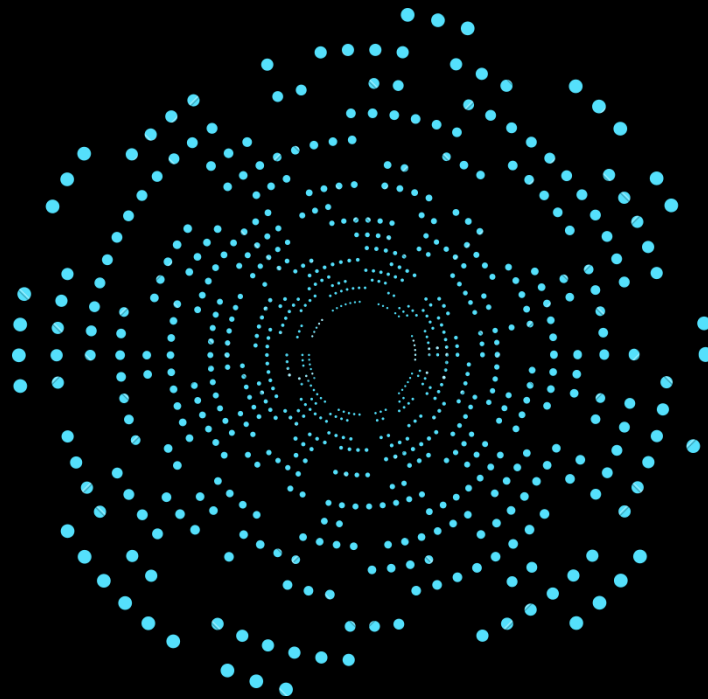




INTERNATIONAL JOURNAL ON CYBERSPACE LAW AND POLICY



VOLUME 1 AND ISSUE 1 OF 2023



INSTITUTE OF LEGAL EDUCATION



International Journal on Cyberspace Law and Policy

(Free Publication and Open Access Journal)

Journal's Home Page – <https://ijclp.iledu.in/>

Journal's Editorial Page – <https://ijclp.iledu.in/editorial-board/>

Volume 1 and Issue 1 (Access Full Issue on – <https://ijclp.iledu.in/category/volume-1-and-issue-1-of-2023/>)

Publisher

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Chairman of Institute of Legal Education (Established by I.L.E. Educational Trust)

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The Metaverse of Intellectual Property

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Best Citation – Shravani Gupta, The Metaverse of Intellectual Property, *International Journal on Cyberspace Law and Policy*, 1 (1) of 2023, Pg. 65–70, ISBN - 978-81-960677-4-8.

Abstract

Metaverse is the new petroleum. As Intellectual Property rights are the result of human curiosity and intelligence, their protection in new "virtual worlds" is of the utmost importance. The article discusses the issues of trademark infringement, patent infringement, and copyright infringement, as well as numerous case laws addressing IPR within virtual reality. Moreover, the legal-regulatory frameworks governing rights in the metaverse are currently suboptimal, but they are being utilised effectively. To ensure that a 'living' system of intellectual property is formed that effectively adapts to the accelerating pace of technology and research, it is said that existing regulations can be modified through modest legal adjustments and the addition of cutting-edge monitoring methods.

Keywords: Metaverse, trademark, infringement, copyright, technology.

Introduction

Intellectual Property (IP) becomes more crucial than ever as an increasing number of businesses enter the hyper-hyped metaverse market. IP is necessary for any business hoping to succeed in any domain, including the metaverse, because it allows companies to protect their ideas and innovations⁷⁸. Of course, in today's internet and its evolution, advances in blockchain technology, and all new forms of media, its meaning, and application of intellectual property have changed dramatically. The latest challenge to the area of intellectual property law is also quickly

developing in the Metaverse and how it's commonly understood.

One may wonder what type of intellectual property is most relevant for the metaverse. Well, there are different types of IP each protecting different part of your inventions, and each offers different kind of protection. Here, we'll take a look at the different types of IP and explore who the leaders are in the Metaverse space when it comes to patent ownership!

Morton Heilig patented the earliest version of the pre-metaverse virtual world, the Sensorama Machine, in 1962. The Sensorama Machine created a simulation of riding a motorcycle in which the user could actually experience the vibrations, sounds, and smells associated with the ride while immersed in a 3D video environment.

Metaverse is a virtual world connected by numerous 3D worlds in which multiple users can interact with each other utilising immersive cutting-edge technologies to simulate the actual world⁷⁹. Similar to the Metaverse, the concept may be traced back to Shankaracharya's Advaita Vedanta philosophy, in which he contends that the reality we presume is actually a dream of the Brahma/Ultimate awareness, which we are all oblivious of due to being in the dream ourselves. Shankaracharya argues that, like the Metaverse, this reality is only "relatively real"; that is, while it is created by a third party and can be dismantled like a computer programme, the mundane aspects of this reality are unquestionably real, making the rights and

⁷⁸ Google Patents, US3050870A – Sensorama simulator – Google Patents.

⁷⁹ Sunil Upasana, The Three levels of Ultimate Reality Indian Philosophy , INDIAN PHILOSOPHY, <https://indiephilosophy.com/2018/07/20/the-three-levels-of-ultimate-reality>.

responsibilities of people in such a reality a matter of grave concern.

What does the word Metaverse mean?

Simply stated, the Metaverse is a rising set of new technology driven digital experiences that are taking place through devices driven by new cloud computing models, the internet and network connectivity. It is understood to be some form of virtual reality with a wide array of digital components. Individuals will be able to conduct meetings, to learn, play games, engage in social interactions, and more.

Of course, while the Metaverse is still evolving, there is no question that it will allow individuals to create their own spaces for interactions. It will also certainly allow individuals to create content, or use content that will be protected by intellectual property law. As you can imagine, the Metaverse presents content creators and owners with a wide array of potential challenges when it comes to tracking their Intellectual Property. These challenges will have massive implications for media companies and the future of content creation broadly. The Metaverse is a virtual world that exists online, and is made up of a series of connected 3-D spaces referred to as "Metaverse World" or a "Metaverse Environment". In metaverse, people can interact with each other, create and share content, conduct events, attend music concerts, own real estate and even conduct business. It is a widespread connectivity which is maintained by augmented reality and virtual reality. Metaverse adds a third dimension for users to explore in an intuitive and realistic manner.

As with any virtual world, the metaverse needs rules and regulations to ensure that novelty, creativity and uniqueness of each stakeholder is protected in right spirit. That's exactly where IP steps in. IP is what protects the ideas and creations of people in the metaverse, and it's essential for keeping the metaverse world running smoothly without illegal copying, brand abuse, and counterfeiting of existing IP owners.

Metaverse and the Intellectual Property Rights

IP is a term that covers a wide range of creations, starting from trademarks and copyrights to patents and trade secrets. Protectable intellectual property assets in the metaverse may range from copyrightable literary works to all trademarks, including brands, slogans, and design patent protection for various configurations. Your company's intellectual property in the metaverse is a valuable asset that must be protected. You may sue anyone who copies or misappropriates your IP⁸⁰. There is also the potential of licencing and monetizing your intellectual property. Companies with excellent intellectual property can generate substantial revenue from licencing and royalties while retaining their competitive edge.

The legality of actions committed by virtual characters within a metaverse, despite being controlled by actual people, is in its infancy and has yet to mature fully. Because the metaverse feels 'real,' there is a desire to apply real-world laws to it as well. However, it would be difficult to determine which rights of people can be protected within the Metaverse. For instance, it would be difficult to protect the right against assault in the absence of "bodily harm," whereas the right against sexual harassment would apply because it does not require physical contact to come into play. In 2021, a lady was sexually abused in the 'Horizon Worlds' Metaverse, prompting the platform to open an investigation into the incident. Similarly, because Intellectual Property Rights (IPR) are fundamentally human inventions, their application would naturally extend beyond the real-virtual divide, necessitating the establishment of protection mechanisms. As the legal status of Metaverse itself is ambiguous, infringement of IPR, which includes protection of trademarks, patents, copyrights, etc., within Metaverse is a hotly discussed matter in modern times.

⁸⁰ Tanya Basu, The metaverse has a groping problem already, MIT TECHNOLOGY REVIEW
<https://www.technologyreview.com/2021/12/16/1042516/the-metaverse-has-a-groping-problem>.

Why should you safeguard your intellectual property in the metaverse?

Metaverse is a fast expanding virtual environment that provides limitless options for businesses and individuals. As this new frontier continues to expand, it is essential to secure your intellectual property in order to optimise your return on investment. IP violation can occur at every phase in the metaverse. For example, the sale of copyrighted NFT artwork in the metaverse may include both counterfeit and genuine artworks. Similar to the real world, trademark infringement can occur when buying and selling virtual things. Obviously, trade secrets that are really important in the metaverse are likely to be compromised. Before entering the Metaverse, you should strongly consider preserving your intellectual property, don't you think?

In addition, the metaverse is a global platform with people from around the globe. This gives an exceptional potential to develop your firm into other markets, but only provided you have the necessary IP protection in place. Without adequate protection, you may be susceptible to lawsuits and other legal proceedings from foreign competitors.

In addition, while deciding whether or not to invest in a firm, investors are increasingly considering the IP portfolio and IP valuation. Who would want to miss that opportunity?! You can illustrate the potential worth of your business and boost your chances of receiving capital if you have a robust IP portfolio.

How Can Your Intellectual Property Be Protected in the Metaverse?

It is vital to take the same measures with intellectual property in the Metaverse as you would in the actual world. Here are some tips for protecting your intellectual property in the Metaverse:

1. Register patents, trademarks, and intellectual property rights: Priorities

come first. Filing patents, trademarks, and copyrights with the competent authorities in jurisdictions of interest is the best approach to protect your innovative technology. This will provide you legal rights to your intellectual property, give you an advantage over your competitors, and prohibit others from violating your rights. Patents can protect distinctive systems, techniques and procedures. The demand for design patent protections for one-of-a-kind aesthetic compositions and configurations increases daily. Trademarks can assist in the protection of business/brand names, logos, taglines, slogans, and even characteristic gestures and sounds! While copyright can protect platform design, user interfaces, and websites, among other things.

2. Conduct an IP analysis: Businesses should conduct a comprehensive and in-depth IP analysis of the virtual landscape in order to find green space and freedom to operate. Such a comprehensive study would not only aid in identifying patented domains and technologies, but also in preventing the infringement of others' intellectual property.
3. Utilize security measures: Ensure that you employ robust passwords and security procedures to safeguard your intellectual property from theft or illegal access. Enforce the privacy policy and confidentiality agreement to preserve total data protection and privacy.
4. Monitor your IP portfolio: Monitor all of the IP you hold and where it is registered. This will help you keep track of your assets and account for all of your intellectual property.
5. Educate your personnel: Ensure that your employees are aware of the significance of intellectual property protection and how to identify and report infringements.

6. Consult a lawyer if you are unsure of how to safeguard your intellectual property or if someone is infringing on your rights; we will have your back.

Metaverse and Trademark

A trademark is a visual symbol that differentiates trademarked goods and services from others. If such a symbol is legally protected in the physical world, its position in the metaverse should not be drastically different. Metaverse is literally a windfall for companies who own trademarks, as it provides a fertile environment for the promotion and marketing of trademarks at a low cost. Multiple instances of alleged trademark infringement have already occurred in Metaverse. In the 2008 landmark case *E.S.S. Entertainment 2000, Inc. v. Rockstar*⁸¹, the court ruled that the virtual representation of the real-life strip club's trademark logo within one of the earliest metaverses, Grand Theft Auto, does not constitute trademark infringement because it is protected by the First Amendment of the U.S. Constitution. In some instances, however, the improper use of trademarks in Metaverse is hotly contested. Exemption from trademark infringement would be considered only if the unlawful use is de minimis, incapable of generating confusion among the general public, or not intended for economic gain. In the case of *Tata Sons Limited vs. Greenpeace*⁸² International, the court determined that the unauthorised use of the petitioner's trademark within a game created by the defendant to promote an environmental cause and criticise the defendant was merely satire and did not constitute trademark infringement. One is left to wonder how a trademark would be secured if it were generated by an avatar within the metaverse.

Metaverse and Patent

⁸¹ 444 F. SUPP. 2D 1012.

⁸² 45 PTC 275 (2011).

Over the past decade, the number of patents relating to the metaverse has increased. Patents within Metaverse must be managed according to three verticals: Patents on the Metaverse technology itself, which can be subdivided into the hardware and software technologies required to create a personalised and unique Metaverse. Since Metaverse as a whole cannot be patented, separate patent applications are being submitted for Augmented Reality and Virtual Reality technology, software applications, etc. Second, the employment of already patented technologies or devices within the Metaverse, which is known as the "virtualization of patents," may constitute an infringement. The third vertical is particularly intriguing as it discusses the Metaverse patents created by avatars. The United States just granted Indian entrepreneur Bhargav Sri Prakash a patent for the first "Digital Vaccine" he designed and tested in a metaverse game⁸³! This case also suggests that the Metaverse will have unimaginable effects on medical patents and healthcare as a whole.

Metaverse and Copyrights

The most common copyrights pertaining to the Metaverse are software applications that contribute in its creation. Since these virtual worlds are a type of "combinatorial inventions" that incorporate a variety of musical, artistic, literary, sonic, and dramatic works, copyright claims are also asserted independently for each of these categories. Given that an endless number of creations are feasible within the Metaverse, copyright claims are extremely intriguing. In *Amarreto Ranch Breedables, LLC v. Ozimals*⁸⁴, Inc, where Ozimals developed 'breedable animals' within the 'Second Life' Metaverse, the plaintiff alleged that the defendants' development of 'virtual bunnies' violated their copyright of a 'virtual horse' developed within the Metaverse! Non-Fungible

⁸³ Rupali Mukherjee, Indian gets world's first digital vaccine patent, THE TIMES OF INDIA, <https://timesofindia.indiatimes.com/business/startups/trend-tracking/indian-gets-worlds-first-digital-vaccine-patent/articleshow/92073578.cms>.

⁸⁴ N.D. Cal. Dec. 21, 2010.



Tokens (NFTs) are an intriguing method of copyright protection as well as an outlet for infringement, as NFTs are tokens that may be electronically traded but whose underlying asset remains unchanged. Thus, an artwork NFT can be easily infringed upon or duplicated without the owner's permission. NFT licence agreements can assist creators in protecting their copyrights in the form of NFTs.

The role of Artificial Intelligence

Media businesses and large tech, including Google, Netflix, Microsoft, Amazon, and IBM, have long used artificial intelligence. By spotting potential infractions, AI can aid in the enforcement of intellectual property laws. In the modern era, it is evident that certain businesses have entire business models devoted to such technology and capabilities.

There is still one important issue, though: How can AI be used in the Metaverse to ensure the preservation of IP? How does it work with the blockchain?

Businesses like IBM have embraced AI for a variety of purposes, including cybersecurity, sophisticated cloud and network orchestration, and customer service.

However, AI can be used to look for infringements on intellectual property. A machine learning system, for instance, could be programmed to look for instances of video, picture, or other digital asset misuse. Legal notices that demand the removal of the assets may be delivered to the proper parties once they are discovered⁸⁵. The content creator can then be alerted and given the opportunity to take appropriate action or be reimbursed by using the same AI to ascertain what type of monetization the property violation has engaged in. All of this raises the following essential query: In the Metaverse, is your content secure? How may your material be tracked? What kind of legal safeguards will be in place to protect your inventions and business

models? As the Metaverse is still being developed, many of these questions are still open⁸⁶. The good news is that intellectual property has endured even in the digital age as business models have evolved. It makes sense to assume that the same safeguards that have kept intellectual property law alive into the Metaverse, including the deployment of AI, will do so.

Who is leading the Metaverse's IP race?

Although the word "metaverse" has been in use since 1992, there has been an increase in patent applications in this field in recent years. There are a few of major intellectual property stakeholders in the metaverse, including IBM Corp, HTC, Microsoft Corp, and others. The patents pertain to the most recent technological breakthroughs in virtual reality, augmented reality technologies, metaverse gestures, metaverse communications, and similar areas. These companies are also leaders in trademark and copyright protection, in addition to patent filing. Their extensive portfolio of registered trademarks and copyrights encompasses everything from VR software to AR gear. By preserving their intellectual property, these businesses are able to preserve a competitive advantage in the ever-changing metaverse environment.

Regulations and the Legal Framework

Currently, IPR within the Metaverse exists in a legal grey area. Either there is no legal structure for virtual space or it is minimal. It is hardly surprising that the number of IPR applications has grown⁸⁷. The following is a list of USPTO applications related to Metaverse:

Since there are no special provisions for Metaverse IPR applications, the majority of them are submitted in the United States under

⁸⁵ Available at <<https://www.ibm.com/security/artificial-intelligence>>

⁸⁶ Available at <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3686469>

⁸⁷ Micheal Kondoudis , NFT + Metaverse + Crypto Trademark Tote Board, THE LAW OFFICE OF MICHEAL E. KONDOUDIS, available at <<https://www.mekiplaw.com/nft-trademark-filing-information>>

Technology Centre No. 2100⁸⁸. (Computer Application and Software) contains Artificial Intelligence and Simulation, Graphical User Interface, Memory Access, and Control, etc. Class 9 of the NICE Classification encompasses 'downloadable virtual items for usage in a virtual world,' for example⁸⁹. Consequently, applications have been filed in the United States, India, and other countries under Classes 9, 35, 41, 43, etc., as directed by the previously mentioned ID Manual⁹⁰. However, legal and technical methods to prevent infringement and keep track of intellectual property rights (IPR) within the metaverse will be challenging to develop but will be necessary.

Conclusion

Arguably, IP plays a significant role in the Metaverse. Metaverse is introducing cutting-edge advancements in AR and VR technologies, copyrightable games, non-fungible tokens, and trade secrets, among others. As technology progresses, it will be difficult for non-IP holders to maintain their position in the metaverse due to the ineluctable nature of IP rules. Having said that, even intellectual property law must adapt and keep pace with technological advancements. There is an increasing demand for compatibility with the metaverse, and it is always preferable to have a deeper understanding of the laws that play a significant part in the metaverse.

According to a recent estimate by J.P.Morgan⁹¹, 54 billion dollars are spent annually on virtual goods, which creates vast opportunities for IPR applications and infringement lawsuits. In a universe where imagination is limitless, protecting intellectual property rights is a

difficult endeavour. Rather than relying on the guidelines of a single nation, it will depend on the proactiveness of governments to incorporate relevant provisions into their IPR laws, such as amending the classes of trademarks and the NICE Agreement, 1957 by WIPO to include specific provisions related to the topic⁹². On the other hand, appropriate supervision mechanisms must be built, such as the virtual investigator of IPR violation, future-proofing existing intellectual property rights, a virtual database of NFTs, etc. As we move into the Web 3.0 and Globalization 4.0 eras, IPR laws must also be updated. As Mark Twain wittily observed, "A country without a patent office and decent patent laws was like a crab that could only walk sideways or backwards"⁹³.

⁸⁸ TC 2100 Management Roster, USPTO, <<
<https://www.uspto.gov/patents/contact-patents/tc-2100-management-roster>>> .

⁸⁹ TMNG | IDML Public Record, <https://idm-tmng.uspto.gov/public-view/record.html?referrer=public&recordId=84025>.

⁹⁰ Aparajita Lath, Trademarks and the Metaverse: Imaginary Rights or Real Wrongs?, SPICY IP, <
<https://spicyip.com/2022/05/trademarks-and-the-metaverse-imaginary-rights-or-real-wrongs.html>>

⁹¹ J.P.Morgan, Opportunities in the Metaverse (2022), J.P.MORGAN <
<https://www.jpmorgan.com/content/dam/jpm/treasury-services/documents/opportunities-in-the-metaverse.pdf>>

⁹² Nice Agreement Concerning The International Classification Of Goods And Services For The Purposes Of The Registration Of Marks , WIPO IP PORTAL, <
<https://wipolex.wipo.int/en/text/287532>>

⁹³ Mark Twain , Mark Twain quotations – Patents Twainquotes.com, <
<http://www.twainquotes.com/Patents.html>>