

EXPLORING METAVERSE: THE INTELLECTUAL PROPERTY COMMERCIALISATION IN THE VIRTUAL REALM

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Abstract

The Metaverse, a virtual landscape where users can interact and create, presents a fascinating frontier for intellectual property (IP) commercialization. This paper explores the Metaverse's intricacies, including its technologies, myriad possibilities, and inherent limitations. It particularly focuses on the pivotal role of Non-Fungible Tokens (NFTs) within the Metaverse and their profound implications for IP rights. While the Metaverse offers enticing advantages such as enhanced connectivity and immersive experiences, it also raises critical concerns regarding addiction, cybersecurity, and mental well-being. NFTs, as blockchain-based tokens representing digital assets, stand poised to reshape the Metaverse by facilitating ownership, monetization, and cross-platform interoperability of digital assets. However, their adoption presents challenges related to privacy and legal ambiguities. Moreover, this paper scrutinizes the convergence of IP, NFTs, and the Metaverse, shedding light on the complexities of IP commercialization within this virtual realm. Trademarks, patents, and copyrights in the Metaverse pose unique legal challenges and opportunities, necessitating a robust legal framework to protect stakeholders' interests. Recent legal disputes involving NFTs underscore the imperative of addressing IP concerns in this burgeoning domain. While the Metaverse holds immense promise for innovation and economic advancement, navigating its legal landscape requires proactive measures. Stakeholders must adapt to emerging challenges and opportunities, ensuring the preservation of IP rights in this dynamic digital ecosystem. Looking ahead, continued growth in the Metaverse, cryptocurrency, and NFT sectors underscores the need for

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ongoing vigilance and strategic adaptation in the face of evolving complexities.

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Understanding the Metaverse and its importance in the digital world

Metaverse is an idea of a virtual, three-dimensional world that a user can access using a virtual reality headset. Neal Stephenson originally introduced the term ‘Metaverse’ in his science fiction work ‘Snow Crash’ published in 1992.¹ Metaverse is an idea of a virtual world where users may communicate with one another through their own distinctive characters known as ‘Avatars’ (this term was also used in the book ‘Snow Crash’ for the first time). The Metaverse does not fully exist yet due to its certain limitations in today’s world such as the need for a very high networking speed, expensive cost of setup, and—most importantly—the fact that people are not ready to adapt to such a lifestyle yet.

To put it differently, the concept of the internet in the upcoming Web 3.0 era is called the metaverse. The Metaverse is an online virtual environment that provides users with a platform for communication, content creation, and ideas sharing. Also, it gives users the ability to host events, go to concerts online, own real estate, and do commerce in that virtual world itself.

The technologies related to Metaverse

The Metaverse is a networked virtual environment controlled by gestures via electromyography and neural interfaces.² The metaverse, a concept significantly larger than virtual games, includes Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), Blockchain, Web 3.0, Cryptocurrencies, NFTs, and many other technologies. One of the most crucial components of the metaverse is the VR, AR, and MR, which essentially give consumers a 3D immersive virtual experience.

The Endless Possibilities of Metaverse

¹ This 29-year-old book predicted the 'metaverse' — and some of Facebook's plans are eerily similar, *available at:* <https://www.cnn.com/2021/11/03/how-the-1992-sci-fi-novel-snow-crash-predicted-facebooks-metaverse.html> (last visited on February 10, 2024).

² What is EMG and How will it Revolutionize Augmented Reality?, *available at:* <https://www.xrtoday.com/augmented-reality/what-is-emg-and-how-will-it-revolutionize-augmented-reality/> (last visited on February 20, 2024).

Metaverse is a vast domain with endless possibilities yet to be explored. Following are some possible advantages of Metaverse.³:

- i. Bringing people together: The metaverse offers a neutral platform where individuals can interact on equal footing, transcending geographical limitations and physical constraints.
- ii. Immersive experience: Since Metaverse offers a more immersive method to explore the numerous features of the Internet, it is known to be a 3D version of the traditional Internet.
- iii. New business opportunities: In the metaverse, innovative marketing and advertisement strategies, including virtualised stores, offer users a fully immersive experience where they can interact with products, and feel their texture and weight – using haptic technology – facilitating informed purchasing decisions.
- iv. Effect on NFTs and cryptocurrencies: Blockchain technology, NFTs, and cryptocurrency are set to be important components of the future metaverse, offering security, decentralisation and seamless asset ownership transitions between physical and digital realms. NFTs could be utilised to link the digital and physical worlds by functioning as deeds to properties and other assets.⁴ NFT has been discussed exhaustively further in this article.
- v. Fresh opportunities to earn profits: With the emergence of new technology like the metaverse, individuals are capitalising on opportunities to earn profit by investing in virtual real estate, constructing diverse assets within the metaverse or engaging in games that award tokens and NFTs, all with the hope of future appreciation and monetary gains.

The limitations of Metaverse

- i. Losing touch with reality: Long-term use of the metaverse may cause one to lose touch with reality to the point of potentially denying the existence of any external world.
- ii. Cybersecurity Challenges: As the metaverse is still a relatively new idea, it does not yet have strong cybersecurity regulations. Consequently, it continues to be extremely

³ Metaverse Pros and Cons 2023: Key Benefits and Concerns, *available at*: <https://cyberscrilla.com/metaverse-pros-and-cons-the-top-benefits-and-drawbacks/> (last visited on January 14, 2024).

⁴ What is the Role of NFTs in The Metaverse? *available at*: <https://www.forbes.com/sites/forbestechcouncil/2022/03/11/what-is-the-role-of-nfts-in-the-metaverse/?sh=43d767686bb8> (last visited on March 5, 2024).

susceptible to a wide range of illegal activities, including fraud, money laundering, exploitation of children, illicit trade, cyberattacks, and more.

- iii. Addiction issue: In the metaverse, addiction poses a significant concern, particularly for children and teenagers, as experts warn that excessive exposure to individuals under 18 could detrimentally impact their developmental progress.
- iv. Mental health issues: VR headsets often lead to ‘cybersickness’⁵ – a technology-induced form of motion sickness, whereas those individuals who perceive metaverse to be superior to reality face an elevated risk of depression, as it can diminish their self-esteem and trigger severe depressive episodes.⁶

Non-Fungible Tokens: Its Considerations in the Metaverse

Non-Fungible Tokens, or NFTs for short, are blockchain-based tokens that each stand for a distinct kind of asset, such as a piece of media, intellectual property, or art. NFTs function more like a digital certificate of ownership and authenticity. When comparing NFTs and cryptocurrencies, we should note that the former are special digital assets, whilst the latter are the digital currency, we use to buy such assets.⁷

The Influence of NFTs on the Metaverse

NFTs have the potential to significantly influence the development of the Metaverse landscape. Below are several ways in which NFTs might impact the Metaverse⁸:

- i. Unique Digital Assets: NFTs can produce unique digital assets in a virtual world such as virtual real estate, avatars and in-game items, granting individuals true ownership and control over their digital assets. This not only enhances their value but also gives a sense of identity within the Metaverse.
- ii. Monetisation: NFTs enable users to earn profit from their digital assets by auctioning them off or selling them on open marketplaces. This opens up a fresh income stream for creators and encourages the development of high-quality, distinctive digital assets.

⁵ Cybersickness Could Spell an Early Death for the Metaverse, *available at*: <https://www.thedailybeast.com/cybersickness-could-spell-an-early-death-for-the-metaverse-and-virtual-reality> (last visited on March 10, 2024).

⁶ Future of mental health in the metaverse, *available at*: <https://gpsych.bmj.com/content/35/4/e100825> (last visited on February 7, 2024).

⁷ What are NFTs and how do they work?, *available at*: <https://www.kaspersky.com/resource-center/definitions/what-is-an-nft> (last visited on January 5, 2024).

⁸ Understanding the NFTs and their role in Metaverse, *available at*: <https://community.nasscom.in/communities/blockchain/understanding-nfts-and-their-role-metaverse> (last visited on March 19, 2024).

- iii. **Interoperability:** NFTs can seamlessly function across diverse platforms, promoting interoperability and delivering a smooth user experience. This means that users would be able to move their digital assets between different Metaverse or platforms with ease.
- iv. **Fraud Prevention:** NFTs serve as a safeguard against fraud by guaranteeing ownership and reliability of digital assets. Their uniqueness, inability to be replicated, and recording on a blockchain create a transparent and secure ownership record.

Privacy with respect to NFTs

A digital file, commonly a picture, video or GIF, is minted to create an NFT. Put another way, a cryptocurrency is used to create a digital certificate of ownership and originality, which is then sold to the new owner. Since digital materials and artwork are notorious for being readily stolen or replicated, NFTs are advantageous. In addition, NFTs could be used as evidence against the unauthorised use of digital goods if they are ever included in copyright legislation.

Unlike the JPEG (Joint Photographic Experts Group) files that can be easily duplicated and verifying the authenticity of an original image can be difficult, the NFT (non-fungible token) are verifiable, since NFTs are stored/maintained on a blockchain. However, JPEGs can be minted as NFTs via NFT marketplaces like OpenSea, etc.⁹

The rationale behind buying an NFT

Today, NFTs are extremely popular, and people are getting enthusiastic about purchasing them. Yet why? Since NFTs are digital assets representing collectables, music, art, etc. Owning an NFT, therefore, entitles one to own the object it represents.¹⁰

Yet some people purchase NFTs in order to enjoy and support artists they like and whose work they appreciate. Many others buy NFTs with the intention of keeping them until their value increases over time and selling them later to generate revenue.

Role of NFT in the Metaverse

Metaverse and NFT are both trendy terms in today's context. There may be some uncertainty regarding what their common ground is, given NFTs tend to be associated with websites and

⁹ Can JPEGs Be NFTs? *available at:* <https://nftclub.com/can-jpegs-be-nfts/> (last visited on January 20, 2024).

¹⁰ Understanding NFTs and The Metaverse, *available at:* <https://influencermarketinghub.com/nfts-metaverse-report/> (last visited on February 21, 2024).

transactions that happen through web browsers, but the metaverse is mostly VR-based. Even though both ideas are relatively new, a number of businesses have already discovered innovative and successful ways to apply both at the same time.¹¹

- i. Digital marketplace: The potential of virtual marketplaces, including VR and NFT platforms, has attracted numerous brands across diverse sectors, with Nike emerging as a notable case study as it has introduced its digital sneakers NFT called ‘Cryptokicks’ and has created a metaverse platform called ‘Nikeland’, where the launch of ‘Cryptokicks’ has achieved remarkable financial success.¹²
- ii. Art gallery: VR offers an exceptional platform for experiencing NFT artworks, allowing users to closely examine artworks from various perspectives. An interesting development is museums adopting virtual metaverses like Cryptovoxels.
- iii. Real estate NFT: In the actual world, real estate may be a very profitable industry; while in the metaverse, there is a chance for this as well. For instance, ‘Decentraland’¹³ Is a 3-D virtual territory where plots of land can be sold as NFTs using their own cryptocurrency¹⁴.

Other examples include brands like Adidas, Tiffany, Gucci and Dolce & Gabbana, where these brands have positioned themselves as industry leaders in NFT and marketing sectors.

The convergence of IPR, NFT and the Metaverse: Commercialising Intellectual Property in the Metaverse

The metaverse is a digital setting where computers or human avatars can operate virtual goods like furniture, cars, and weapons that may be protected by copyright or trademarks. As IP laws deal with the intangible part, i.e., corpus mysticum of an object, it implies that the makers of the metaverse will need to respect the rights of inventors, designers, and owners of unique signs as that in the real world.¹⁵

¹¹ What Is The Role Of NFTs In The Metaverse? *available at:* <https://www.forbes.com/sites/forbestechcouncil/2022/03/11/what-is-the-role-of-nfts-in-the-metaverse/> (last visited on December 19, 2023).

¹² Nike and RTFKT Go to the Metaverse with CryptoKicks Sneakers, *available at:* <https://www.fxempire.com/news/article/nike-and-rtfkt-go-to-the-metaverse-with-cryptokicks-sneakers-977051> (last visited on January 29, 2024).

¹³ Decentraland, *available at:* <https://en.wikipedia.org/wiki/Decentraland> (last visited March 4, 2024).

¹⁴ Alexandra Marquez, “Welcome to Decentraland, where NFTs meet a virtual world” *NBC News*, Apr. 3, 2021.

¹⁵ The metaverse, NFTs and IP rights: to regulate or not to regulate?, *available at:* https://www.wipo.int/wipo_magazine/en/2022/02/article_0002.html (last visited on January 26, 2024).

Trademarks in Metaverse

A trademark basically functions as a device or symbol that sets one good or service apart from the competition. A mark having legal protection in the actual world should be granted protection in the metaverse as well. For companies who own trademarks, the metaverse offers great potential because it offers an affordable setting for marketing and advertising their brands. Several cases of alleged trademark infringement in Metaverse have already been registered.¹⁶

The court ruled in a renowned case of *E.S.S Entertainment 2000 Inc. v. Rockstar Videos, Inc*¹⁷ in 2008 no trademarks were violated when the Grand Theft Auto (GTA) computer game used a virtual representation of an actual strip club's trademark device. This ruling was based on the premise that it fell under the protection of creative expression protected by the United States Constitution's First Amendment.

The court decided in *Tata Sons Limited v. Greenpeace International*.¹⁸ that trademark infringement would not occur if the petitioner's trademark was used 'within' a game created by the defendant. These cases raise questions about how a trademark produced by an avatar within the metaverse itself would be protected, as the issue is still up for debate.

Patents in Metaverse

The number of metaverse-related patent applications has increased during the past ten years. There are two primary categories into which patents in the metaverse fall. First, the technology that drives the metaverse is patented. The technology in question includes the hardware and software components needed to build unique, personalized metaverses. It's crucial to remember that patenting the metaverse as a whole is unfeasible. As a result, numerous patent applications are being filed for its technologies such as software, augmented reality, virtual reality, and other related fields.

In the second category, it is intriguing to read about the patents that are created by avatars 'within' the Metaverse. An Indian businessman Bhargav Sri Prakash, who developed and tested the first 'Digital Vaccine' inside a metaverse game, has been granted a patent by the United States. Within the metaverse, a digital vaccine trains the brain on what to do and

¹⁶ Ashish Deshmukh, "Intellectual Property Rights In The Metaverse", *International Journal on Consumer Law and Practice*.

¹⁷ 444 F. Supp. 2d 1012 (C.D. Cal. 2006).

¹⁸ CS (OS) 1407/2010.

what not to do in order to avoid diseases. This instance also suggests that the Metaverse may revolutionise healthcare in general and medical patents in particular.¹⁹.

Copyrights in Metaverse

The software programs that help build the Metaverse are typically protected by copyrights. Copyright claims are fascinating since the Metaverse allows for an endless number of creations. In *Amarreto Ranch Breedables LLC v. Ozimal Inc.*²⁰, the plaintiff contended that the defendant had infringed upon their copyright of a ‘virtual horse’ created within the Metaverse by creating ‘virtual bunnies’ in the ‘Second Life’ Metaverse.

Since NFTs are just representations of specific blockchain-based works, it is unlikely that they will enjoy copyright protection. Under the intellectual property law, NFT wouldn't be considered original works. Nonetheless, the Works on which the NFT is created may enjoy copyright protection. For example, an NFT might be a meme inspired by a well-known TV program. However, in this scenario, the person who created the NFT might be the owner of the NFT, but not the copyright to the original content.

However, the Copyright protection in the Metaverse is likely to face fresh challenges when it comes to Licensing and Enforcement. The territoriality of copyright is an issue because of how simple it is to move intellectual property between virtual platforms in the Metaverse. Because switching between platforms is so straightforward, it can be difficult to track permitted use for licensing/royalty purposes or illegitimate use for damage assessment.²¹

Non-Fungible Tokens (NFTs): An IPR Perspective

The question often asked is whether the sale of an NFT also transfers copyright in the underlying work to the buyer. The answer is that IP rights in the underlying work are almost

¹⁹ Indian entrepreneur gets US patent for ‘digital vaccine’, available at: <https://www.thehindubusinessline.com/companies/indian-entrepreneur-gets-us-patent-for-digital-vaccine/article65381532.ece> (last visited on March 11, 2024).

²⁰ 790 F. Supp. 2d 1024 (N.D. Cal. 2011).

²¹ Intellectual Property in the metaverse, available at: <https://www.mondaq.com/unitedstates/trademark/1198372/intellectual-property-in-the-metaverse#:~:text=However%2C%20the%20licensing%20and%20enforcement,of%20copyright%20is%20a%20concern> (last visited on February 15, 2024).

never transferred. What the purchaser generally gets is only a copy of the digital work, duly authenticated by the blockchain record.²²

The real value of an NFT lies in its non-fungible quality, making it one-of-a-kind and unlike cryptocurrencies that can be swapped interchangeably. This uniqueness, coupled with its exclusivity, transforms specific NFTs into collectibles, spreading wide interest among enthusiasts. Recently, Indian actor Amitabh Bachchan recently made headlines by selling his NFT collection including poetry recitations from his father's renowned work, *Madhushala*, as well as autographed movie posters, for nearly \$900,000.²³

Trading of an NFT

The trading of NFTs relies solely on cryptocurrencies, and the legal ambiguity surrounding cryptocurrencies in India poses a significant obstacle. In 2018, the Reserve Bank of India (RBI) published guidelines that barred financial institutions under its jurisdiction from carrying out transactions using cryptocurrency. However, the Supreme Court invalidated this guideline in the case of *Internet and Mobile Association of India v. Reserve Bank of India*.²⁴, essentially holding that in the absence of any legislative ban on cryptocurrencies, the RBI could not impose restrictions on trading them, since this would tend to interfere with the fundamental right of an Indian citizen to carry on any trade deemed legitimate under the law.

Subsequently, in an attempt to outlaw all private cryptocurrencies, the Cryptocurrency and Regulation of Official Digital Currency Bill was an attempt by the government to be introduced in 2021. Nevertheless, at present, the legal status of cryptocurrencies remains uncertain, with no established regulations or bans in place.

Legal perspective

At the moment, there are no specific laws in India that directly govern the commercial transactions involving NFTs. The sole legal mention relates to the Income Tax Act of 1961, which has been modified to incorporate NFTs within the category of Virtual Digital Assets (VDAs). Consequently, any income derived from NFT trading is subject to a 30% tax rate.

²² Pravin Anand, Dhruv Anand, Udit Patro “Bollywood buzzing over NFTs”, 7 *Asia Business Law Journal* (2023).

²³ Indian celebrities who have launched their own NFTs, available at: <https://www.lifestyleasia.com/ind/tech/indian-celebrities-and-their-nfts/> (last visited on February 21, 2023).

²⁴ (2013) 8 SCC 519.

Since NFTs are traded on a marketplace, they may also fall under the purview of the Sales of Goods Act, 1930, which could make certain implied warranties applicable. Additionally, as virtual products, purchasers might find protection under the Consumer Protection Act, 2019. The rules that are part of this act, the Consumer Protection (E-commerce) Rules, 2020, specifically cover all goods and services—including digital products—that are transacted using digital or electronic networks. Consequently, it's probable that both the act and these 2020 Rules extend their coverage to NFT consumers, allowing them to seek liability claims for faulty products.

NFTs have been a subject of legal disputes worldwide, leading to some noteworthy IP lawsuits highlighting questions over their use:

The first copyright infringement suit involving NFTs in China was *Shenzhen Qice Diechu Cultural Creativity v. Hangzhou Yuanyuzu Technology*²⁵ In 2022. After learning that an NFT marketplace had created and sold an NFT that was an exact replica of the original work, the owner of the copyright for the 'Fat Tiger' cartoon series — which was first posted on the social media platform Weibo — filed a lawsuit against it for contributory copyright infringement. The Hangzhou Internet Court dismissed the marketplace's defence of being a mere intermediary and ordered the destruction of the digital work with the plaintiff awarded USD 600 in damages.

In 2022, a European court delivered the inaugural NFT-related verdict in the case of *Juventus FC vs. Blockeras*.²⁶ Juventus FC, the Italian football club sued NFT creator 'Blockeras', for marketing NFTs that featured football players — including Christian Vieri — wearing Juventus jerseys with the club's trademark clearly visible. Juventus had not given its consent for Vieri's image to be used, even though Vieri had lawfully licensed his image to Blockeras. The Rome Court of First Instance gave its decision in favour of Juventus, issuing an injunction that prohibited Blockeras from engaging in NFT transactions involving these assets.

*Nike v StockX*²⁷ is ongoing, filed by Nike in New York against online marketplace StockX for trademark infringement, counterfeiting and false advertising in launching an NFT collection tied to actual Nike sneakers without authorisation. The shoemaker alleges StockX sold NFTs at unreasonable prices; StockX disputes these allegations, claiming NFTs are nothing more than digital receipts or claim tickets that are used to monitor ownership of the particular real

²⁵ (2022) Zhe 0192 Minchu No. 1008.

²⁶ No. 32072/2022.

²⁷ 22-CV-00983 (VEC)(SN) (S.D.N.Y. Jan. 9, 2023).

Nike goods that StockX has verified. Thus, according to StockX, the ‘first-sale’ doctrine—which permits the resale of goods containing intellectual property (IP) of another party without that party's consent—applies to the sale of shoes and NFTs, provided that the party selling them is the legitimate owner of the item.²⁸

The case *Hermès International v. Mason Rothschild*²⁹, which is still pending in New York, involves the luxury company accusing Rothschild of trademark infringement. Mason Rothschild is the person behind the furry versions of Hermès's well-known Birkin Bag, known as the MetaBirkin NFTs. According to Rothschild, his fantastical representations of the bags and names are both artistically significant and authentic regarding their origin. The court rules that a trial is the only way to assess whether or not the trademark usage is purposefully misleading or has any artistic value.

Conclusion: Emerging Trends and Future Outlook for IPR in the Metaverse

The Metaverse is an evolving digital platform that brings forth a complicated way of commercialization and safeguarding the Intellectual Property (IP). The Metaverse combines different advanced technologies, including Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), Blockchain and Non-Fungible Tokens (NFTs) which presents itself as an unprecedented unique opportunity, however accompanied by major legal challenges.

Conventional IP protection and commercialization frameworks are struggling to keep up with the vast and dynamic nature of the Metaverse. The current laws are still unable to address particular issues such as the protection of digital assets and enforcing IP rights on virtual platforms. In this rapidly changing digital era, managing intellectual property (IP) issues can also be greatly aided by a robust legal framework designed to meet the unique challenges that come up with the Metaverse.

One thing which is expected to grow substantially is cryptocurrency and NFTs driven by rising media attention. As a result of the media's extensive coverage of these ideas, celebrities, marketers and companies have been more active in cryptocurrency in an effort to make a statement. This means that IP issues will become more prominent during this period of fast growth requiring stakeholders to direct their approach towards IP management in order to stay

²⁸ Nike v. StockX Case Highlights Many Unanswered Questions About IP and NFTs, *available at*: <https://www.jdsupra.com/legalnews/nike-v-stockx-case-highlights-many-9205701/> (last visited on January 20, 2024).

²⁹ 22-cv-384 (JSR) (S.D.N.Y. Jun. 23, 2023).

competitive. Over the next few years, we anticipate significant growth in the Metaverse, the cryptocurrency and NFT sectors. It is anticipated that this growing tendency will continue in the upcoming years. The Metaverse is growing and increasing speed, and there are no signs that it is going to slow down anytime in the near future!