



SAFEGUARDING INTELLECTUAL PROPERTY RIGHTS AND DATA PRIVACY IN THE EXPANDING METAVERSE

BY

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INTRODUCTION

In the wake of Facebook's transformation into "Meta"¹ and its focus on the metaverse – an alternate reality that aims to promote social and economic interactions, the boundaries between the physical and digital realms continue to blur. This virtual reality-based universe offers boundless opportunities for creativity, and exploration. Expanding and rapidly growing prominence, some even refer to it as the “new oil”².

However, as with any unprecedented phenomena, it brings along a host of complex challenges, including the protection of intellectual property rights and

¹Roose, K. (2021, November 10). The Metaverse Is Mark Zuckerberg's Escape Hatch *The New York Times*. <https://www.nytimes.com/2021/10/29/technology/meta-facebook-zuckerberg.html>

² Deshmukh, A., (2022, September 11). Intellectual Property Rights in The Metaverse. IJCLP. <https://ijclp.com/intellectual-property-rights-in-the-metaverse/>

data privacy. The expansive landscape of the Metaverse encompasses user-generated content, immersive experiences, and intricate virtual economies. Preserving and safeguarding intellectual property rights in this set-up has become a valid and crucial concern.

Simultaneously, the Metaverse thrives on user engagement and the exchange of personal data. Virtual environments often require users to share sensitive information, including personal preferences, behavioral patterns, and financial transactions. How can individuals and businesses safeguard their creations and sensitive information within this vast, interconnected world?

This essay undertakes a comprehensive exploration of the multifaceted considerations and measures required to effectively protect IPRs and privacy in the metaverse. It delves into the intricate interplay between legal frameworks, technological advancements, and collaborative efforts in addressing these critical concerns.

By examining the existing legal frameworks governing IPRs and privacy, including intellectual property laws, data protection regulations, and digital rights management systems, we gain insight into the complexities and gaps that arise when applying these frameworks to the metaverse. This in-depth exploration aims to pave the way for a metaverse that respects IPRs, preserves privacy, and fosters an equitable digital environment for all participants.

What is Metaverse?

The term "metaverse" refers to a virtual reality space or a collective virtual shared space where users can interact with a computer-generated environment and other users in real time. It can be thought of as an immersive and interconnected virtual

universe that transcends traditional boundaries of physical reality. The concept of the metaverse has gained significant attention in recent years due to advancements in virtual reality (VR), augmented reality (AR), and other emerging technologies. This attention has also been propelled by several other factors such as: investment by major tech giants³; the gaming industry with millions of dedicated fanbase who are eager to embrace the immersive experiences the metaverse provides⁴; technological advancements; pandemic driven shift and the social economic potential of the metaverse.

In the metaverse, users can explore and engage with a variety of digital environments, such as virtual cities, landscapes, games, social spaces, and marketplaces. They can create avatars, interact with other users, participate in activities, and even conduct business. The metaverse offers opportunities for socializing, entertainment, education, commerce, and much more.

The idea of the metaverse draws inspiration from various sources, including science fiction literature, such as Neal Stephenson's novel "Snow Crash," which depicted a virtual reality-based metaverse. The concept has also been popularized by movies like "The Matrix" and "Ready Player One." However, the current understanding and development of the metaverse go beyond fictional depictions, as technology continues to evolve and enable new possibilities.

It is important to note that the metaverse is still a developing concept, and its exact form and implementation are subject to ongoing discussions and experimentation.

³ Wagner, K. (2022, December 19). *Facebook's Meta Will Devote 20% of Costs to Metaverse Next Year*. Bloomberg.com. <https://www.bloomberg.com/news/articles/2022-12-19/facebook-s-meta-to-keep-investing-in-reality-labs-next-year>

⁴ Leroy, K. (2023, April 25). *The Metaverse: A New Frontier In Technology And Interconnectivity*. Forbes. <https://www.forbes.com/sites/forbesbusinesscouncil/2023/04/25/the-metaverse-a-new-frontier-in-technology-and-interconnectivity/?sh=1dff4fae3afc>

Different companies, including tech giants like Facebook (now Meta), Epic Games, and Microsoft, are investing in the development of metaverse-related technologies and platforms.

Intellectual Property Rights in the Metaverse

The metaverse is created to be highly interwoven, seamless, and unanchored in physical location, further complicating an already intricate field of play⁵. Practitioners will need to navigate questions of jurisdiction, territoriality, and conflicts of laws for each of the legal issues covered below; none of these issues have been satisfactorily resolved for the current internet, much less fully developed virtual worlds with an even higher level of interaction and user immersion⁶.

In the past three decades, nations with a strong online presence have established fresh regulations to address various aspects of the digital landscape. One significant area of regulation is intellectual property (IP) laws. These laws aim to safeguard the rights of authors, inventors, producers, designers, and performers by granting them exclusive rights over their creative works, trademarks, patents, industrial designs, or trade secrets. It is important to note that the focus of IP regulation is not primarily on the physical object containing the creative work, distinctive sign, or technical innovation, but rather on their intangible aspects.

While civil legislation governs the ownership of tangible property like cars, books, or purses, which may contain trademarks, patents, or copyrighted works, IP laws specifically address the ownership of the non-physical components of such

⁵ Bahuguna, A. (2022, September), *Intellectual Property and Metaverse*, International Journal of Science and Research (IJSR), Vol. 11 Issue 9. [Intellectual Property and Metaverse \(ijer.net\)](https://www.ijer.net)

⁶ Clifford Chance (2022, September) [the-metaverse-what-are-the-legal-implications.pdf \(cliffordchance.com\)](https://www.cliffordchance.com)

property. In IP terminology, this distinction is known as the "*corpus mysticum*" (the intangible asset) versus the "*corpus mechanicum*" (the physical representation) of that asset. Since IP laws concern themselves with the intangible elements (*corpus mysticum*) of an object, whether it exists physically or in the virtual realm, it is evident that the architects of the metaverse must respect the rights of inventors, designers, and owners of distinctive signs, just as in the physical world⁷.

The fact that the metaverse feels 'real', is the basis of demand to apply real-world laws within it as well⁸. In this section, we explore the key considerations and challenges related to intellectual property rights in the metaverse, along with strategies to safeguard creations and ensure fair compensation for their use.

Copyrights

A copyright is a collection of rights that automatically vest to someone who creates an original work of authorship like a literary work, song, movie or software. These rights include the right to reproduce the work, to prepare derivative works, to distribute copies, and to perform and display the work publicly⁹. Copyrights protect the original works of a creator published in any tangible medium. As such, texts, music, images, videos, and other works can be copyrighted in the metaverse¹⁰.

From a legal perspective, the Berne Convention, ratified by 181 countries, mandates that authors are granted exclusive rights over their works regardless of

⁷The metaverse, NFTs and IP rights: to regulate or not to regulate? (n.d.). https://www.wipo.int/wipo_magazine/en/2022/02/article_0002.html

⁸ Ibid.

⁹ Copyright Alliance. (2022, September 22). *What is Copyright* | Copyright Alliance. <https://copyrightalliance.org/faqs/what-is-copyright/>

¹⁰ Bleidorn, L. (2022). Intellectual property rights in the metaverse. *Red Points*. <https://www.redpoints.com/blog/metaverse-intellectual-property/>

the form of expression. The convention has been supplemented by the WIPO Copyright Treaty, which addresses digital environments. According to the treaty, storing a protected work in digital form, such as an NFT or a file displayed in the metaverse, constitutes reproduction requiring prior approval from the copyright holder.

The most common copyrights relating to Metaverse are the software applications aiding to create the Metaverse. Since an infinite number of creations are possible within Metaverse, copyright claims are quite interesting¹¹. If a right holder discovers unauthorized use of its copyrighted material in the metaverse, it should promptly notify the platform. However, procedures for takedown and website blocking may vary depending on the location of the host server, following local laws¹².

When assessing copyright infringement, courts will consider whether a substantial portion of the copyrighted work has been copied. The application of "fair dealing" defenses in a metaverse context remains uncertain.

Trademarks

A trademark is a symbol, word, or phrase used to identify and distinguish goods or services offered by

a particular company. Trademarks can include logos, names, slogans, or any other unique identifier that sets a company apart from its competitors¹³. Enforcing trademark rights in the metaverse presents similar obstacles as copyright

¹¹ Ibid

¹² *What does the Metaverse mean for intellectual property rights?* (n.d.). <https://www.techuk.org/resource/what-does-the-metaverse-mean-for-intellectual-property-rights.html>

¹³ Haroon, I., Olukokun K., *Navigating The Metaverse: Trademark Infringements and its Legal Implications* [Navigating The Metaverse - Trademark Infringements and its Legal Implications.pdf \(gelias.com\)](#)

enforcement. Trademark theft in the metaverse can be more challenging to address compared to the physical world. Monitoring and identifying infringing content becomes difficult due to the vast number of users, virtual spaces, and items. Keeping track of potential infringements in such a dynamic environment is a significant challenge. Moreover, discerning intentional from unintentional infringements can add further complexity to the situation.

Although there hasn't been specific legislation regarding metaverse regulation, notable cases related to trademark rights and infringements in the virtual world have emerged. In January 2022, luxury fashion brand Hermès initiated a legal action against Mason Rothschild, the creator of a Non-Fungible Token (NFT) called "Metabirkins." These digital assets replicated Hermès' iconic Birkin bag and were sold at high prices, including on the resale market. Hermès sought to halt Rothschild's marketing of the Metabirkins, claiming trademark infringement and misleading use of the Birkin brand¹⁴.

Companies like Nike and Converse have taken proactive steps by filing trademark applications with the United States Patent and Trademark Office, particularly for virtual offerings. Other industries, including fashion, cosmetics, sports, and entertainment, are also following suit and seeking trademark registrations for their virtual goods. While these applications are still undergoing review, they provide insights into potential strategies for securing trademark protection in the metaverse. Brand owners should be considering how to construct their virtual

¹⁴ *NFTs Found to Infringe Hermès Trademark.* (n.d.). The National Law Review. <https://www.natlawreview.com/article/nfts-found-to-infringe-herm-s-trademark#:~:text=Monday%2C%20February%2013%2C%202023%20In%20a%20case%20with.artwork%20consisting%20of%20images%20of%20Herm%C3%A8s%E2%80%99%20Birkin%20handbag> .

marketplace with appropriate trademark registrations, a robust policing strategy and appropriate licenses and terms of use as they look to grow in the metaverse¹⁵.

Patents

A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem¹⁶. While copyrights provide automatic protection to original works, patents necessitate a formal registration process to safeguard specific inventions.

In the metaverse, patents are handled in three main areas. Firstly, there are patents for the technology used to build the metaverse itself, including hardware and software components. While patenting the metaverse as a whole is not possible, applications for specific aspects such as augmented reality and virtual reality technologies are being filed¹⁷. Secondly, if existing patented technology is used virtually within the metaverse, it can lead to infringement. Secondly, the virtualization of already patented technology or machines, when used within the metaverse, can potentially lead to infringement issues. Lastly, patents can be created by avatars within the metaverse, which adds another interesting dimension to patent considerations.

Innovators in the metaverse may also use design patents to protect ornamental aspects of their invention. For example, fashion companies may seek protection of their branded objects within the metaverse. Technology companies may try to

¹⁵ *Trademarks in the Metaverse*. (n.d.). https://www.wipo.int/wipo_magazine/en/2022/01/article_0006.html

¹⁶ *Patents*. (n.d.). <https://www.wipo.int/patents/en>

¹⁷ *ibid*.

protect the ornamental features of their headsets or user interfaces¹⁸. It is crucial to recognize that the metaverse operates on a global scale, and industrial design applications may have varying requirements in different regions. For instance, Europe does not mandate a display screen for industrial designs. Accordingly, comprehensive strategies for design protection of metaverse related technologies may consider the nuances of seeking industrial design protection in various jurisdictions¹⁹.

Data Privacy in the Metaverse

Data privacy generally means the ability of a person to determine for themselves when, how, and to what extent personal information about them is shared with or communicated to others. This personal information can be one's name, location, contact information, or online or real-world behavior²⁰. Privacy is widely recognized as a fundamental human right in numerous jurisdictions, leading to the establishment of data protection laws. These laws serve to safeguard individuals' personal information. Data privacy is crucial for fostering trust and encouraging online engagement, as individuals need assurance that their personal data will be treated with utmost care and confidentiality.

As established, the concept of the metaverse is a hotbed of innovation and has emerged as a promising frontier. According to J.P. Morgan, the metaverse is a seamless convergence of our physical and digital lives, creating a unified, virtual community where we can work, play, relax, transact and socialize²¹.

¹⁸ Gerratana, F. (2023), *Intellectual Property for the Metaverse*. [How will Patents and Trademarks Work in the Metaverse? \(natlawreview.com\)](https://www.natlawreview.com/article/how-will-patents-and-trademarks-work-in-the-metaverse)

¹⁹ Ibid.

²⁰ Cloudflare. *What is Data Privacy?* <https://www.cloudflare.com/learning/privacy/what-is-data-privacy/>

²¹ J.P. Morgan, *Opportunities in the metaverse*, [Opportunities in the metaverse \(jpmorgan.com\)](https://www.jpmorgan.com/insights/metaverse)

The metaverse will bring new dimensions to the data protection and privacy scene; where regulations of data protection have been so far tackling physical data about users/ people, and its movement between countries, the metaverse world will create totally new actors (avatars) in addition to the original users with massive amounts of data generated from new sources such as the data collected from facial and eye expressions, moving between different metaverses.

When engaging in the metaverse, consumers often utilize avatars or virtual identities to interact. The issue arises as to whether these virtual activities and identities can be linked back to real individuals. While users can create avatars without disclosing personal information during the profile creation process, it doesn't imply complete anonymity. Metaverse platform owners possess knowledge of the account and user responsible for creating the avatar, thereby eliminating anonymity towards them. While gathering private data may be necessary to generate a genuinely pre-planned individualized experience—the automated systems, given artificial intelligence and machine learning abilities, will allow metaverse providers easy access to user information on an unprecedented scale.

The metaverse cannot be limited to one or a few data privacy regimes since it has a global reach and offers its features to users irrespective of where they are located. In many cases, multiple privacy regimes will apply to the same data and even the same individual. For example, the EU General Data Protection Regulation allows for any business located anywhere in the world to fall under its terms if a business offers goods or services in the European Union or monitors the behavior of EU citizens, even though it has no physical presence in Europe (Article 3 Sec. 2

GDPR)²². Privacy law has not quite caught up to state and international boundaries yet, and it's years away from reaching a consensus on the choice of privacy law in the metaverse.

For the metaverse to function properly, we need laws that emulate data privacy and protection, like the EU's GDPR. These laws would stipulate rules surrounding the collection use and potential misuse of data. However, very few global jurisdictions currently have these comprehensive laws in place. So, as a result, there are a few measures that platform providers and third parties can take to safeguard their users' data. Users should be informed when their physiological and biometric data is collected – primarily via artificial intelligence – in an obvious manner. And specific consent mechanisms (such as those outlined in the GDPR) should be implemented.

For organizations utilizing AR/VR devices or platforms, it is imperative to maintain strict vigilance over the risks of hack attacks, data breaches, and other adversarial exploits. They should proactively monitor and address these security concerns. Additionally, organizations must anticipate and prepare for potential adversarial AI attacks, implementing robust security measures to mitigate the risks. Likewise, individual users entering the metaverse should exercise caution regarding the information they share. It is essential to be mindful of the quantity and nature of personal data disclosed. Furthermore, deploying reliable online security tools specifically designed to safeguard against privacy infringements

²² Ibid.

and data breaches is crucial for protecting personal information in the metaverse environment²³.

Conclusion

The emergence of the metaverse as a transformative digital realm necessitates a robust framework for protecting intellectual property rights and ensuring data privacy. As this virtual ecosystem continues to evolve, it is imperative for stakeholders to address the complex challenges and embrace innovative solutions. Intellectual property in the metaverse requires a careful balance between encouraging creativity and innovation while upholding the rights of creators. Adapting existing intellectual property laws to encompass virtual assets and creations is essential to foster a thriving metaverse economy.

Equally important is the preservation of data privacy within the metaverse. As individuals immerse themselves in virtual experiences and engage with diverse platforms, their personal information becomes increasingly vulnerable. Establishing transparent data practices, implementing robust security measures, and adhering to applicable privacy regulations are vital to instill user trust.



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²³ Aijaz, S. (2022, April 21). How we can mitigate the potential threat to data privacy in the metaverse. *VentureBeat*. <https://venturebeat.com/datadecisionmakers/how-we-can-mitigate-the-potential-threat-to-data-privacy-in-the-metaverse/>

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