

## COPYRIGHT AND PROTECTION OF INTELLECTUAL PROPERTY IN THE DIGITAL AGE

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**Annotation.** This article is devoted to the current situation of copyright and intellectual property. The author gives a brief history overview and definition of the term «intellectual property». Also, the article offers a description of the strategies and methods currently used to protect intellectual property. The issues arising in the field of intellectual property protection are discussed in relation to the development of modern technologies, particularly artificial intelligence.

**Keywords:** intellectual property, copyright, artificial intelligence.

**Introduction.** The intellectual property concept initially appeared in antiquity, when inventors were officially recognized as the owners of the exclusive rights for their works. The epochs of Renaissance and Enlightenment greatly contributed to the improvement and final formation of the modern intellectual property concept. The enactment of international laws and treaties during industrial revolutions improved the existing methods of protecting intellectual property. In the 20th century complex protection systems were eventually established altogether with global organizations like WIPO (World Intellectual Property Organization), which consequently resulted in standardization of copyright laws.

The rapid advancement of modern Internet-related technologies in the 21st century introduced such a phenomenon as internet piracy and brought up the questions of copyright application towards the works generated by artificial intelligence (AI), which led to the necessity of renovations in the field of intellectual property protection.

**Main part.** The origin of the term «intellectual property» is tightly connected with the French legislation of the end of the 18th century. The theory, according to which the creators' right for any creative outcome was considered to be inalienable, served as a solid base for the traditional French proprietary approach to copyright and patent law, which, in return, played a crucial role in the formation of the current intellectual property protection system.

According to the official World Intellectual Property Organization (WIPO) [6] website, the modern definition of the term «intellectual property» alludes to «creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce» [1].

The issues of intellectual property rights protection are managed by many international organizations, which actively contribute to the development and application of intellectual property protection laws, support innovative ideas, and create an environment that enables creators, inventors, and businesses to protect and derive value from their intellectual property.

In the Republic of Belarus, the National Center of Intellectual Property [5] is one of the establishments responsible for administering the laws and issues related to the protection of intellectual property.

Currently, there are officially legalized ways to protect intellectual property including:

1. A *patent* is an exclusive right granted for an invention, either the product or the method that provides an innovative way of manufacturing various goods, or offers a new technical solution to a problem.

2. A *trademark* is a sign capable of distinguishing the production or services of one enterprise from those of others.

3. *Industrial design*. In a legal sense, an industrial design includes the ornamental aspect of an item.

4. A *geographical indication* is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are owing to that origin.

5. *Copyright* (or author's right) is the rights that creators have over their literary and artistic works.

6. *Trade secrets* are intellectual property rights on confidential information which may be sold or licensed.

With the flow of time intellectual property has become an inextricable part of the ever-developing sphere of technological innovations, which consequently leads to the emergence of brand-new forms of intellectual property – digital intellectual property. Including software, code, databases and others, such types of intellectual property are crucial for the functioning of an untold number of online-platforms, services and online shops. Despite the various methods of protecting intellectual property, the digital property faces challenges due to its unique characteristics such as lack of physical form. However, the Blockchain technology and digital rights management (DRM) systems are transforming online intellectual property protection methods. By recording transactions in a tamper-proof manner across a computer network, blockchain provides an immutable system for managing copyrights issues, effectively combating piracy and ensuring the safeguarding of creators' rights in the digital domain.

The enhancement of information technology, the Internet, the rise of artificial intelligence and a diverse range of new technologies have introduced new challenges and issues to the sphere of intellectual property protection and utilization.

Digital piracy refers to the unauthorized copying, distribution, or sharing of digital content such as music, movies, software, books, or other copyrighted materials. It is connected with the violation of intellectual property rights by reproducing and distributing copyrighted works without the permission of the right holders [4].

Internet piracy is a widespread notion, including the illicit downloading or streaming of copyrighted music, movies, and TV shows from file-sharing websites. It also encompasses the unauthorized distribution of e-books, software, or games through online platforms. Additionally, the availability of streaming services offering unlicensed or pirated content contributes to the issue.

Currently, the issue of internet piracy is tackled in different ways including such methods as implementation of stricter copyright regulations on the governmental level; direct collaboration between content creators, right holders, streaming services and intellectual property protection establishments; educational campaigns raising public awareness of digital piracy.

According to the research conducted by Professor Andres Guadamuz [2], the relationship between artificial intelligence and copyright has two key points. Firstly, traditional technologies were seen as tools used by artists in the creative process. However, artificial intelligence has the capacity to independently make decisions and generate content without direct human contribution to the result. This raises questions about the level of human involvement and authorship in works generated by artificial intelligence. Secondly, copyright laws were designed in order to protect only human-authored creations, but artificial intelligence challenges the commonly accepted concept and understanding of how authorship should be applied [3]. As artificial intelligence becomes more sophisticated and independent, the distinguishing features between human-made and works created by artificial intelligence are becoming less noticeable, exacerbating the need to reevaluate copyright laws to cope with the unique challenges posed by AI-generated content.

**Conclusion.** Thus, the protection of intellectual property and copyright is increasingly important in the digital age. Internet piracy and illicit distribution of copyrighted content present

noteworthy obstacles requiring stricter laws and the promotion of legal alternatives. Collaboration between content creators and legal establishments and organizations, educational initiatives, and technological advancements are crucial for protecting intellectual property rights. However, the ever-developing technologies including artificial intelligence need ongoing enhancements and adaptations in order to effectively protect intellectual property in the contemporary world.

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