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JOURNAL	International Journal of Innovative Technologies in Social Science
p-ISSN	2544-9338
e-ISSN	2544-9435
PUBLISHER	RS Global Sp. z O.O., Poland

ARTICLE TITLE	METAVERSE: ENSURING LEGAL RECOGNITION OF AVATARS AND ELECTRONIC PERSONALITIES THROUGH A CROSS-BORDER PERSONALIZED ID-CODE
AUTHOR(S)	Kostenko Oleksii, Dniprov Oleksii, Zhuravlov Dmytro
ARTICLE INFO	Kostenko Oleksii, Dniprov Oleksii, Zhuravlov Dmytro. (2024) Metaverse: Ensuring Legal Recognition of Avatars and Electronic Personalities Through a Cross-Border Personalized ID-code. *International Journal of Innovative Technologies in Social Science*. 2(42). doi: 10.31435/rsglobal_ijitss/30062024/8141
DOI	https://doi.org/10.31435/rsglobal_ijitss/30062024/8141
RECEIVED	29 March 2024
ACCEPTED	15 May 2024
PUBLISHED	18 May 2024
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METAVERSE: ENSURING LEGAL RECOGNITION OF AVATARS AND ELECTRONIC PERSONALITIES THROUGH A CROSS-BORDER PERSONALIZED ID-CODE

Kostenko Oleksii
Ph.D., Associate Professor, State Scientific Institution "Institute of Information, Security and Law of the National Academy of Legal Sciences of Ukraine"
ORCID ID: 0000-0002-2131-0281

Dniprov Oleksii
Doctor of Law, Associate Professor
Vice-Rector for Scientific and Pedagogical Work and and strategic development of the Kyiv National University of Construction and Architecture
ORCID ID: 0000-0002-7157-9748

Zhuravlov Dmytro
Doctor of Law, Deputy Director of the Department of the Office of the President of Ukraine
ORCID ID: 0000-0002-2205-6828

DOI: https://doi.org/10.31435/rsglobal_ijitss/30062024/8141

ARTICLE INFO

Received 29 March 2024
Accepted 15 May 2024
Published 18 May 2024

KEYWORDS

Metaverse, Electronic Personalities, Personalized ID-code, Large Language Models.

ABSTRACT

The study examines the topical issue of legal recognition of avatars, electronic personalities, and electronic humanoids in the context of the rapid development of digital technologies, in particular in the Metaverse ecosystem. The author emphasizes the need to reform existing and create new legal norms adapted to the digital era that would regulate the ownership and intellectual property rights to digital objects in the Metaverse, considering the global nature of digital transformations and the need for cross-border legal regulation and interaction of different legal systems to create international standards for the regulation of virtual worlds. The author proposes an innovative approach to solving these problems using blockchain technologies to create unified technological solutions that will allow for the end-to-end application of procedures for cross-border electronic identification of avatars, electronic personalities, and electronic humanoids. This will enable each avatar to have its own unique identification set of attributes, ensuring their unique and unrepeatable identification in the digital space, and will also facilitate international recognition of ownership rights to avatars, e-personalities and e-humanoids.

Citation: Kostenko Oleksii, Dniprov Oleksii, Zhuravlov Dmytro. (2024) Metaverse: Ensuring Legal Recognition of Avatars and Electronic Personalities Through a Cross-Border Personalized ID-code. *International Journal of Innovative Technologies in Social Science*. 2(42). doi: 10.31435/rsglobal_ijitss/30062024/8141

Introduction.

In the context of the rapid development of digital technologies, including virtual and augmented reality, blockchain technologies, and large language models (LLMs), in particular, in the Metaverse ecosystem, the issue of the legal definition of ownership and intellectual property rights over avatars, e-personalities, and e-humanoids is becoming increasingly relevant. This need is exacerbated by the global scale of digital transformations of corporate virtual spaces into the cross-border Metaverse, which goes beyond traditional jurisdiction, creating unique challenges for the international legal framework.

The emergence of digital technologies has catalyzed the creation of complex, immersive digital environments where users can interact through avatars, essentially digital objects that can have significant economic, social, ethical, and personal value. The digital evolution of society is blurring the boundaries between digital and physical identities, requiring a reassessment of traditional legal concepts of property, identity, and personhood. The need for a cross-border legal framework for the use of avatars, e-personalities, and e-humanoids in the Metaverse is becoming increasingly critical. Such a framework should balance innovation with the protection of individual rights, paving the way for a future where digital and physical identities coexist harmoniously in a legally robust and ethically sound digital ecosystem. This article is a continuation of Metaverse's study of the problems of electronic jurisdiction.

Presentation of the main material.

Modern advances in digital technologies such as virtual and augmented reality, blockchain, large language models (LLMs), and Metaverse ecosystems are prompting the reform of existing legal norms, laws, and jurisdictions and the creation of new ones adapted to the challenges of the digital age [1, 2].

One of the main problems is determining the legal status of avatars in the Metaverse. An avatar can be seen as a digital representation of an individual, a legal entity, or even an independent digital personality with its rights and obligations. The question arises to what extent the rights and obligations of the avatar owner can be transferred or associated with their digital representation. This includes intellectual property rights, the right to privacy, and other personal rights.

Avatars, which in Web 2.0 played the role of game objects - characters in online games, in the Web 3.0 or Metaverse space are being rethought and acquire new, more complex functions, closer to the roles traditionally attributed to socialized subjects in digital society and social processes of the virtual world. However, today avatars in the field of law remain digital assets, digital things, or electronic content [3].

Given that Metaverse is currently largely a corporate product, the rules for the creation, use, and ownership of avatars and other electronic entities in this space are largely determined by corporate policies, internal guidelines, and user agreements. This creates a certain legal vacuum and uncertainty, especially in the context of cross-border use of the Metaverse, which requires international legal regulation [4].

The problem of transboundary use of the Metaverse and electronic personalities creates an urgent need to develop a universal technical, technical-legal, and legal framework that would allow regulating the creation, use, ownership, and other aspects of the existence of digital entities at the international level [5]. This includes defining the legal status of avatars, e-personalities, and humanoids, establishing rules for their use, ownership, and mechanisms for protecting rights and freedoms in virtual spaces.

Such international legal regulation requires a comprehensive approach that considers not only the technological aspects of digital innovation but also the social, economic, and ethical dimensions of interaction in virtual worlds. It is important to ensure that such regulation promotes the development of digital technologies while protecting the rights and interests of users and ensuring fairness and security in the digital environment.

In today's legal discourse, driven by the rapid development of digital technologies, there is a need for a detailed analysis and reform of the legal framework governing the status and use of avatars in the digital space [6]. Modern legislation offers several legal categories for classifying avatars considering them as "digital things" or "electronic content", each of which has certain legal consequences and possibilities of application [7].

An avatar, viewed as a "digital thing," is characterized by the presence of a stable (fixed) digital combination consisting of a unique sequence of zeros and ones that can be stored on a physical medium.

This characteristic allows avatars to be subject to existing laws governing property rights and copyrights, similar to traditional physical objects. This approach greatly simplifies the protection of property and intellectual property rights in the digital space by offering clear and proven legal protection mechanisms.

However, a digital avatar, when viewed as a "digital thing," can also be used as a basic object for creating electronic content, indicating its technological stability and functional variability.

The differences between an avatar as a "digital thing" and "electronic content" lie in the possibilities of transformation and fixation, which affects the life cycle of an avatar as an information product. These dynamics require the adaptation of legal norms aimed at regulating electronic content to consider the unique aspects of digital identity and property [8].

Considering the above, both approaches to the classification of avatars have their application depending on the specific circumstances and legal context of the relevant jurisdiction. However, the existing legal framework that allows for such a dual classification may not be sufficient to address all potential legal issues related to the evolution of digital technologies. This underscores the need for a thorough rethinking and updating of the legal framework to meet the complexity and dynamics of the digital world, ensuring effective protection of the rights and interests of all participants in the digital space [9].

In addition, the problem of ownership of objects created/acquired/gifted/transferred by an avatar in the Metaverse is becoming an urgent issue. This concerns intellectual property issues, in particular copyright to the avatar design, as well as ownership rights to digital assets and their transfer. An important aspect is the development of mechanisms to protect these rights from infringement, in the context of copying, modification, or unauthorized use of avatars and other digital objects.

In response to the challenges associated with establishing ownership rights to avatars in the context of globalization and the digitalization of society, an advanced approach based on the use of blockchain technologies is proposed [10 , 11]. This approach involves the creation of unified technological procedures that allow for the end-to-end application of cross-border electronic identification procedures for avatars, similar to the citizen identification system [12]. This technology can form the basis of international legal regulation, as the Metaverse has no geographical boundaries and participants can be located in different jurisdictions and ensure interaction between different legal systems and the creation of international standards for the regulation of virtual worlds.

The concept is to form a unified technological and legal framework that, using code and blockchain, will allow each avatar to have its own unique identification set of attributes that are resistant to change and manipulation. This set of attributes will perform functions similar to those of a citizen's passport, providing a unique and unrepeatable identification of each avatar in the digital space. In fact, a cross-border personalized ID code of an avatar, electronic personality or electronic humanoid will be created.

This identification catalog may include information about the avatar owner (whether an individual or a legal entity), as well as specific attributes related to corporate products or services in the Metaverse. In addition, the catalog will contain information about the initial generation of the avatar, which will serve as the basis for any further modifications or iterations, ensuring transparency and traceability of the avatar's evolution over time.

The use of blockchain technologies for this purpose has significant advantages to ensure a high level of security, the impossibility of unauthorized changes in identification data and attributes, as well as to create conditions for unimpeded cross-border recognition of ownership of avatars [13]. This, in turn, paves the way for the creation of a global, decentralized system of identification [14] and digital asset management, which is of great importance in the context of the constantly transforming digital world.

This approach will not only help to standardize the processes of identification and ownership of avatars but will also be an important step towards the formation of a single, integrated digital identity ecosystem, which is significant for the further development of the digital economy and society.

First, it will make it possible to quickly and reliably identify the owner/owner of an avatar in case of problems related to illegal acts and crimes in the Metaverse [15].

Secondly, to form a modern institution for the protection of property rights and ownership of digital things, electronic content, and intellectual property rights. This includes fixing the creation of copyrighted content, assigning rights to the real author and/or transferring property rights, if necessary, from the creator to the right holder (customer of the content creation), preventing violations, facts of

illegal use of content and encroachments on it, creating prerequisites (foundation) for the effective use of claim-based methods of copyright protection.

Thirdly, to ensure reliable registration of a trademark as an independent object of intellectual property rights to protect and designate goods and services.

Blockchain technology, with its inherent characteristics of decentralization, transparency, and immutability, offers a basic infrastructure for establishing and verifying ownership of digital assets, avatars, and electronic identities. The creation of a cross-border personalized identification code system will provide a reliable mechanism for the unique identification and authentication of digital objects and entities in the Metaverse, as well as in various virtual environments and legal jurisdictions.

Most importantly, the mechanisms for providing cross-border personalized ID codes for avatars, e-personalities or e-humanoids will form the basis for the formation of procedures that can ensure

- partial legal capacity and legal capacity of these digital entities as a legal entity;

- limited legal capacity and legal capacity of digital objects (subjects)-representatives of a corporation;

- other procedures for determining the legal rights, obligations and liabilities of avatars, electronic personalities or electronic humanoids.

Implementation of such a system requires a nuanced understanding of the interplay between technology, law, and human rights, including privacy, freedom of expression, and the right to digital identity. At the same time, large-scale international cooperation is needed to develop a coherent legal framework that can integrate the diverse legal systems and cultural perspectives present in our globalized world.

Conclusions.

The issue of legal recognition of avatars, e-personalities, and e-humanoids in the context of the rapid development of digital technologies, especially in the context of the Metaverse ecosystem, is relevant. The application of an innovative approach to solving these problems by using blockchain technologies to create unified technological solutions that will allow for the end-to-end application of cross-border electronic identification procedures is promising. Adaptation of existing legal norms to the new realities of the digital world, where avatars may have economic, social, ethical, and personal value, requiring appropriate legal protection, is becoming a necessary reality through the transformation of international legal regulation and the interaction of different legal systems to create common standards for virtual worlds that ensure the protection of property and intellectual property rights.

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