



SOME LEGAL ISSUES AND THEIR CONSEQUENCES IN THE METaverse: IN CASE OF FOUR MAIN CHALLENGES

Mukhammad Ali Turdialiev

PhD candidate, Senior lecturer of Tashkent state university of law

m.turdialiyev@tsul.uz

Article history:	Abstract:
Received: May 28 th 2023 Accepted: June 26 th 2023 Published: July 30 th 2023	In this article analyzed four main legal issues and their consequences in the metaverse world. Moreover it is also illustrated some collision regulatory of relation in metaverse. In addition discussed diversity of scientific views on crypto currency and other private issues in metaverse. As a result of these analyzes suggested some recommendation for the development of legislation on virtual relations.
Keywords: metaverse, crypto coin, crypto currency, NFT, intellectual property, data protection, data privacy, metadata.	

INTRODUCTION

With the development of information technology and the emergence of virtual worlds such as the metaverse, new legal problems and challenges arise. The Metaverse is a digital space created by people for communication, entertainment and commercial purposes. In this article, we will consider the main legal aspects related to the metaverse and suggest possible approaches to their regulation.

Firstly, consider the world experience in this area. At the global level, the legal aspects regarding the study of the metaverses are not explicitly regulated. However, there are some guidelines and standards that govern the use of technology in general. For example, the EU General Data Protection Directive (GDPR) regulates the use of personal data on the Internet. This may also apply to the metaverses if they contain personal information. The next step is to consider the experience of China. In China, the legal aspects of the metaverses are governed by the cybersecurity law, which came into force in 2017. This law requires Internet service providers to store user data and provide it to the government upon request. In addition, this law also contains provisions on the protection of personal data and requires providers to comply with certain security measures when storing data. From the point of view of the metaverses, this law can be applied if the personal information of users is contained in the metaverses. In addition, the Chinese authorities banned the sale of cryptocurrencies and ICO (Initial Coin Offering) in 2017, which may apply to the metaverses based on cryptocurrencies. In addition, the Chinese authorities have banned the holding of virtual reality events without the appropriate licenses and permits, which may also affect the metaverses based on VR technologies.

DISCUSSION AND RESULTS

Some discussion points of legal regulation of metaverse.

1. Intellectual Property Rights:

In the metaverse, users have the ability to create and sell virtual objects such as clothing, home furnishings, or digital man-made objects. Questions arise about the protection of intellectual property rights in this context. It is necessary to develop effective mechanisms for protecting copyrights and patents for the created objects of the virtual world.

As an example, consider intellectual property (IP) laws. They protect authors, inventors, manufacturers, designers, and performers, among others, by granting them exclusive rights to their works, trademarks, patents, industrial designs, and trade secrets. The regulation of IP rights is not so much focused on the physical object in which a creative work, distinctive sign or technical innovation is expressed, but rather on their intangible aspects.

Ownership of physical property (a car, a book or a bag, each of which may contain trademarks, patented items or works of authorship) is governed by civil law, while IP laws govern the ownership of the intangible aspects of such property. IP terminology distinguishes between *corpus mysticum* (intangible asset) and *corpus mechanicum* (physical representation) of such an asset. This principle has been applied for centuries and fully applies to the metaverse and NFTs as well.

The Metaverse is a virtual universe where human or computer-controlled avatars are able to act on virtual objects such as vehicles, weapons, or furniture, all of which may contain trademarks or copyrighted works. Because IP laws are about the intangible aspects (*corpus mysticum*) of a physical or virtual object, the implication is that the creators of the metaverse would have to respect the rights of inventors, designers, and decal owners in the real world. Accordingly, a particular copyright holder will have the right to prosecute the use in the metaverse of their IP rights,



for example, on a virtual bag or jacket that is designed for digital avatars.

With respect to NFTs, a similar conclusion can be drawn. NFTs are digital files where creative works or other objects such as videos or other artwork can be recorded. Due to the fact that copyright is an institution of exclusive right to original works of authorship (*corpus mysticum*), different from the ownership of any digital object in which these works are enclosed (*corpus mechanicum*), to any person who wishes to use in the NFT, for example, sound recording from a clip from a video game, the prior permission of the copyright owner for this work will be required. Thus, it is difficult to challenge the applicability and validity of existing rules regarding NFTs and the metaverse.

From a legal point of view, the Berne Convention for the Protection of Literary and Artistic Works, which has already been ratified by 181 states, establishes that contracting parties must grant authors exclusive rights to their works, regardless of the type or form of expression. Since its adoption, the Berne Convention has been complemented by other international agreements, including the 1996 WIPO Copyright Treaty, which has adapted the Berne Convention for the digital environment. This agreement (the Agreed Statement in relation to Article 1(4) of the WIPO Copyright Treaty) expressly states that the storage of a protected work in digital form on an electronic medium (in particular, an NFT or a file whose contents are displayed in the metaverse) is a reproduction, on which requires the prior permission of the copyright owner. It turns out that legal norms do not always lag behind reality.

2. Data privacy:

The Metaverse can collect and store vast amounts of data about users, their behavior, preferences, and personal information. There is a need to ensure the confidentiality of this data and respect for the privacy of users. Regulators must develop rules and standards to protect the privacy of virtual inhabitants of the metaverse.

The most surprising aspect of the study was the fact that an extremely small amount of data is required to identify a user in the virtual space, so true anonymity in the metaverse can be completely excluded. Modern virtual reality headsets are equipped with numerous cameras, microphones and sensors that collect various data: the user's facial features, voice timbre, eye movements, as well as the surrounding objects in the house or office. In the future, it is even possible to install EEG sensors that read indicators of brain activity through the scalp. And even if you remove this entire set, it will still not be possible to ensure anonymity - to

identify a person, it is enough to analyze simple data about his movement.

By "simple data" we mean the movements of three basic points tracked by virtual reality headsets: one on the user's head and two on the user's hands - this is the minimum set of data needed to work in a virtual environment. Berkeley scientists analyzed 2.5 million anonymous recordings from more than 50,000 users of the Beat Saber VR app and found that to identify a person with 94% accuracy, they needed movement data that was recorded in just 100 seconds. At the same time, half of the users could be identified by a 2-second piece of data. The study required the work of artificial intelligence algorithms, but it must be taken into account that the data was extremely scarce - 2 seconds of movement of only three points.

This poses a serious threat to the privacy of users - as a result, anonymity in the metaverse is impossible. In addition to identifying an individual, these same meager data are enough to determine specific information about a person: height, gender, and predominant hand. And in combination with data from other sensors, identification can be even more accurate. If a person connects to the metaverse and visits a virtual furniture store, they are more likely to make simple movements: take virtual items from virtual shelves or take a few steps back to see how they look. Berkeley scientists emphasize that all these daily movements are unique to each person, just like his fingerprints.

Protecting the privacy of users in the metaverse will be much more difficult. As one of the options, the researchers propose the transfer of data from sensors to intermediate resources that will distort them. But that means information noise, reduced accuracy in VR headsets, and a loss of enjoyment in a game that requires physical skill. There is also an alternative option - to introduce industry regulations that prohibit the platforms of the metaverse from storing and analyzing data on human movements. Such regulations will be designed to protect the public, but enforcement of such requirements will not be easy to enforce - the industry will definitely resist them. Although, if consumers do not feel safe in the metaverse, it will be difficult to make virtual spaces an important part of a person's daily life.

3. Cybercrimes:

The Metaverse is also subject to the threat of cybercrime such as fraud, virtual currency theft, or copyright infringement. Legislation must be adapted to deal with these types of crimes in the context of the metaverse.

Interpol member countries have expressed concerns about how to prepare for a possible "metaverse of crime," Interpol's executive director for technology and



innovation, Madan Oberoi, told the agency. "Some of the crimes may be new to this environment, some of the existing crimes will be resolved by the environment and taken to a new level," he said.

According to Oberoi, phishing and scams can operate differently when it comes to augmented reality and virtual reality. He added that the issue of children's safety is also a concern.

Oberoi believes that virtual reality can facilitate the commission of crimes in the physical world. "If a terrorist group wants to attack physical space, they can use that space to plan, simulate and run their pre-attack exercises," he said.

Earlier this month, European Union law enforcement agency Europol said in a report that terrorist groups could use virtual worlds for propaganda, recruitment and training in the future. Users can also create virtual worlds with extremist rules, the report says.

If metaverse environments record user interactions on the blockchain, "it could allow tracking of everything someone does based on a single interaction with them, providing valuable information for stalkers or extortionists," Europol says.

4. Responsibility for actions:

The question of the legal liability of users of the metaverse is complex. How to determine legal liability for actions performed by virtual characters? Who is responsible for damage or violation of the rights of other users? It is necessary to develop clear norms and principles to regulate this aspect.

The first aspect to consider is the ethical responsibility for acting in the metaverse. Virtual reality can provide unlimited opportunities for users to experiment and perform various activities. However, such actions may have negative consequences for other users or even for the user himself. For example, the use of VR technologies to simulate violence or create virtual copies of real people can lead to serious ethical issues. Therefore, it is important to develop ethical standards and a code of conduct for the use of the metaverse.

The second aspect to consider is the legal liability for actions in the metaverse. As in the real world, users of the metaverse must be held accountable for their actions and subject to laws and regulations. However, the existing legislation is not always able to resolve all emerging issues of virtual space. For example, how to determine liability for damage or copyright infringement in the metaverse? It is important to develop new legal

instruments and policies that will effectively deal with such cases.

One way to effectively manage accountability for actions in the metaverse is to create a system of reputation and feedback. Users whose behavior complies with ethical and legal standards may receive a positive assessment or rank, while violators will be subject to negative consequences. Such a system can be implemented using machine learning algorithms and artificial intelligence.

To effectively manage responsibility in the metaverse, it is also necessary to ensure the dissemination of information about the rules and standards of behavior. Users must have access to all necessary guidance and instructions for using the Metaverse so that they are aware of the consequences of their actions.

Comparative analyzes of foreign experience of legal regulation of metaverse.

Consider the experience of Russia. In Russia, the legal aspects regarding the metaverses are regulated by several laws, including the law on personal data and the law on crypto currencies. The Law on Personal Data requires compliance with certain security measures when processing personal data and prohibits the transfer of this data outside of Russia without the consent of the data owner. This may also apply to metaverses containing personal information. The Federal Law on Crypto currencies, which came into force in 2019, regulates the use of crypto currencies in Russia. It sets the rules for mining, exchanging and holding crypto currencies and requires the registration of crypto transactions. This could apply to crypto currency-based metaverses as well.

In addition, Russia is currently working on the creation of a cybersecurity control center that will be responsible for protection against cyber attacks and data leakage. This can be an important aspect when dealing with the metaverses, as they can contain a lot of sensitive data. One example of WEB3 law enforcement is the death case of Canadian entrepreneur Gerald Cotten, founder of the QuadrigaCX cryptocurrency exchange. In this case, after Cotten's death in 2018, access to the company's cryptocurrency accounts was lost, as only Cotten had access to the corresponding keys. This led to big problems for exchange users who could not access their accounts¹.

As a result, legal proceedings were initiated, in which it was established that Cotten used client funds for personal purposes, and that access to the company's

¹ Anson, M. (2021). Initial exchange offerings: The next evolution in cryptocurrencies. *The Journal of Alternative Investments*, 23(4), 110-121.



accounts could be intentionally lost. This has led to an independent administration of the company by the court and ongoing compensation processes for the exchange's clients.

Another example is the Federal Bureau of Investigation (FBI) investigation into cryptocurrency crimes in the US. As part of this investigation, it was found that cryptocurrencies can be used to finance terrorism, money laundering and other crimes. The FBI also uses blockchain technology to track cryptocurrency transactions and detect criminal acts associated with them. In addition, work is currently underway in the European Union to create legislation to regulate cryptocurrencies and blockchain technologies. In particular, in 2020, the fifth EU Directive on combating money laundering and the financing of terrorism (AML5) was adopted, which expands the scope of the law to cryptocurrencies and cryptocurrency wallet operators.

The UAE's WEB3 enforcement experience is still limited, but the UAE government is actively seeking ways to regulate cryptocurrencies and blockchain. In 2020, the UAE Cryptocurrency Law and initiatives for the use of blockchain technology in the public sector were passed. In addition, in 2021, the UAE launched The Future City project, which will be built on blockchain technology and include smart contracts and digital citizen identities.

In Brazil, the government is also working to regulate cryptocurrencies and blockchain. In 2019, the Brazilian Commission on Financial Transactions (COAF) set rules for declaring transactions with cryptocurrencies. In addition, in 2020, the Brazilian Central Bank launched a digital version of the national currency implemented on blockchain technology². WEB3 enforcement experience varies from country to country. However, more and more countries are working on the regulation of cryptocurrencies and blockchain and the introduction of WEB3 technologies into the public sector. The main areas of regulation are consumer protection, the fight against money laundering and terrorist financing, as well as ensuring the security and confidentiality of data. There are various international organizations and initiatives that are working to create standards and

recommendations for the regulation of cryptocurrencies and blockchain throughout the global community. One of these organizations is the Financial Stability Board, FSB, which in 2018 published recommendations for the regulation of cryptocurrencies and blockchain on a global scale. These recommendations highlight the need to set standards for user identification, combating money laundering and terrorist financing, and consumer protection³. However, regulation of cryptocurrencies and blockchain remains a challenge for governments and regulators⁴.

First, WEB3 technologies are often used in decentralized environments, making it difficult for governments to regulate and control.

Secondly, wild fluctuations in the value of cryptocurrencies and the ability to transfer funds quickly and anonymously can lead to financial instability and abuse.

Effective regulation of cryptocurrencies and blockchain requires a balance between protecting consumer rights and ensuring the safety and stability of the financial system. Regulators and governments should develop and implement appropriate laws and standards that take into account the specifics of WEB3 technologies and prevent abuse and violations⁵.

Another important aspect of cryptocurrency and blockchain regulation is the issue of taxation. Despite the fact that cryptocurrencies are digital assets, for many countries their exchange and use is subject to taxation. For example, in the US, cryptocurrencies are recognized by the authorities as property and the exchange for them is subject to capital income taxation. Also in the United States, a new taxation system was introduced in 2021, which requires exchanges and platforms working with cryptocurrencies to provide reports on their clients' transactions to the tax authorities.⁶

CONCLUSION

The Metaverse is a new space where unique legal challenges arise. Specific legislation and international standards need to be developed to regulate intellectual

² Karapetyan, M., Timoshenko, L., Stroganov, I., & Pronina, I. (2019). The development of blockchain technology in Russia: Outlook and trends.

³ Osivand, S. (2021). Investigation of Metaverse in cryptocurrency. *GSC Advanced Research and Reviews*, 9(3), 125-128.

⁴ Teichmann, F. M. J., & Falker, M. C. (2021). Cryptocurrencies and financial crime: solutions from Liechtenstein. *Journal of Money Laundering Control*, 24(4), 775-788.

⁵ Allen, F., Gu, X., & Jagtiani, J. (2022). Fintech, cryptocurrencies, and CBDC: Financial structural transformation in China. *Journal of International Money and Finance*, 124, 102625.

⁶ Zhao, N., & You, F. (2023). The growing metaverse sector can reduce greenhouse gas emissions by 10 Gt CO2e in the united states by 2050. *Energy & Environmental Science*.



property rights, data privacy, combat cybercrime, and define legal liability in the context of the metaverse. This will ensure the security, protection of rights and development of this digital environment.

In conclusion, the future prospects of international private law relations within the metaspaces may still seem uncertain. Although there are potential solutions, such as international agreements or the creation of decentralized organizations, there are still enough problems to be solved. As the world becomes more and more digital, it is clear that there will be a need for new legal frameworks regulating interactions in virtual reality spaces. As technology continues to develop in the coming years, we think it will be interesting to see how this field develops.

So, what do we mean by these words? The fact is that the perspective of international private law relations in the metaspaces is high, in our opinion. In the coming years, topics such as the creation of a legal system in the metaspaces and its reform will continue to be discussed, will become the main topic of international and national conferences, in short, will remain the main focus of attention of all legal scholars.

We believe that in the next few years, in particular, in the next ten years, we will create such a legal basis that we will be ready for the entry of "metacon" into Uzbekistan, its spread and popularization, because at that time, if in this case If suggestions and comments are taken into consideration, we will have the basis to create the necessary legal relations for the digital environment.

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