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Metaverse and Intellectual Property Rights

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Intellectual property rights pertain to concepts, inventions, and creative work that provide the foundation for a widespread willingness to transfer ownership (IPR). IPR grants the property's authors or producers special favorable rights that enable them to profit from their creative endeavors or notoriety. Trademarks, copyright, and patents are a few of the legal mechanisms used to safeguard intellectual property. When an invention meets the criteria for overall uniqueness, non-obviousness, and economic utility, a patent is awarded. IPR is necessary for better organization, commercialization, protection, and identification of original works. Metaverse is by far the most recent propellant. It is essential to protect intellectual property rights in the developing "virtual realm" because they are the outcome of internal motivation and expertise. The legal-regulatory frameworks governing entitlements in the metaverse are already being ingeniously utilized, notwithstanding their current shortcomings. An attempt has been made to emphasize how current regulations can be altered with minor legal alterations and contemporary snipping monitoring techniques to ensure that a "dynamic" framework of intellectual property is developed that efficaciously keeps up with the speed of innovation and science. The metaverse is gaining traction in the realm of cloud computing in the industrial revolution 4.0 and promises to offer increasingly better and much more comprehensive methods to communicate with others. The merging of the real and virtual worlds will be facilitated by the metaverse. Users will be able to communicate in virtual environments and purchase and sell virtual commodities thanks to the creation of this virtualized world. The users, participants, and proprietors of the metaverse platforms will face additional difficulties and dangers as a result of these changes. To do this, authorities and legislators would need to carefully consider problems like intellectual property rights (IPRs). The paper considers the issues of trademark, patent, and copyright infringement whilst discussing several case laws concerning IPR in the virtual reality world. This study's main goal is to examine IPR-related problems within the metaverse in addition to the potential benefits as well as problems it will bring to IPRs.

Keywords: *metaverse, ipr, property, right.*

INTRODUCTION

Any imaginative product of the human mind that is protected by intellectual property may be in the fields of art, innovation, science, and engineering, among others (IP). Intellectual property rights are the legal privileges granted to the creator or developer to safeguard their work for a predetermined amount of time (IPR). During a set amount of time, these rights grant the creator, inventor, or agent the only right to fully exploit their innovation. Without a question, IP is essential to the expanding economy. Furthermore, this has been unambiguously demonstrated that the mental effort associated with innovation merits recognition for it to further society. Also since repercussions for technology aficionados have grown significantly, it is becoming more practical to stop knowledge from being used illegally, at least temporarily. IPR is a potent tool for safeguarding financing options in time, cash, and energy because it grants the innovator or developer of an IP the sole right to infringe on his idea or good for a set period.

Intellectual property (IP) is becoming more and more important than ever as more businesses enter the highly publicized metaverse. Any firm seeking to prosper in any area, including the metaverse, must have IP to secure its ideas and discoveries. Morton Heilig created the Sensorama Device in 1962, which produced a recreation of riding a motorbike in which the user could experience the motorcycle's sensations, sounds, and smells while immersed in a 3D graphical environment. The pre-metaverse digital universe appeared here for the first time. The term "metaverse" refers to a network of interconnected virtual worlds in which users can interact with one another utilizing cutting-edge technologies to simulate real-world interactions. The idea first appeared in the Advaita Vedanta philosophy of Shankaracharya, who argues that perhaps the truths we assume to be normal are the perception of Brahma/Ultimate consciousness, as we're all oblivious of because we are in the imagination ourselves, much like in the Metaverse.¹ It is extremely important to consider the rights and obligations of those who

¹ Sunil Upasna, 'The Three Levels of Ultimate Reality Indian Philosophy' (*Indic Philosophy*) <<https://indicphilosophy.com/2018/07/20/the-three-levels-of-ultimate-reality>> accessed 05 February 2023

live in such a universe because, like Metaverse, it was created by a 3rd person and could be nullified like a computer algorithm. The mundane aspects of our life are, however, undeniably real.

BRIEF HISTORY

Europe was the birthplace of administrative procedures and laws protecting intellectual property (IPR). Patents became more prevalent in the 14th century. England leveraged its technological superiority over other European countries in several fields to its advantage by offering attractive terms to artists from outside of Europe. Copyrights were first acknowledged in Italy. It might be stated that Venice is the birthplace of the IP system because it was the first city on Earth to establish laws and organizations protecting intellectual property. Other countries quickly followed. The Indian Patent Act has been in effect for over 150 years. The 1856 Act, which created the 14-year patent duration and was patterned after the British patent system, was the first.²³ Then came several additional actions and adjustments.

TYPES OF INTELLECTUAL PROPERTY AND THEIR DESCRIPTION

The term 'Industrial Property' is used to refer solely to patents, trademarks, and industrial designs, but today the term "Intellectual Property" has a far larger scope. The following are some of the ways that IPR advances technology:

- It provides a process for handling unauthorized use, theft, and infringement.
- It provides the general public with access to a wealth of information because all types of IP are revealed, including but not limited to trade secrets. A range of cognitive endeavors can be protected by IP, notably:
 1. Patents

² 'Intellectual Property - Wikipedia' (*Intellectual property - Wikipedia*, 1 June 2021)

<https://en.wikipedia.org/wiki/Intellectual_property> accessed 5 February 2023

³ R Singh, *Law relating to intellectual property* (vol 1, Universal Law Publishing Co Pvt Ltd 2004)

2. Industrial designs comprise aspects that are applied to products in any form, configuration, material design, combination of lines, and color, whether they are 2-D, like textiles, or 3-D, like toothbrushes.⁴
3. Any name, sign, or insignia used in business to distinguish the producer or supplier of a product or service as well as to recognize products or services is referred to as a trademark. Trademarks can be bought, sold, or licensed. A trademark's quality depends on the repute of the product or service it denotes.⁵
4. Copyright refers to the right to the unrestricted expression of ideas through works of literature, music, theatre, art, film, sound recordings, and computer software.⁶
5. Geographical indications are signs that locate a good's excellence, reputation, or another characteristic primarily because of its botanical origin in the national territory or a particular region or locale inside that territory.⁷

A patent is issued when an invention satisfies the standards of overall uniqueness, and non-obviousness, with business or manufacturing application. Patent protection is available for both products and processes. Except for pre-treatments for medications and the organic industry, which had a lifespan of either 7 years starting on the application date or 5 years starting on the patent date, whichever came first, under the Indian Patent Act of 1970, a patent had a 14-year lifespan commencing on the application date. There were no product patents covering medications or food goods.⁸ In all other signatory countries, a copyright created in one of the countries that have adopted the Berne Convention is immediately and without registration protected. India has outstanding copyright laws which are in line with those of any other country while also being a contracting party to the Berne Convention. Unfortunately, at this point, the copyright cannot be directly accessible in countries that haven't ratified the Berne

⁴ Design Act 2000; Design Rules 2001

⁵ Trademarks Act 1999; Trade Marks Rules 2002

⁶ Copyright Act 1957; Copyright Rules 1958; International Copyright Order 1999

⁷ Geographical Indications of Goods (registration and protection) Act 1999; Geographical Indications of Goods (registration and protection) Rules 2002

⁸ Patents Act 1970

Convention. As a result, copyright might not be officially acknowledged as a territorial right. IPR is an asset that may be traded, bought, or sold just like any other asset.⁹

Intellectual property (IP) refers to a wide range of creations, including patents, trade secrets, trademarks, and copyrights. Protectable IP assets in the metaverse can include everything from copyrighted literary works to any trademarks, that encompass brands, tag lines, and objects that are subject to design patents. Your intellectual property should be safeguarded in the metaverse because it can benefit your business greatly. Anyone who copies or improperly uses your intellectual property is subject to legal action. Another option is to license your intellectual property and make money off of it. Strong IP owners can gain large cash through royalties and licensing while retaining their competitive advantage.¹⁰

ROLE OF UNDISCLOSED INFORMATION IN INTELLECTUAL PROPERTY

Although it is arguably the most significant kind of security for businesses, Research institutes, and other organizations working with IPR, safeguarding concealed knowledge is both the least understood and least discussed by IPR stakeholders. Unreleased information encompasses any equation, structure, composition, code, instrument, methodology, approach, or procedure. It is often referred to as trade secret information or confidential knowledge. Protection of trade secrets and undisclosed information is nothing new for humans; throughout its history, people have developed strategies to keep sensitive information hidden, frequently by limiting access to their immediate family. Although there are several stages of implementation of laws covering all forms of IPR in India, there is no unique regulation that just protects secret or private information.¹¹

Between the 1950s and the 1980s, there were fewer pressing needs brought on by industrialization or consumerism, and many countries, like India, were able to function without putting in place a strong IPR system. R&D spending has increased as a result of the globalization

⁹ Copyright Act 1957; Copyright Rules 1958; International Copyright Order 1999

¹⁰ Vaishnavi Joshi, 'Importance Of IP In Metaverse - Trademark - India' (*Mondaq*, 2 August 2022)

<<https://www.mondaq.com/india/trademark/1217914/importance-of-ip-in-metaverse>> accessed 06 February 2023

¹¹ A Michaels, *A practical guide to Trade Mark Law* (2nd edn, Sweet and Maxwell 1996)

led by the chemical, pharmaceutical, electronic, and IT industries. The production cycle, length, and significant risk of rival reverse engineering are characteristics of this method. Industries eventually understood that trade secrets were insufficient to protect technology. Without standard laws and regulations governing patents, trademarks, copyright, and other intellectual property rights, it was difficult to profit from breakthroughs. IPR rose to prominence inside the World Trade Organization in this way.¹²

WHAT IS THE BUZZING WORD: METAVERSE?

The metaverse has so far been seen as a notion in its infancy with the ability to evolve into a virtual environment similar to real-world social life. But, the idea itself is not brand-new. The term "metaverse" was initially coined by Neal Stephenson in his 1992 book "Snow Crash," which portrays a virtual reality environment where people can work, play, and transact. People can live online in a place called the Metaverse which is like the real world. Imagine it as a 3D internet that a VR interface might be used to access. In this area, one can create an avatar of themselves and use it to communicate with others in several settings or activities. Because it coexists with the actual one and is a living reality, this parallel universe is always changing even when no one is utilizing it.¹³

The Metaverse, also known as a "Metaverse Environment," is a collection of interconnected 3-D locations that exist online and can be thought of as a virtualized world. Individuals may communicate with one another, produce and exchange material, organize events, go to concerts, acquire property, and even carry out activities in the metaverse. Augmented reality and virtual reality help to maintain broad connectivity. Users can intuitively and realistically explore a third dimension thanks to the metaverse. Each participant in the metaverse during this period of change should be cognizant of intellectual property rights (IPRs) associated with the digital components of the metaverse. As with any simulated space, the metaverse needs rules and regulations to protect each stakeholder's originality, invention, and creativity. IP is used in this

¹² Watal J, *Intellectual property rights in the WTO and developing countries* (Kluwer Law International 2001)

¹³ Bleidorn L, 'Intellectual Property Rights in the Metaverse - Red Points' (*Red Points*, 27 June 2022) <<https://www.redpoints.com/blog/metaverse-intellectual-property/>> accessed 06 February 2023

situation. IP is what protects people's concepts and creations in the metaverse, and it's essential to avoid unauthorized copying, misusing brands, and piracy of IP owners who already have rights.¹⁴

OPPORTUNITIES FOR IPR OWNERS

Shortly, industry players in the tech sector will probably have new opportunities to produce AR and VR products, making them more user-friendly, more inexpensive, and more comfortable to use for longer periods. Additionally, there will be additional chances for AR technology-related gadgets to be used with a wider range of objects that make AR and VR more approachable for regular consumers.¹⁵ As a corollary, there'll be fresh chances for IPRs in this industry, like fresh patents for technology relating to devices and software. New brands or product lines will emerge as a result of emerging technology, creating new trademarks that may be used in both the actual world and the virtual one.

These trademarks will probably be non-traditional (like moving picture marks or audio marks), which will result in an augmentation of the amount of protection given to such atypical trademarks to accomplish their rightful purpose in the interactive experience of the metaverse. Furthermore, because these new trademarks will be applied to new categories of products and services, it will be crucial for IP owners to take this into account. New patentable innovations and copyright protection for applications and services advancements and games, notably patents for blockchain-related technology and cryptocurrency, will have prospects as modern web platforms are developed.

WHY PROTECT YOUR IP IN THE METAVERSE?

The virtual world known as Metaverse is expanding quickly and provides both individuals and corporations with limitless options. To optimize your potential return on investment as this new frontier develops, it's crucial to secure your intellectual property. In the metaverse, intellectual

¹⁴ Importance of IP (n 10)

¹⁵ 'Immersing Intellectual Property Rights in the Metaverse' (Tilleke & Gibbins)

<<https://www.tilleke.com/insights/immersing-intellectual-property-rights-in-the-metaverse/>> accessed 08 February 2023

property can be violated at every turn. For instance, the sale of NFT artwork protected by copyright may include both fraudulent and real artwork.¹⁶ Even trademark violation can happen when purchasing and selling virtual goods, much like it does in the real world. Trade secrets, which are extremely important in the metaverse, are quite likely to be at risk. Aren't these arguments strong enough to convince someone to think about IP protection before using the Metaverse?

The metaverse is also a worldwide platform with individuals from around the planet. The possibility to grow your company into new areas presented by this is exceptional, but only when you have the necessary IP safeguards in place. Lacking defense, you can be subject to claims as well as other criminal charges from rivals in other countries. Furthermore, when deciding whether or not to invest in a business investors are now increasingly evaluating IP portfolios and IP pricing for businesses of all sizes. Who wants to lose out on that? You can show the future worth of your company and raise your chances of getting investment by having a robust IP portfolio.

RIGHTS, INTELLECTUAL PROPERTY & METAVERSE

The legislation governing the legitimacy of measures undertaken by animated characters in a metaverse, despite being run by real humans, is still in its infancy and hasn't yet fully developed. The urge to impose real-world regulations within the metaverse is rooted in the fact that it seems "real." Determining which human rights may be preserved in the Metaverse, however, would be difficult. In contrast to the right against sexual harassment, which does not require physical contact, it would be difficult to defend the right against assault without inflicting "bodily injury." In reality, a woman was sexually assaulted in 2021 in the "Horizon Worlds" Metaverse, which caused the platform to launch an investigation.¹⁷

¹⁶ Importance of IP (n 10)

¹⁷ Tanya Basu, 'The metaverse has a groping problem already' (*MIT Technology Review*, 2021)

<<https://www.technologyreview.com/2021/12/16/1042516/the-metaverse-has-a-groping-problem>> accessed 08 February 2023

Similar to how IPRs are fundamentally products of human cognition, their applicability will unavoidably transcend the real-virtual barrier. As a result, strategies for protecting them must be developed. Since the Metaverse's legal status is unclear, the infringement of intellectual property rights (IPR), A fiercely debated topic in the modern day is the security of trademarks, patents, copyrights, and so on within the Metaverse.

INTELLECTUAL PROPERTIES TO WATCH OUT FOR IN THE METAVERSE

Regarding the merchandise sold within the metaverse, major firms are submitting trademark applications to the US Trademark and Patent Office.¹⁸ Brands are searching for new business opportunities as well as tactics for enhancing their visibility in the metaverse. As users may buy and sell goods, services, and sometimes even property investment in the metaverse, concerns regarding how IP content owners can protect their interests over IP counterfeiters in the virtual space arise.

COPYRIGHTS IN METAVERSE

The original works of a person that are published in any physical medium are protected by copyrights. As a result, in the metaverse, works such as words, music, photos, and videos may be protected by copyright. When dealing with copyright violations, rights holders will face difficulties. A clear takedown structure for copyright breaches in the metaverse may take years to implement. Additionally, you might need to continually modify license arrangements for the products under your brand because of divergent laws or regulations among the many metaverse platforms. This also holds when determining usage costs for copyrighted works depending on the number of viewers or subscribers. The tracking of users on various platforms within the metaverse may be made more difficult by their varying usage policies.

Interestingly, the computer programs that were employed to create the Metaverse are those that have the most copyrights attached to them. Since most of these fictional spaces contain what are known as "combinatorial developments," which include various musical, artistic, ideological,

¹⁸ Bleidorn L (n 13)

acoustic, and theatrical works, copyright claims are also made on an individual basis. Given that there is no restriction on the number of works that can be created in the Metaverse, copyright claims are especially intriguing. In the legal dispute between Amaretto Ranch Breedables, LLC and Ozimals, Inc.¹⁹, in which Ozimals generated "breedable animals" in the "Second Life" Metaverse, the plaintiff alleged that the defendants had violated their copyright by creating "virtual bunnies"! The usage of Non-Fungible Tokens (NFTs), which are proficient tokens that may be digitally exchanged but whose underlying asset does not change, is both an intriguing solution to safeguard copyrights and a potential channel for infringement. As a result, it is simple to copy or violate the rights of an NFT without the owner's consent. To protect their copyrights in the form of NFTs, creators, however, might benefit from NFT license agreements.²⁰

- **Trademarks in Metaverse**

A trademark serves as a visual cue to differentiate one product or service from others. A symbol that is legally protected in the actual world should have a similar status in the metaverse. A trademark is a distinguishing mark, or group of markings, that enables consumers to determine the origin of a good or service. Trademarks can be used to identify words, characters, logos, pictures, and other facets of a company's identity. Simulated products and commodities may be trademarked with the USPTO.²¹ Brands should register their trademarks in the metaverse if they have already done so for their goods and services in the real world. Take into account online stores that sell virtual goods or entertainment software designed for usage in virtual worlds. Since almost everything physical may be turned into a digital item, trademark owners can prohibit illegitimate usage of their marks by licensing their marks.

Similar to the difficulties that rights holders face while defending their copyrights in the metaverse, trademark infringement may be harder to prevent than it would be in the real world. Because trademarks are not always recognized, they must be registered in every country. It is

¹⁹ *Amaretto Ranch Breedables, LLC v Ozimals, Inc* N.D. Cal. (21 December 2010)

²⁰ Ashish Deshmukh, 'Intellectual Property Rights In The Metaverse' (*IJCLP*, 11 September 2022)

<<https://ijclp.com/intellectual-property-rights-in-the-metaverse/>> accessed 09 February 2023

²¹ 'Trademarks in the Metaverse' (*WIPO*, 2022)

<https://www.wipo.int/wipo_magazine/en/2022/01/article_0006.html> accessed 09 February 2023

unclear to what extent registered trademarks will defend their owners against potential online trademark infringements if the metaverse combines across different platforms. Working with a label security program, such as Red Points, that can search the internet for potential trademark infringements and can instantly disable them before it impacts your goodwill or profits, is recommended for entrepreneurs and IP rights holders who desire to promote their brands in the metaverse.²²

Because it provides a productive environment for affordably promoting and advertising trademarks, the metaverse is practically a boon for companies that own trademarks. There have already been several occasions in Metaverse where trademark infringement claims have been made. In the well-established 2008 case of *E.S.S Entertainment 2000, Inc. v Rockstar Videos, Inc, et al.*, the court determined that the virtual portrayal of the real-life strip club trademark symbol inside the game of GTA, one of the first metaverses, will not amount to trademark infringement since it is creative license safeguarded by the First Amendment of the United States Constitution.²³ Sometimes, however, the unauthorized use of trademarks in the Metaverse is fiercely debated. The key topic of discussion is the nature of unlicensed trademark usage, namely whether it is minimal, unable to cause consumer misunderstanding, or not intended to produce income. In *Tata Sons Ltd v Greenpeace International*, the court determined that the unlawful utilization of the plaintiff's trademark inside a game created by the defendant to advance environmental causes and disparage the defendant was just a parody and would not amount to trademark infringement.²⁴ These circumstances raise the question of how a trademark would be protected if it were created by an avatar within the metaverse.

- **Patents within Metaverse**

New inventions, such as designs, procedures, or utility types, are shielded from duplication and commercial exploitation by patents. Patents require formal licensing to protect a specific innovation, in contrast to copyrights, which immediately protect every unique work generated.

²² Bleidorn L (n 13)

²³ *E.S.S Entertainment 2000, Inc v Rockstar Videos, Inc & Ors* 444 F. SUPP. 2D 1012

²⁴ *Tata Sons Ltd v Greenpeace International & Anr* 45 PTC 275 (2011)

Metaverse technology needs to be developed for augmented worlds and the actual reality to coexist. This includes haptic gloves, scanning sensors, cameras, and headgear for AR and VR. The need for better hardware is anticipated to increase the number of patent applications for the metaverse.²⁵

A growing amount of metaverse-related patent applications have been made over the previous ten years. Three verticals must be followed when handling patents within Metaverse: The first category includes ideas for the Metaverse concept directly, which can be further divided into patents for the operating systems needed to build a unique and customized Metaverse. While the Metaverse as a whole cannot be patented, many grant filings are being presented for software, augmented reality, and virtual reality technology. Second, the use of already-patentable innovations or equipment within the Metaverse may violate them, a practice called as 'virtualization of patents'. Particularly intriguing is the third vertical, which examines the patents created by avatars within the Metaverse. US authorities recently granted a patent to Indian entrepreneur Bhargav Sri Prakash for the first "Digital Vaccine," which he created and tested in a metaverse game.²⁶ This case also raises questions about the Metaverse's unfathomable effects on medical patents and healthcare as a whole.

LEGAL FRAMEWORK & REGULATIONS

IPR in the Metaverse currently exists in a limbo of law. Virtual space has either very little or no legal protections. It is hardly surprising that the number of IPR applications has grown. The majority of these entries are submitted in the United States in the Technology Centre category, which encompasses AI and Simulation, Graphical User Interface, Memory access, and Control, etc. because there are no particular provisions for Metaverse IPR applications. The USPTO has

²⁵ 'The Metaverse: Patent Infringement in Virtual Worlds' (*Holland & Knight*, 23 August 2022)

<<https://www.hklaw.com/en/insights/publications/2022/08/metaverse-patent-infringement-in-virtual-worlds>> accessed 11 February 2023

²⁶ Rupali Mukherjee, 'Indian gets world's first digital vaccine patent' (*The Times of India*, 08 June 2022)

<<https://timesofindia.indiatimes.com/business/startups/trend-tracking/indian-gets-worlds-first-digital-vaccine-patent/articleshow/92073578.cms>> accessed 11 February 2023

published an ID Manual²⁷ with several definitions for Metaverse virtual patents. However, it will be necessary for legal and technical tools to arise simultaneously to monitor IPR in the metaverse and prevent infringement.

MANAGING OR PROTECTING IP IN THE METAVERSE

The idea of a metaverse is currently being explored on several distinct platforms with centralized control, yet it may eventually grow into an interoperable, decentralized digital space in which users can freely migrate. As a result, brands that want to participate in the metaverse must bargain with the platform provider over IP licensing.²⁸ If a company develops a digital garment for a metaverse platform, it must ensure that it has complete IP rights for usage in the future, in case it decides to move the item to some other platform, for instance. Another concern that brands should pay attention to is ensuring authenticity and safeguarding IP from online infringements. Even though NFTs can serve as digital certificates that demonstrate ownership, many creators have experienced NFT infringements on various digital platforms. When it comes to safeguarding their marks in traditional e-commerce, businesses and IP rights holders can count on a strong legal framework, but the legal foundation for IP in the metaverse is still being created. However, brand owners should concentrate on tried-and-true methods of enforcing and safeguarding their intellectual property because a lax IP strategy in the real world is probably going to be just as lax in the metaverse. Registering your patents, copyrights, and trademarks in all relevant operating jurisdictions is an excellent place to start. Brands should think about registering their intellectual property (IP) for applications in virtual worlds that protect their ability to offer products and services in the metaverse. Infringements can be found and avoided with the use of a strong monitoring and enforcement strategy for your intellectual property rights in both the physical and digital realms. It's necessary to use the same prudence

²⁷ Aparajita Lath, 'Trademarks and the Metaverse: Imaginary Rights or Real Wrongs?' (*Spicy IP*, 18 May 2022) <<https://spicyip.com/2022/05/trademarks-and-the-metaverse-imaginary-rights-or-real-wrongs.html>> accessed 13 February 2023

²⁸ Immersing Intellectual Property Rights (n 15)

when it comes to intellectual property in the Metaverse as you would in the real world. Some pointers for safeguarding intellectual property in the Metaverse²⁹:

Register for copyrights, trademarks, and patents: Priorities come first. The best method to safeguard your cutting-edge technology is to submit patent, trademark, and copyright applications to the appropriate authorities in the jurisdictions that interest you. By doing this, you will be granted legal protection for your intellectual property (IP), get an advantage over rivals, and stop others from violating your rights as well. Unique systems, techniques, and methods may be protected by patents. The demand for design patent protections for distinctive visual developments and arrangements is growing daily. One can use trademarks to protect your company's or brand's name, logos, taglines, slogans, and even distinctive movements and noises! While copyright can help protect platform designs, user interfaces, websites, and other things.

Conduct an IP analysis: Businesses should carry out comprehensive and in-depth research of the virtual world about IP and identify areas of freedom and green space. The such in-depth investigation would assist in not only locating patented technologies and domains but also in preventing the violation of third-party intellectual property.

Employ security protocols: To prevent theft or unauthorized access to your IP, use unique passwords and security procedures. Maintain strict data privacy and protection by enforcing the privacy policy and confidentiality agreement.

Keep track of your whole IP portfolio, including where each piece of intellectual property is registered. This will make it easier for you to maintain track of your assets and make sure all of your intellectual property is properly protected.

Educate your staff: Ensure that your staff members are aware of the significance of protecting intellectual property and are equipped to spot and report infringements.

²⁹ Importance of IP (n 10)

Seek legal counsel: If you're unsure of how to defend your intellectual property rights or if someone is violating them, contact us, and we'll stand up for you.

FUTURE OF IPRS IN THE METAVERSE

The metaverse, which will bring forth new atypical trademark types, goods, and services embracing a variety of trademark categories, and new patentable VR and AR-related technologies, seems to hold great promise for IP. The transition to virtual reality could lead to new problems with protecting trade secret secrecy. The virtual environment will require additional strategies to keep this confidentiality far beyond conventional methods of having signed nondisclosure agreements or restricting access with biometric identification. This is because the institution of precautionary means to retain confidentiality is among the crucial legal requirements for securing trade secrets.

The United States' passage of the Digital Millennium Copyright Act in 1998 was a critically important reform to copyright law that has now established itself as a cornerstone tool for defending intellectual property in a digital setting. It permits digital businesses to send DMCA "take-down" notices. When someone is accused of violating the intellectual property rights of another, these notices offer a method of enforcement. As a result, they are practically priceless tools that can aid in safeguarding the assets of another individual or company.³⁰ The metaverse may present challenges for IP laws and IPR owners, but there is also great potential for IP to advance and integrate with the metaverse ecosystem. Utilizing these new opportunities to adapt to the metaverse will be advantageous and crucial to maintaining the continual adaptation of IP law to cutting-edge technological advancements.

CONCLUSION

IP could have a significant impact on the Metaverse. New, cutting-edge developments in NFTs, trade secrets, copyrightable games, and VR and AR technology are all being introduced by Metaverse. As technology develops, it will become more challenging for non-IP holders to

³⁰ 'Digital Millennium Copyright Act' (*LII/Legal Information Institute*)
<https://www.law.cornell.edu/wex/digital_millennium_copyright_act> accessed 14 February 2023

maintain their position in the metaverse because IP laws cannot be avoided. Having said that, even intellectual property law must change and advance along with technology. Being compatible with the metaverse is becoming more and more important, thus it is best to comprehend the laws that are fundamental to it.