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INTERNATIONAL INTELLECTUAL PROPERTY LAW FOR SCIENTIFIC RESEARCH IN DIGITAL FORMAT

Abstract: In order to start, this work will analyze the jurisdictions that recognize intellectual property rights over scientific research in digital format in Colombia, Russia, and the United States; it will be compared, and, in the end, we will examine what are the opportunities or gaps in the rules that protect intellectual property.

Regarding the previous information, the paper is to know the international intellectual property law for scientific research applied to digital formats in Colombia, Russia, and the United States, which category of intellectual property rights belongs according to their own regulations. Also, what are the main existing differences in intellectual property protection focused on the scientific research of digital formats in these countries [1, p. 3].

Currently in Colombia, Russia and the United States, intangible assets are more related to intellectual property, applying it in scientific research. It includes texts, drawings, symbols, ideas and creations. It can also be included in digital media, such as: video and audio, which, according to its author, can be downloaded for free. Today, at Moderna, this type of unauthorized copying has changed, in the age of digital information it has become possible to copy other authors' information more easily at almost no cost.

Digital rights management technologies, also known as Electronic Rights Management Systems, ensure copyright by identifying and protecting content, controlling access to the work, protecting the integrity of the work, and guaranteeing payment for access. Technologies prevent illegal users from accessing content. Access is protected using a user ID and password, license agreements. Another way to protect digital content is Technical protective measures.

The question we can ask ourselves is, which of the three countries has the best laws for the protection of intellectual property focused on scientific research in digital format?

Key words: Copyright, intellectual property, digital format, scientific research, electronic Rights.

Analysis

As a starting point, we will review how copyright law is understood in Colombia, Russia, and the United States, according to how it is defined in the law of each of these

countries, it is possible to see points in common or differences.

For Colombia, copyright is the branch of intellectual property that recognizes, at the head of the authors, certain moral and patrimonial prerogatives over their artistic and literary works that are original, and susceptible of being disseminated or reproduced by any means.

Related rights, on the other hand, are those rights granted to performers, producers of phonograms and broadcasting organizations, over their performances, phonograms, or broadcasting broadcasts. The regulation of copyright and related rights is mainly found in Law 23 of 1982 and Andean Decision 351 of 1993[1, p. 3].

For Colombian legislation, that work will be considered original under two criteria, objective originality, and subjective originality. Objective originality specifies that the creation will be original if it is not a copy of another; subjective originality implies that the author expresses his style or personal stamp in the created work [2, p. 2].

Having into account the previous information, copyright law in the United States is governed by a federal statute, the Copyright Act of 1976.

The law prevents the unauthorized copying of a work of authorship. However, only the copying of the work is prohibited: anyone can copy the ideas contained in a work [3, p. 10].

Copyrights can be registered with the Library of Congress Copyright Office, but works do not need to be registered, however copyright law provides additional benefits.

This is especially true in the case of computer programs, reproduction of pictorial, graphic, or sculptural works, internet material, and sound recordings.

For instance, it is not an infringement to make a copy of a computer program provided the copy is to utilize the software for backup purposes and not for sale.

In the case of works of art - pictorial, graphic and sculptural - third parties are also allowed to reproduce these works in new reports, comments and publicity, it is an example where it prevents the author from asserting the exclusive rights of reproduction [4, p. 5].

For the Russian Federation, the Copyright Law regulates relations arising in

connection with the creation and use of works of science, literature and art, phonograms, performances, productions, broadcasts of broadcasting organizations or cable television (related rights) [5, p. 2].

The law on copyright in the Russian Federation understands as an author a natural person who with his abilities and talents has created an original work. Under the 1993 law, copyright covers work of the sciences, literature, and the arts that are the result of creative activity and that exist in objective form.

Copyright is vested in an author automatically upon the creation of a work. Both disclosed and undisclosed works are covered by copyright.

In Soviet copyright, publication included ephemerally making available a work, such as through a performance, a speech, or a broadcast.

However, for foreign works protected under Soviet law indirectly through international agreements, the definition of "publication" laid down by these agreements (typically the "making available of copies", which excluded ephemeral reproduction and required the physical fixation of a work) was used.

The new law tried to resolve this confusion by using "disclosure" for the broader sense, using "publication" generally only in the sense of distribution of copies of a work to the public [6, p. 10].

To observe that Colombia, Russia, and the United States, have in common the understanding of copyright as the law that prevents the unauthorized copying of a work of authorship and penalizes the improper use of illegally copied information.

Nevertheless, for the United States only copying of the work is prohibited, but anyone can copy the ideas contained in a work, unlike Colombia, which will consider it illegal to even copy the ideas contained in a work.

In the case of the Russian Federation, its copyright law is very complete, unlike Colombia, which does not contemplate it in detail, only superficially.

Now, let's analyze the copyright laws of Colombia, Russia and the United States applied to digital formats, in our case, focused on scientific research.

Comparisons between countries regarding copyright laws for digital formats will be presented in tables. In the following tables:

Table 1.
Comparative table on copyright protection for digital scientific works

Countries	copyright laws applied to digital formats	Protection level
Colombia	In Colombia, works that are fixed in digital format have the same protection as works fixed on supports analogs, since Colombian legislation does not distinguish between both types of media [7, p. 457].	Medium level
Russia	The Russian Federation protects the copyright of works in digital format, specifying the use that can be given to digital works, on the copyright laws of the Russian Federation protect and differentiate between physical and digital works.	High level
U.S.A	For the United States in 1998, Congress passed the Digital Millennium Copyright Act (DMCA), which amended United States copyright law to address important parts of the relationship between copyright and the Internet, which include works in digital format [8, p. 1].	High level

Table 2
Table of copyright duration by country

Countries	Copyright terms	Copyright terms based on	Until year
Countries	based on authors'	publication and creation	end?
		-	ena:
	deaths	dates	
Colombia	Life + 80 years [9, p.	80 years from publication	Yes [11, p.
	1].	(cinematographic works) [10,	5].
		p. 1].	
	Life + 70 years [12, p.	50 years from publication	
	1].	(radio and television	
		broadcasts)	
	Life + 74 years (for		
	those who fought in	50 years from creation if	
	or worked during the	unpublished, or 50 years from	X
	war of 1941–45)	publication (sound records)	
Russia	,	, , ,	
		70 years from publication	
	Date of rehabilitation		
	+ 70 (74) years (for	' - ' - '	
	unlawfully	'J'	

	prosecuted and posthumously rehabilitated) Protection applies if copyright term of Life + 50 years (or Life +	70 years from publication if published within 70 years from death (posthumous publication)	
	54 years) did not expire by 1 January 1993. [13, p. 152].		
U.S.A	Life + 70 years (works published since 1978 or unpublished works) [15, p. 1].	120 years from creation whichever is shorter	Yes [17, p. 1].

Conclusions:

In this work, the regulations that recognize the intellectual property right on scientific research in digital format in Colombia, Russia and the United States were analyzed, to which category of intellectual property rights it belongs according to their own regulations.

It was possible to study different sources, those that develop and explain the importance of regulations in this field, and with technological advances, a broad and high-impact protection is required.

Lastly, se obtuvieron los siguientes resultados:

- 1. Colombia is not very developed in terms of copyright protection laws for digital formats, its laws are very superficial, the United States and Russia are very advanced in terms of digital format protection laws, for this reason it is not possible to choose a only country that has the best intellectual property protection laws focused on scientific research in digital format.
- 2. Colombia, Russia and the United States only mention digital formats, but none of the three countries directly emphasizes scientific research in digital format because

it is understood by simply mentioning digital formats in general.

- 3. Colombia, Russia, and the United States, have in common to understand the right as the law that prevents the unauthorized copying of a work of authorship, and that, according to their laws, penalizes the improper use of illegally copied information.
- 4. The main advantages of copyright are that it protects the intellectual property of a person, comparing this type of property with property of a material nature, in which there are documents and laws that protect and secure the intellectual property.

There are laws passed in Colombia, Russia and the US that clearly focus on copyright and are the legal part to protect this type of rights in legal channels.

5. It is difficult to take control over the copying and distribution of works in various ways, managing to harm the author not only by devaluing, but also by correcting his creations.

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