



## LEGAL GUARANTEES FOR THE PROTECTION OF DIGITAL WORKS A STUDY IN LIGHT OF PUBLIC INTERNATIONAL LAW

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### **Abstract:**

Technological development and the emergence of modern technological means have contributed to the emergence of technical programs that raise many jurisprudential questions about the protection you enjoy from all forms of attacks to which you may be exposed.

Computer programs are considered as one of the technical models that have contributed to the emergence of many international disputes regarding the legal scope that is subject to its protection, and this is a result of their great importance in developing the economic system for countries, as well as their contribution to the development of societies if they are properly exploited.

In that context, several international trends emerged regarding adapting the rules for protecting electronic programs, while some considered them to be subject to international rules related to the protection of intellectual and literary property rights, we find that others relied on modern technological requirements, which the world is witnessing as a basis upon which it is subjected to the rules of protecting property and industrial rights, through this, international agreements and organizations rushed to create rules capable of enshrining this principle of protection, as a way to ensure good conduct all economic and commercial operations at the internal and international levels.

**Keywords:** innovation, patent, electronic programs, technical means, industrial property rights, trade, property rights Intellectual.

### **Introduction:**

The emergence of the modern technological revolution has contributed to the emergence of many questions, especially the protection that is supposed to be provided to the inventors of various devices of modern technology, as well as for its users, as a result of the emergence of the modern technological era, has attracted increasing attention among various legislators of legal rules, whether internal or international, with the aim of ensuring the continued growth of technical and creative innovation, which contributes to increasing the productive capacity of countries and raising the competitiveness of economic institutions, by trying to The latter to increase their ability to innovate through so-called *open innovation*, especially in digital stores.

The most important challenges facing economic institutions are the risks to which their innovations may be exposed from all acts of piracy and burning, therefore, they are protected by countries adapting different legal rules to the realities that the world is witnessing today, especially in terms of protection of electronic digital works.

Technical scientists consider that electronic programs are one of the most important technical works, therefore, we find that most thinkers and researchers in legal sciences have focused on this type of works, especially in terms of their legal protection.

On this basis, we focused in this research paper on the international protection of computer programs as one of the works. Electronic by defining its concept and importance as it is one of the most important vehicles determining the development of societies, which leads to assault on them having severe economic effects on the degree of economic growth of countries.

On this basis, international law has paid attention to the issue of legal protection of automated media programs from all international crimes, the most important of which is *electronic piracy*.

This is through adapting these programs and determining the legal scope within which they fall under protection, in accordance with the rules of intellectual property protection or the principles



of industrial and commercial property protection, and this is according to the international requirements and rules of the law.

And through this, the following problem must be addressed:

*1- How have international agreements contributed to enhancing the protection of digital works and electronic programs in the field of property rights? Intellectual and industrial together?*

Within the previous problem, several sub-questions include:

*a-What is the concept of automated media programs?*

*b-What is the legal basis relied upon in matters of international protection for electronic programs?*

*c-What are the most important international mechanisms to protect automated media programs from electronic piracy crimes?*

In order to answer the previous problem, we relied on the following axes

**The first:** The concept of electronic works.

**The second:** International efforts to protect the ownership rights of digital works.

***The first axis: The concept of electronic works.***

Digital works are generally defined as the technical means that allow the transfer of information and its transformation from a tangible intellectual phenomenon into digital processes that operate in accordance with the dual system (1-0), that is, it is a creative, innovative, technological work, and as one of the examples of those works that we relied on electronic programs, and the following paragraphs will be devoted to defining them and explaining the reasons for protecting electronic works in general and digital programs in particular, then the most important forms of attack to which these programs are exposed, we will also finally review the legal aspects of protecting electronic programs<sup>1</sup>

***First: Definition of Electronic Programs.***

The computer consists of two basic parts: the equipment that forms the physical part. The computer is the group of devices associated with the computer, which contains a group of different units such as the central processing unit, the information input and output unit, and storage units, all of which constitute the physical part of the computer.

As for software, it is a set of programs and documents necessary to operate the computer, which is regulated the work of its units, which constitute the non-physical aspect of the computer.

Computer programs are defined technically or artistically as a set of instructions and commands expressed in a specific language and prepared for use in the computer with the aim of solving a specific problem or issue. It is also considered a set of commands and instructions that specify for the computer the operations it carries out in sequence and specific steps.

These instructions are summarized by: A given medium can be read by a machine, and then a program can read it

The method of processing data is to perform certain functions and achieve the results required. This includes all the documents that are included in the software Produced during the program design and development phase, whether in writing, images, diagrams, or any other form.<sup>2</sup>

It is basically divided into two types of programs, one of which is basic for operating the device and the other is applied to help the individual in performing his various daily tasks.

We will explain it in the following diagram:

As for the legal definition of computer programs, it does not differ from considering them a set of instructions expressed according to the language, or specific symbols that the computer can translate according to the form or image that humans understand, as you find that the American law - as a model chosen from among the definitions of the internal legislation for these programs

<sup>1</sup> Taha Alssani, Assault on Digital Works and Their Protection, A Master's Thesis from the Faculty of Law and Political Science, Department of Law, University of Algiers, 2013, p 152.

<sup>2</sup> Azza ali mouhammed Hassan, Legal Protection of Computer Software: Protecting Software under Copyright Laws. Dar Al Janaan for Publishing and Distribution, 2000. Amman, Jordan. pp. 9-10.



regarding the protection of the rights of the author of the program, which was issued in 1980, is: a set of directives or instructions that the computer can use directly, or indirect to reach a specific result and of these Regionally, and at the international level<sup>3</sup>, *the World Trade Organization* defined it through the International Agreement on Trade Aspects of Intellectual Property Rights and the Tries Agreement issued in 1994 in Article 10/01 as "Computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971)."

### **Second -kinds of attacks against electronic computer programs**

Computer programs may be exposed to two types of attacks.

The first is represented by verbatim copying, which is whereby the process of completely reproducing the program is carried out without making any modification to it, this form is the most widespread among the public.

The second form is represented by non-literal copying of the program, which is intended to obsessing over the badger's ideas, this form of assault takes shape if there is a copy taken from the original and closely identical to it. This method is done either by accessing and obtaining the source program, which is one of the preparations of the program, or it, can also be done by plagiarizing some of what was stated in the description of the program. <sup>4</sup>The issue of legal protection of electronic works in general, and in particular the legal protection of programs, aims to Computer basically processing is different. The intrusions that these products are exposed to, as they are the basis on which economic institutions depend, this protection depends on ensuring the non-negative exploitation of new intellectual products and literary works that carry the status of patent, which has a direct impact on the increase and expansion of production rates in countries and various productive institutions, which is considered an encouragement and motivation to increase innovations <sup>5</sup>

L'article 10-10, accord sur les aspects des droits de propriétésintellectuelle qui touchent au commerce TRIPIS, L'organisation mondial du commerce, "Les programmes d'ordinateur,qu' il soient exprimé en code source ou en code objets , seront protégé en tant qu' œuvres littéraires en vertu de la convention de Berne (1971)"

The importance of legal protection for these technical programs at the local and international levels is also based on pushing creators to continue their creativity without suffering from poverty, because intellectual creativity is considered a cultural image in any society and must be protected. Also, protecting these programs constitutes a strong deterrent to deter those who commit software piracy, not to mention software piracy, the great economic value that these programs have, as they are considered a strong impetus for the national economy of countries, and their good exploitation contributes to achieving economic development goals and encouraging workers in this field to increase investing in worry. <sup>6</sup>

### **Third: The legal field of protecting electronic programs.**

It is generally accepted that computer programs are considered one of the basic components of the industry and that all factories depend on them during the performance of their activities, especially those that rely on robots in production. As a result, the specificity of the innovation requirement for some relatively modern works such as databases and computer programs has increased, so that innovation has become in electronic programs, the focus is mostly on the element of synthesis, arrangement and coordination of information, which requires the generation of a new intellectual effort and an iron or new work that no one has ever accessed before or a

<sup>3</sup> Taha aissani, op cit , p 35.

<sup>4</sup> Abderahman mahmoud hocine; Legal Protection of Computer Software: A Supplementary Thesis for the Requirements of the Master's Degree in Private Law, Graduate Studies College, An-Najah National University, Nablus, Palestine, 2008. pp. 13-14." .

<sup>5</sup> Peter S. Menell. An analysis of Scope of Copyright Protection for Application Programs, Georgetown University law center, vol. 41, 1989.p 1045.

<sup>6</sup> Abderahman mahmoud hocine, op cit, p 71.



previous program development, which in the future, it may be considered the basis of an industrial structure, a device or something.<sup>7</sup>

Therefore, the answer to the question regarding the extent to which international industrial property protection rules are compatible with computer programs requires research into the possibility of applying the rules related to patenting to those programs, and research into seriously defining the invention as considering it a set of products, methods, and every new application, or adopting a set of known means to reach an unknown result.

With regard to the technical situation, the invention also includes new solutions to technological problems that necessitate an attempt to facilitate the exploitation of computers and modern technical means, including electronic programs, despite this, there are many jurisprudential opinions that exclude computer programs from the field of industrial property and consider them subject to intellectual rights only<sup>8</sup>.

As for regarding the international law's definition of invention, Article 12 of the Model Law issued by WIPO defines it as "the idea that the inventor comes up with and results in solving a specific problem in the field of technology. The invention may be a product or method of manufacture or anything relating to any of them." With regard to a patent, it is defined as a legal document or certificate that defines the invention and outlines its descriptions, and according to it, the patentee of that invention is granted the right to exploit it and legally protect it, that is, it is considered a contractual obligation concluded between the public authorities in the state and the inventor for the purpose of the latter benefits from innovation to achieve the general interest of society.

In exchange for a sum of money that the inventor receives as a result of his production Intellectual and material.<sup>9</sup>

Regarding the legal scope for protecting electronic programs, two main trends have emerged in the world, the first rejecting the idea of it being subject to industrial property rights and the second supporting it, and the preference between the two trends will present the position of the Paris Agreement in the latter. 1-

The trend that rejects electronic computer programs being subject to industrial property rules The European Patent Convention held in Munich on October 5, 1973, as well as the legislation relating to its amendments issued on 07/13/1978, adopted the principle that programs prepared through the data collection process should not be considered inventions, in addition, the French legislator and the European countries have explicitly stipulated that computer programs are not subject to protection through the patent law, the reason for this law's refusal to grant patents for computer programs is due to the absence of their industrial nature, as they are not considered an industrial innovation, and this is the same trend that inspired some French courts in the cases before them relating to Topic<sup>10</sup> have also identified the Eurasian Patent Organization in the Patent Regulations on the Eurasian Convention for the readings in Article 3/3 According to the amendment of the United Nations in the 11th session held during October 15-19, 2001, it does not recognize algorithms and computer programs, as inventions, after acknowledgment by the European Union that electronic programs are subject to intellectual and literary property rules<sup>11</sup>.

<sup>7</sup> Racha ali dine, The Legal System for Software Protection. Dar Al-Jami'a Al-Jadida, Egypt, 2007. pp. 141-142.

<sup>8</sup> Ibn Manzur defines invention as derived from the verb "create" which means to derive, create, and innovate something. For more on this, refer to Ibn Manzur's "Lisan al-Arab," Volume Three, published by Dar Al-Hadith for Publishing and Distribution, Egypt, 2003, page 68.

<sup>9</sup> Sinouet halime dous, The Role of Public Authority in the Field of Patents. Manshurat Al-Ma'arif, Alexandria, Egypt, 1983. pp. 6-7."

<sup>10</sup> Abderahman mahmoud hocine, op cit, p 22.

<sup>11</sup> regle3/3de règlement sur les brevets relatif à la convention sur le brevet eurasienn, ORGANISATIN11 EURASIENNE DES BREVETS (OEAB)? ONZIEMME session : les 15 et 19 Octobre 2001 : « ne sont pas reconnu comme inventions :



1- The trend in favor of subjecting computer programs to industrial property protection rules. There is a section of French jurists who had a different opinion, as they pointed out the possibility of these programs benefiting from the protection stipulated in the patent system, if programs, for example, are presented as an element of the invention, then in this case they cannot be prohibited.

of the protection established according to the patent system and the reason for excluding computer programs from being covered by patent protection this is due to the difficulty of ascertaining the novelty of these programs in order to determine whether they are patentable or not.

It is also the same union sold by the United States of America, in a ruling issued by the Supreme Court of the United States of America In the case *Dimond-v-dichrn*) it was ruled that an invention could not be denied protection through the patent system, because it uses a computer program, many judicial rulings have been issued in this store. <sup>12</sup>

By reviewing the rules of the TRIS Agreement, it is found that it followed the same opinion as the second trend. Article 1/27 of the TRIS Agreement stipulated that the possibility of obtaining patents is available for any inventions, whether they are products or manufacturing methods in all fields of *technology*, provided that they are new and involve *a creative and usable step in the industry*.

And through this article we conclude that the issue of patent possession is based on a set of conditions, which are:

A- That the invention is a new innovation that no one has invented before, or a new technical means that contributes to the synthesis and creation of new inventions.

B: This composition should be included in technological fields and is capable of industrial application or contribute to facilitating industrial applications.

Legality and innovation which do not violate the rules of international law in the same context, it states that the TRIS Agreement did not define the concept of invention.

It also finds that *Article 22, paragraph 1*, of the Agreement on Trade-Related Aspects of Intellectual Aspects of 1994 provided the possibility of obtaining a patent, whether for products or industrial processes in all fields of technology, provided that they are new and involve "An innovative step that can be used in industry (...), and its ownership rights are enjoyed without

-Les découvertes ;

Les théories scientifiques et les méthodes mathématiques ;

La communication d'informations ;

Les méthodes d'organisation et de gestion économique ;

Les dénominations conventionnelles, les horaires et les règles ;

Les méthodes d'exécution d'opération intellectuelles ;

Les algorithmes et les programmes d'ordinateur ;

Les topographies de circuits intégrés ;

Les projets et les plans de construction d'ouvrages ou de bâtiments et d'aménagement du territoire ;

Les solutions concernant exclusivement l'aspect extérieur un article et répondant à des considérations esthétiques. »

<sup>12</sup> Abderahman mahmoud hocine, op cit, p 23.

L'ARTICLE 27/1 ? Accord TRIPS « Sous réserves des dispositions des paragraphes 2 et 3, un pourra être obtenu pour toute invention , de produit ou de procédé , dans tous les domaines technologiques ,à condition qu' elle soit nouvelle ,qu' elle implique une activité inventive et qu' elle soit susceptible d'application industrielle.5 Sous réserve des dispositions du paragraphe 4 de l'article 65, du paragraphe 8 de l'article 70 et du paragraphe 3 du présent article ,des brevets pourront être obtenus et il sera possible de jouir de droits de brevet sans discrimination quant au lieu d'origine de l'invention, au domaine technologique et au fait que les produits sont importés ou sont d'origine nationale .





discrimination with regard to the place of the invention or the technological object or whether the products are imported or produced locally.

According to this article, precisely in terms of industrial operations in all fields of technology, being new we understand that this agreement did not prevent computer programs from being patented if they were usable in industrial activities and were new, therefore, it left the door open for program algorithms to be patented, whenever they fall within the concept of “Industrial processes involving a “creative step”. In all fields of technology. <sup>13</sup>From the above, a rule can be drawn regarding the extent to which industrial property protection rules can be applied to electronic programs, and it is related to the ability of that program to contribute to the invention, innovation, or creation of manufactured and tangible materials. It should be noted that this Adaptation is adopted by developed countries for their own benefit and according to their personal requirements, and this has led to a conflict between the interests of both North and South countries.

***The second axis:***

***International mechanisms to protect the ownership rights of digital works:***

The first international hesitations regarding the issue of legal protection for computer programs in light of intellectual property rights occurred in 1970 as a result of the technological development that the world witnessed in that period, when the idea emerged that new information machines must be protected to ensure their development, and this was in accordance with the guarantee of copyright and patent rights. The nature of protection was adopted.

Intellectual property is the result of these programs relying on the foundations of the human mind, such as thinking and language, which will claim protection through literary and artistic property, which is tantamount to guaranteeing the use of the machine without infringement of patent right <sup>14</sup>, these mechanisms are represented in various global and regional international agreements that were concluded for the purpose of protecting intellectual and industrial property, as well as it is embodied through the role played by international organizations in this regard.

***First, protecting computer programs through international agreements.***

Countries have been concerned with the issue of regulating legal rules concerned with protecting electronic computer programs by organizing international agreements, whether generally required regulating intellectual and industrial property in general, or it was specific to electronic works.

To study the protection of international agreements for electronic programs, we will look at the Berne Convention 1887, the International Convention for the Protection of Trade-Related Aspects of Intellectual Property Rights 1994, as well as the European Convention on Copyright and Communicating Rights in the Community. Information dated May 22, 2001

***-1- The Berne Convention of 1887 relating to the protection of literary and artistic works:***

The Berne Convention of 09/09/1886 was the first to impose provisions on intellectual, literary and artistic property, through several Principles to ensure the protection of rights emanating from intellectual innovations that fall within its protection, as well as defining a set of procedures that must be followed to limit attacks on copyright, whether in the international or domestic domain.

This agreement is considered the first multilateral agreement in the field of literary and artistic property, as it was concluded in 1887 and was subsequently amended.

This happened several times, and the last of these amendments was in 1971, and most of the international efforts to protect intellectual production were concluded before the agreement between it was bilateral, but between it covered the deficiency in all respects <sup>15</sup>

The jurists also considered that a treaty between the legitimate father of copyright regulation and rights referred to at the international level, especially since it was one of the first treaties that were reached to address copyright issues, and its texts were revised a number of times and were last amended in Paris 1971, this treaty stipulates the minimum level of protection, and obligates the

<sup>13</sup> Abderahman mahmoud hocine, op cit, p 71.

<sup>14</sup> Séverine Dusollier, Protection des programmes d'ordinateur, chargée de cour, facultés Universitaires notre dame de la paix, Namur, 2007, pp346.

<sup>15</sup> Abderahman mahmoud hocine, op cit, p 75.



countries that adhere to it not to decrease the protection assigned to them below this limit, but they can increase it above

The treaty also clarified the total rights enjoyed by the author, and defined the works and their types, the article mentioned some examples of literary and artistic works, including books, pamphlets, lectures, and theatrical or musical works, but it did not mention automated media programs among the works it mentioned.<sup>16</sup>

It goes without saying that the Berne Convention did not address electronic publishing via the Internet, because its last amendment in 1971 was before the communications and information revolution and the emergence of the Internet, therefore, it is limited to providing solutions to the legal problems resulting from works published on the Internet.

Principles upon which the Berne Convention is based:

***The Berne Convention is based on a set of principles***, which are:

***The principle of national treatment*** is stipulated in Paragraph 1 of Article Five of the Convention, according to which authors in countries of the Union other than the country of origin of the work that are members of the convention have the rights that the laws of those countries currently transfer or may transfer in the future to their nationals, in addition to the rights specifically stipulated in this Agreement, this applies to works based on which they enjoy protection under this Convention

***Automatic protection principle:*** Under this condition, the protection of digital works is not based on a formal procedure or a specific condition, regardless of whether protection exists in the country of origin of the work or not, thus, the state has the full right to determine the conditions and procedures for benefiting from the protection of electronic works, and this is in accordance with the provisions of The agreement is in accordance with paragraph 02 of Article 5 of the Bern Convention<sup>17</sup>

***The principle of protection in the country of origin:*** It is stipulated in the third paragraph of Article 5 of the Berne Convention, according to which protection for works is carried out in the country of origin in accordance with the provisions of the internal law of that country, however, if the author is not a national of the country of origin of the work on the basis of which he has protection under this convention in that country, he has the same rights granted to its citizens.

#### ***B. Rights covered by legal protection under the Berne Convention***

Article 2 of the BERNE Convention mentioned several protected works, namely literary and artistic works, which are every production in the literary, scientific and artistic fields, regardless of the method or form of its expression, such as books, pamphlets and other written documents, lectures, speeches, sermons and other works of the same nature, theatrical works or musical plays, performances performed with artistic movements or steps, pantomimes, musical compositions whether or not they are accompanied by words, cinematic works, and works that are changed in a manner similar to the cinematic method can be compared to them, and works related to drawing and photography with lines or colors, architecture, underlayment, engraving, and lithography.

Photographic works are measured against works that are expressed in a style similar to the photographic method, works related to applied arts, illustrations, geographical maps, designs, diagrams, and three-dimensional works related to geography, topography, architecture, or science.

As for the period of protection, Article 7 of the same agreement stated that it includes the duration of the author's life and extends up to fifty years after his death. Although the Ben Convention did not explicitly stipulate the protection of electronic works because it was concluded and amended during a period of time in which the idea of electronic programs had not yet spread on the international scene, a deeper study of its articles and reliance on an expanded interpretation of them will find that they can be applied to the protection of digital works, and this

<sup>16</sup> Hawas Fatiha. Protection of Digital Works and Domain Names on the Internet. Ph.D. Dissertation in Intellectual Property Law, Faculty of Law, Algeria, 2016. p. 125

<sup>17</sup> Al-Wali Ibrahim Muhammad. Intellectual Property Rights in Algerian Legislation. University Press Office, Algeria, 1983. p. 195



what international legal scholars have become accustomed to, as there was consensus that the Berne Convention guarantees this indirectly, it helps protect digital works from piracy and copying.<sup>18</sup>

***Agreement on the Protection of Trade-Related Aspects of Intellectual Property Rights***

***The TRIS Agreement***, which is the approved abbreviation for the Agreement on Trade-Related Aspects of Intellectual Property Rights, is one of the agreements annexed to the World Trade Organization Agreement, which entered into force during the Marrakesh Conference on April 15, 1994. The TRIS Agreement was also concerned with protecting intellectual property, including computer programs, as in several principles and provisions have been developed related to digital works in general, which include electronic programs. 10 Classified into:

The agreement concerned itself with regulating two types of intellectual property in seventy-three articles, which would provide protection for intellectual property rights Industrial intellectual property rights, which include patents, trademarks, industrial models, geographical data, and designs Schematics of integrated circuits, trade secrets and the fight against unfair competition Literary and artistic intellectual property rights, which include both copyrights and related rights.<sup>19</sup>

The TRIS Agreement was essentially based on a set of principles that were essentially derived from the Benin Convention, where Tris referred some provisions to the Convention that preceded it, which embodies the principle of complementarity between the various rules of public international law. It also proves that Tris was not the goal, including the cancellation of the agreement between the two countries that complement it, and the core principles included in TRIS are united in the following: 4

***The principle of national treatment:***

Article 3 of the Convention stipulates the necessity of equality between citizens and foreigners when implementing the provisions of the Convention It stipulates that each member country is obliged to grant members the citizens of other member countries treatment not less than the treatment it grants to its own citizens with regard to protection, however, there are exceptions to the general rule, which is the case of multiple agreements concluded under the auspices of the World Intellectual Property Organization, and this is in accordance with Article 5 of The TRIS Agreement stipulates that the obligations stipulated in Articles 3 and 4 do not apply to the procedures stipulated in multilateral agreements concluded under the auspices of the World Intellectual Property Organization with respect to the acquisition of intellectual property rights or its continuation.” The principle of special treatment of the right of the most favored nation Article IV of the TRIS Agreement held that any advantage, preference, privilege or immunity granted by a member country to the nationals of any other country must be granted immediately and without any conditions to the nationals of all other member countries.

The article also excludes from this previous obligation any advantage, preference, privilege or immunity granted by a member country that is dependent either on international agreements related to judicial assistance or the enforcement of laws of a general nature and not specifically limited to the protection of intellectual property, or those granted in accordance with the provisions of the Berne Convention 1971 or The Rome Treaties, which permit treatment granted to others not to be linked to national treatment but rather to treatment granted in another country, also excluded the rights of producers of sound recordings and broadcasting organizations.

The agreement also included protection for all computer programs, regardless of the language or symbols in which they were written.

<sup>18</sup> Mohammed Abu Bakr Al-Maqsood. "Primary Principles of Copyright in International Agreements and Treaties." Dar Al-Thaqafa for Publishing and Distribution, Amman, Jordan, p. 260.

<sup>19</sup> Aisha Mouzaoui. "Intellectual Property Rights under the World Trade Organization and Its Role in Developing the Investment Climate." Supplementary Thesis for the Requirements of the Master's Degree in Finance and International Economics, Faculty of Economic Sciences, 2011, 2012. p. 37.





All collected data or other materials, whether machine-readable or in any form, are also protected. Last<sup>20</sup>

The agreement also obliged member states to grant authors and their successors the right to license or risk renting their original copyrighted works or copies produced thereof commercially to the public, but excluding programs that are not considered the primary subject of rental, thus, the agreement has covered in its protection all the material and moral rights related to the electronic product.<sup>21</sup>

As for the duration of protection, Article 12 of the agreement was considered to include 50 years as an estimate of the average life of a natural person, starting from the end of the year.

The calendar in which it was produced, also stipulated the protection of collected data or so-called databases if they constitute an innovative work as a result of the selection or arrangement of their contents and that protection does not include data or materials in themselves, without prejudice to the rights of authors related to that data, it also set a basic standard for the restrictions and exceptions that are mentioned, on the absolute restrictions on authors, which is called "fair use," the agreement also specified procedures for settling disputes related to the protection and implementation of intellectual property rights laws to contribute to promoting technological innovation.

This agreement includes many important and effective measures to deter attacks on property rights; on the other hand, it imposes on states the unification of several general measures to address the situation, and among those measures is giving the authorities the right to issue orders to launch surprise campaigns to seize evidence of the commission of the crime.

In the event that the member state refrains from tricks such as this, the international organization declares that the state does not fulfill its duties in implementing the conditions and procedures stipulated in the treaty is therefore vulnerable to many punitive measures being taken against it by other member states, although the TRIS Agreement "is a broad agreement and addresses matters not addressed in the Berne treaty, and despite its modernity, this agreement and its importance, however, it is noted that it was not able to cover all aspects related to the protection of works that

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<sup>20</sup> L'article 10, Accord sur les aspects de droit de propriété intellectuelle qui touchent au commerce TRIPIS, L'ORGANISATION MONDIAL DU COMMERCE.

L'article 03 accord trips "1. Chaque membre accordera aux ressortissants des autres membres un traitement non moins favorable que celui qu' il accorde a ses propres ressortissants en ce qui concerne la protection 3de la propriété intellectuelle ,sous réserves des exceptiondèjà prévus dans respectivement, la convention de Paris (1967), la convention de Berne (1971) ?La convention de Rome le traite sur la propriété intellectuelle en matière de circuits integres. En ce qui concerne les artiste interprètes ou exécutants , les producteurs de phonogrammes et les organismes de radiodiffusion, cette obligation nes'applique que pour ce qui est des droits visés par le présent accord .Tout membre qui se prévaudra des possibilités offerts par l'article6de la convention de Berne (1971)ou par le paragraphe 1b)de l'article 16 de la convention de Rome présentera une notification au conseil des ADPIC ,comme il est prévu dans ces dispositions .

2 Les membres pourront se prévaloir des exceptions autorisées en vertu du paragraphe 1en ce qui concerne les procédures judiciaires et administratives , y compris l'électionde domicile ou la constitution d'un mandataire dans le ressort d'un membre ,uniquement dans les cas où ces exception seront nécessaires pour assurer le respect des lois et règlements qui ne sont pas incompatibles avec les dispositions du présent accord et ou de telles pratiques ne seront pas appliquées de façon a constituer une restriction déguisée au commerce . »

\*L'article 05 accord TRIPIS « les obligations découlant des articles 3 et 4 ne s'appliquent pas aux procédures prévues par les accords multilatéraux conclus sous les auspices de l'OMPI POUR L'acquisition ou le maintien de droits de propriété intellectuelle . »

<sup>21</sup> L' article 10, Accord sur les aspects des droits de propriété intellectuelle qui touchent au commerce TRIPIS,



are published and circulated other than the internet and modern means of communication, which created a new type of challenges<sup>22</sup>.

This applies to the global international agreement ensuring the protection of digital works, as well as the regional agreements related to these matters you will find that we have chosen two models, one of which is Arabic, represented by the Arab Copyright Agreement of 1945, and another model is European, represented by the European Agreement on the Harmonization of Copyright and Related Rights in the Information Society, dated May 22, 2001.

### **1- Arab Copyright Convention 1948:**

The Council of the League of Arab States approved the Cultural Treaty on November 27, 1945, Article 8 of which stipulated that the Arab countries pledge to each establish legislation to protect the literary, scientific and artistic property of what is published in each country of the League of Arab States.

Accordingly, the Permanent Legal Committee of the League was established.

Arab countries draft copyright law, which was approved by the Council in 17 February 1948.<sup>23</sup>

L'article 11, accord sur les aspects des droits de propriété intellectuelle qui touchent au commerce TRIPIS, L'ORGANISATION MONDIAL DU COMMERCE.

The Arab Agreement requires the protection of copyright by protecting the rights of authors over literary, artistic and scientific works in an effective and unified manner, the author of the work, in accordance with Article 4 of the Agreement, has copyrights, the authorship of the work is proven for everyone who publishes the work in his name, unless proven otherwise, likewise, if the work is created by the author, natural or legal person, private or public, copyright is established for the author, and national legislation may stipulate that the legal person is the owner of the original right, unless the agreement stipulates that what's different of writing.

Article Six of the same agreement also stipulates that the author acquires the right to have the work attributed to him, mentioning his name on all copies produced, and he can also object to prevent any deletion, change, addition, or making any other modification to his work .

These works are protected in accordance with mechanisms established for this purpose, including national institutions established by the member states of the convention, as well as through the Permanent Committee for the Protection of Copyrights established under the convention and composed of representatives of the member states to follow up on the implementation of the convention and exchange information in a way that ensures the protection of the moral and material interests of authors, this is also done through the property protection office: literary, artistic and scientific in the general administration of the Arab Organization<sup>24</sup>

### **2- The European Agreement on Copyright and Related Rights in the Information Society of May 22 2001.**

This agreement addressed the issue of legal protection for electronic programs through its sixth article, which obliged its member states to provide legal protection against any infringement of effective technical standards, carried out by the user, whether knowingly or without knowledge, as it stipulated

This Article 6 stipulates that Member States must provide in their laws for appropriate legal protection against circumvention of all effective technological measures, which shall be imposed on a person who carries out knowledge or has sufficient reasons to know that his actions lead to the commission of an infringement of these measures.

Member States must also provide in their laws effective legal protection against the manufacture, recovery, sale, rental and advertising products, components or performance of services for the

<sup>22</sup> Hawas Fatiha. The previous reference, p. 127

<sup>23</sup> Abderahman mahmoud hocine, op cit, p 225

<sup>24</sup> Articles 23 and 24 of the Arab Agreement for the Protection of Copyright address the establishment of the Arab Copyright Office and the formation of a permanent Arab Committee for Copyright Protection



purpose of sale, rental or possession for commercial purposes, thus, this article came to strengthen technical protection on the one hand, as well as to punish the sale, distribution, export, or delaying, purchasing or possessing it, according to Article 2/6 of the agreement.

This agreement does not protect technical systems unless they are supported on works protected by copyright law or that have the purpose of controlling copyrighted works

***Second - The role of the World Intellectual Property Organization in protecting computer programs:***

Countries signed the agreement establishing the World Intellectual Property Organization at the Stockholm Conference in 1967 with the aim of encouraging innovations and preserving intellectual property, as well as protecting intellectual property and literary works.

This is evident through Article Three of the agreement establishing the organization, which stipulates that the purposes of the organization are:

1-Supporting the protection of property intellectual property throughout the world through cooperation between states with any other international organization where appropriate.

2 - Ensuring administrative cooperation between federations Article Four of the same agreement also clarified the mechanisms followed by the organization to achieve the goals stipulated in Article Three of the Charter establishing Organization WIPO, These mechanisms are impossible supporting the adoption of actions aimed at facilitating the effective protection of intellectual property throughout the world and at harmonizing national legislation in this regard to carry out the administrative functions of the Paris Union and the special unions established in connection with that union, and there is no union between “; Accepting or participating in administrative tasks arising from the implementation of any other international agreement aimed at supporting intellectual property protection encouraging the conclusion of international agreements aimed at strengthening intellectual property protection offering its cooperation to countries requesting technical legal assistance in the field of intellectual property Collecting and disseminating information on intellectual property protection, investigating and encouraging studies on this activity, and publishing the results of those studies; Providing services that facilitate the international protection of intellectual property, lifting the burden of registration in this field, and publishing private data recordings where appropriate also take every other appropriate measure when necessary.<sup>25</sup>

In the context of achieving the objectives set forth in Article Three of the Statutes of WIPO, it has prepared many international agreements especially with regard to intellectual property protection, which are: A the Paris Convention protected industrial property on March 20, 1883.

B Rome Convention Protection of Performers, Producers of Phonograms and Broadcasting Organizations, signed on October 26, 1961

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<sup>25</sup>Article 4 Functions: “ In order to attain the objectives described in Article 3, the Organization, through its appropriate organs, and subject to the competence of each of the Unions: (i) shall promote the development of measures designed to facilitate the efficient protection of intellectual property throughout the world and to harmonize national legislation in this field; (ii) shall perform the administrative tasks of the Paris Union, the Special Unions established in relation with that Union, and the Berne Union; (iii) may agree to assume, or participate in, the administration of any other international agreement designed to promote the protection of intellectual property; (iv) shall encourage the conclusion of international agreements designed to promote the protection of intellectual property; (v) shall offer its cooperation to States requesting legal technical assistance in the field of intellectual property; (vi) shall assemble and disseminate information concerning the protection of intellectual property, carry out and promote studies in this field, and publish the results of such studies;”

Agreement establishing the World Intellectual Property Organization, signed in Stockholm on July 14, 1967, amended on September 28, 1979.



C the Patent Cooperation Treaty concluded in Washington on June 19, 1970, and amended on September 28, 1979 and on February 3, 2001 1984 and October 3

D the Brussels Convention on the Distribution of Program-Carrying Signals Transmitted via Industrial Dependencies concluded on May 21, 1974.

E WIPO Copyright Treaty, December 20, 1996.

In order to ensure that states implement the agreements concluded under WIPO, the latter supervises their implementation, this process is taken in two forms: it may be direct supervision, and this is through its reliance on its internal bodies without relying on mediation from outside its administrative structure, as is the case with the administrative supervision resulting from the implementation of the Paris Agreement, represented by the Paris Union, as well as resulting from the implementation of the Berne Agreement, represented by In the Berne Union.

As for indirect supervision, it depends on an administrative body that is either affiliated with an international organization, or a body that is based on authority which created it to achieve its goals.<sup>26</sup>

**Conclusion:**

Electronic computer programs are defined as a set of instructions and commands expressed in a specific language and prepared for use in the computer Automation with the aim of solving a specific problem or issue. It is also considered a set of commands and instructions that specify the operations that the computer performs A specific sequence and steps. These instructions are carried through a specific machine-readable medium, as considered by the International Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIS Agreement issued during the year 1994). Computer programs, whether in a language. Source or machine code is protected as a literary work under the 1971 Convention. In order to determine the nature of the legal rules that are concerned with protecting electronic programs, it is necessary to address the definition of the concept of invention, which is considered a group Products, methods, and every new application or adopting a set of known means to reach a result unknown to the technical state Thus, the invention also includes new solutions to technological problems that are concerned with trying to facilitate the exploitation of computers and modern technical means, including electronic programs. By defining the invention, it can be determined whether electronic programs are subject to classification within... International patent certificates or not, and there are several legal opinions regarding this matter

For example, the European Convention on Patents held in Munich on October 5, 1973, as well as the legislation related to its amendments issued on 07/13/1978, considered the principle that programs prepared through the data collection process should not be considered inventions, as well as the laws of the European Organization on patents.

By reviewing the rules of the Tris Agreement to the extent that it followed the same opinion as the second direction, Article 1/27 of the Tries Convention stipulated that the possibility of obtaining patents for any inventions, whether they are products or manufacturing methods, is available in all fields.

The technology provided is new, involves an innovative step and is usable in industry. International organizations and countries have been interested in protecting computer programs from piracy to which they may be exposed, through: Several international agreements were concluded for this purpose, including the Berne Convention of 1887 relating to the protection of literary and artistic works, an agreement to protect Trade-Related Aspects of Intellectual Property Rights of 15 April 1994, European Convention on Copyright Related Rights in the Information Society dated May 22, 2001. Through all of the above, several recommendations should be put forward regarding the subject, which are: the necessity of raising the level of Arab awareness of intellectual property

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<sup>26</sup> Mohammed Ibrahim Al-Sayegh. "The Role of the World Intellectual Property Organization in Intellectual Property Protection." Supplementary Thesis for the Requirements of the Master's Degree in International Law and International Relations. University of Algiers, January 2012, p. 49 .



rights for electronic programs by spreading the culture of software through various social media means, and the quality of how to protect it.

The League of Arab States must work to adopt European and international experiences in the field of intellectual property protection for electronic programs and apply them at the Arab regional level to reduce the phenomenon of piracy and copying of these programs and reduce the crimes committed against them.

Holding national and international seminars and forums on the subject of protecting digital works to contribute to raising the level of cultural awareness of particular peoples the topic, thus encouraging innovation in the Arab region in particular and the world in general.

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