "http: // www or even" http: // r ", "www which stands for World Wide Web.

2**. Root:** chosen by the applicant "Yahoo", for example.

3**. suffix:** Also called an extension, such as com fr.. " etc...

There are four zones of international activity ".com" and are managed by INTERNIC: for commercial activities, ".net" for bodies involved in the operation of the Internet, ".int" for international organizations, and ". org "for associations.

The domain name must be between 1 and 63 characters long. Regarding areas of personality

At the national level, each country has a Network Information Center (N.I.C) branch responsible for managing domain names for the corresponding case. They are identified by a two-letter code (for example: ".dz for Algeria. UK for Great Britain and. fr for France. (

A company with a web service will have an interest in adopting a domain name consisting of the company name or trade name, so that the Internet user can easily identify it. So we clearly

understand the challenge for companies to customize an email address, especially since demystification is impossible here.

To register a domain name in the ".com» area, please contact INTERNIC, administered in the United States by an organization called Network Solutions Incorporation (N.S.I.). If the identification of a website itself does not confer any intellectual property rights, it may happen that the domain name will be considered an infringement, if it is taken over for the benefit of the owner of a pre-existing trademark. Similarly, using a competing company name can be problematic.

Cybersquatting is defined as the act of one person to usurp the token of another by registering it as a domain name before trying to resell it at a high price. The distinguishing signs of a company that are frequently infringed upon are its trademark, trade name, trade name, or even trademark. It can also be the last name or stage name of the individual (Zlatan Ibrahimovic, Zahia, ... etc).

Domain name conflict: In the event of a conflict between two registered domain names with similar or identical marks, what matters is the date the domain names started and not the date of registration.

2.3. Online Intellectual Property:

With the increasing use of the Internet, whether for sale, communication, exchange or information..., by a number of actors of increasing and different importance: companies, associations, foundations, communities, individuals ..., any computer owner should be able to understand and understand the basics of Internet law and gain knowledge of the legal environment related to the use of this tool.

Many components of websites may be protected by various types of copyright and intellectual property. For example: e-commerce systems, software, website design, creative content of the site (text, photographs, graphics, music, video), databases, trade names, logos, product names, domain names, other tags that appear on your website, computer-generated graphic codes, screen images, graphics, user interfaces (GUIs), and even hidden web pages and website components.

How to protect the site:

Some precautionary measures are necessary to protect the website from misuse. It may consist in particular of:

Protect your intellectual property rights: If you do not develop strategies to protect your intellectual property assets as soon as possible, you risk losing the relevant legal rights. So you must:

- Register your trademark.
- An easy-to-use domain name registry evokes your trademark, company name, or aspect of your business. If possible, it is recommended that you register your domain name as a trademark as well, as this will not only improve your ability to enforce your rights towards

anyone who tries to use that name to market similar products and services, but also to prevent anyone from registering it as a trademark.

- Consider granting patents for online business methods in countries where such protection exists.
- Register your website and copyrighted material in countries where this possibility exists through the national copyright office.
- Use caution in revealing your trade secrets. Ensure that all those who may have knowledge of your confidential business data (such as employees, external maintenance contractors, companies that offer website hosting, and Internet service providers) are bound by a confidentiality agreement or non-disclosure agreement.
- Consider having an intellectual property insurance policy that covers any legal costs you incur in case you need to take action against perpetrators to enforce your rights. Be sure to declare the existence of this insurance, for example by posting a disclaimer on your website. This can deter potential criminals.

Tell your visitors that its content is protected:

Many people assume that the material on websites is free to use. Remind visitors that you own intellectual property rights.

- It's a good idea to use the symbol ® or abbreviations TM, SM, or equivalent symbol on your brands. Similarly, you can use the copyright © notice) code or the term "copyright" or the abbreviation "Copr." the name of the copyright holder and the year of publication. First publication of the work (to alert the public that the content of your site is protected by copyright.
- Another possibility is the use of tattooing technology that allows copyright information to be embedded in the digital content itself. For example, it is possible to tattoo a music file using a few pieces of music samples to encode information about copyright ownership. Digital tattoos can either be in an easily recognizable form, very similar to a copyright notice placed on one side of the image, or it can be integrated into the entire document such as text printed on watermarked paper, or Include it in such a way that it is usually undetectable unless you know how and where to find it. Visible tattoos have a deterrent function, while invisible tattoos can help track online work and prove theft.
- You can also use the timestamp: This is a content-related indicator Digital document that certifies the status of content on a certain date Digital timestamp is useful because without this technology it is not difficult to modify both the text of the digital document and the relevant dates stored by the operating system (for example, creation date and modified date).

Let users know how they can use the site's content:

Consider placing a copyright notice on each page of your site, which sets out your business terms for using the page. Thus, visitors will know at least what they are authorized to do (for example, whether or not they are allowed to create links to your site, download or print certain

elements of the site and under what conditions) and who they should contact to obtain copyright permission for anything on your site.

Control access to and use of your website content:

You can use technological protection measures to restrict access to works published on your website to visitors who agree to certain terms of use for those works or who have paid for such use. The following methods are commonly used:

- **Online contracts:** frequently used to provide visitors with a restricted license that allows them to use the content available on or through the website.
- **Encryption:** In general, software, audio recordings, and audiovisual works can be encrypted to prevent their unauthorized use. Thus, when a customer downloads a file, a specialized program connects to a central body to take care of the payment terms, decrypts the file and assigns a dedicated "key" (for example, a password) to the customer. So that he can view or listen to his content.
- **Access control systems or conditional access:** In the simplest form, this type of system verifies the identity of the user and the identities of the files and privileges that each user has for each file (read, modify, execute, etc.). There are many ways to configure access to your electronic content. For example, a document can be viewed without being printed, used for a limited time only, or even attached to the computer where it was originally downloaded.
- You can **offer insufficient quality versions** that make suspected illegal use impossible. For example, you can display images on your website with sufficient resolution to enable their use, particularly for advertising purposes, but not enough to enable their reproduction in a magazine.
- **Digital fingerprints:** can be compared to compelling serial numbers by which you can identify a customer who violated their license agreement by providing the protected object to third parties.

3.3. Rights of E-Commerce Websites:

The E-Commerce Act is a new law due to the relatively recent technology used in its implementation. E-commerce (or online commerce, online selling or distance selling, sometimes e-commerce) is the monetary exchange of goods, services, and information over computer networks, in particular the Internet.

Thus, e-commerce involves the conclusion of a contract for the sale or provision of services, the terms of which must be specified for formation and execution.

E-commerce has three characteristics:

Immateriality: This is one of the characteristics of the relationship that is established. The contract is concluded in a completely immaterial way and execution can also be. At the closing stage, problems of proof and formality arise.

Interactivity: It is the basic characteristic of multimedia and thanks to it and through it the true dimension of multimedia is known. It has a legal meaning, and one of the most interesting is the

ability, during the exchange between offer and acceptance, to refer to pages outside the contractual process (in particular contractual clauses) or incorporation by reference.

Universal: It is caused by the fact that the IP protocol is universal and allows exchange between computers located around the world. This factor must be integrated into contractual risk management. There are rules to consider when creating an online trading site, in particular the identification obligations imposed by the Digital Economy Trust Act. (LCEN) However, consumer protection is not neglected in e-commerce. They are guaranteed by provisions, particularly with regard to consumer protection in telecontracts. General Directive 1997 on Contracts Concluded Remotely By the 2001 decree the withdrawal is determined within 7 days of receipt or order depending on whether it is a product or service.

This General Directive was supplemented by the 2002 Directive on Financial Services which provides for a longer withdrawal period (after 14 days by the 2005 decree) but must provide some consumer protection so that it is not limited to e-commerce,

Is this right of withdrawal sufficient? According to Huet, no we could have thought of the rules regarding the validity of contracts. The exceptions could have been more numerous, more concerned with consumer protection, and in particular we could have avoided allowing a credit contract to be in electronic form.

Algerian law, like French law, does not provide any definition of electronic commerce and, on the other hand, it does define the act of commerce in general in article 2 of the Algerian Commercial Code (632 of the French Commercial Code).

4.3. Intellectual Property and Social Networks:

The advent of social networks allowed easy and instant access to works protected by copyright ... In fact, the publication of protected works is subject to forgery without the permission of its author, as well as the use of a trademark.

4. Patent

1.4. Definition:

A patent is industrial property that protects technical innovation, any product or process that provides a technical solution to a particular technical problem. The owner is granted the right to prevent the exploitation of the patented invention by third parties.

To be patentable, an invention must be new, include an inventive step and be industrially applicable. Patents do not protect mathematical methods or formulas, knowledge or ideas as such, but only their implementation in products or processes. For an invention to be new, it must not have been disclosed at the time of application – except under the cover of a confidentiality agreement.

In addition, to be a patent holder, it is necessary to file a file with a deposit with the National Institute of Industrial Property (INPI). During protection, the invention can be disclosed. In fact, patent filings are automatically published after 18 months.

If the patented invention is used fraudulently, its owner can prosecute especially for compensation for damages. The violator may also be subject to criminal penalties.

The protection granted to the invention is limited to twenty years, non-renewable, from the date of filing the patent application.

Patent Protection

A patent allows the protection of a technical invention, process or method, hereinafter referred to as an "invention". An invention is defined by law as a technical solution to a technical problem. Therefore, this definition excludes the rules of a game, a concept, a mathematical theory, etc. The subject matter of a patent must meet the following three conditions:

1. Modernity: The invention must not be known. In particular, the researchers themselves must maintain its absolute confidentiality until the filing of the patent application. It is therefore necessary to prohibit publications, oral or poster communications (the abstract published during a conference may be sufficient to invalidate the novelty of the invention), thesis discussions and reports of exercises.

2. Includes an inventive step: the invention should not be obvious to someone who is familiar with the latest technical developments of the time. In France, this criterion does not preclude the granting of a patent. On the other hand, a judge can revoke a patent at the request of a third party if he considers that the invention does not involve an inventive step.

3. Be industrially applicable: The invention must be viable and economically advantageable.

Patent ownership

A patent can be obtained on the initiative of the doctoral student, in consultation with other inventors. The method of writing a patent is different from writing a scientific article, and this may require the help of the framer as well as the participants in the research project, and may require the consultation of lawyers or consultants specialized in intellectual property.

A patent distinguishes inventors from owners:

- Inventors are natural persons who have had a creative role in the development of innovation.
- Patent holders are the employers of inventors: all owners are then co-owners of the patent and have identical rights and obligations, including the right to transfer their property rights.

Employees are required by law to declare their inventions to the employer so that the latter can decide on filing a patent application.

The patent is filed by its owners. In return, they acquire a monopoly on the exploitation of the patent, with an annual royalty paid in each country where the patent is extended. Owners can also waive a third party, by making them redundant, by setting up a company, etc.

In all cases, when the inventor is not an owner, the employer shall provide financial compensation. For public research institutions and organizations, it can take the form of a patent remuneration and/or an incentive on royalties. In most cases, inventors share 50% of royalties, less than intellectual property costs. This provision applies to permanent employees and contractors.

2.4. Rights in Patent:

A patent is a right that gives its holder, for a period of 20 years from the filing date, the right to prevent anyone from reproducing the invention (i.e., making, using or marketing) the invention. The patent owner can assign their patent to a third party, or grant a license to use it, usually for a fee. The monopoly is granted only on the condition that the patent is preserved, i.e. maintenance fees are paid regularly. In return, the invention will be revealed and thus enrich the collective knowledge heritage.

The European Patent Office grants the European patent after a single examination that identifies all or part of the countries that have ratified the European Patent Convention (i.e. 19 countries). It is also possible to make a reservation in many countries, through an international patent application, filed under the Patent Cooperation Treaty (PCT) between 96 States. The international application refers to the Contracting States for which protection is sought, and the validity of the application is then verified by filing in each country. of selected countries.

However, Western companies often view patents as an outdated and ineffective way to protect their inventions and know-how from potential hacking. This problem is becoming increasingly important in the context of globalization, the emergence of new modes of production, such as the creation of research networks between companies, and a new way of disseminating knowledge, especially on the Internet, due to the risks of counterfeiting and counterfeiting. The protection of industrial property therefore occupies an important place in the establishment of technological cooperation, as it provides the basic legal basis for the protection of acquired knowledge and the acquisition of new knowledge.