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ABOUT THE NEWSLETTER

Devoted to the study of comparative and international laws and legal systems, the Comparative Law e-Newsletter (CLN) is an open access, peer-reviewed and refereed newsletter published bi- annually, with four Issues already released. It aims to encourage comparative legal studies in the transnational context of legal history, theory, philosophy, legal cultures, and traditions, by tracking the developments in the field across the world. The newsletter se:eks works that are dynamic and interdisciplinary in nature with specific display of comprehensive knowledge on the subject matter.

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FROM THE VICE-CHANCELLOR'S DESK

Maharashtra National Law University, Aurangabad is established by Maharashtra National Law University Act, 2014 (Act No. VI of 2014) passed by State Legislature of Maharashtra. The University commenced its operation in the year 2017 having its headquarters at Aurangabad, Maharashtra and since then has been thriving to achieve academic excellence. The University has in the past hosted national level seminars and conferences and has been visited by legal luminaries who have enhanced and furthered the objective of making this institution of national importance.

I strongly believe that it is the students, faculties and the non-teaching staff who plays a pivotal role in the over-all development and growth of an institution. It is under able guidance and constant support of judges, eminent legal practitioners and academicians that the institution is on its path of achieving excellence in the field of legal education. This newsletter is one such initiative undertaken by the faculty members and students of Maharashtra National Law University, Aurangabad. This newsletter aims to bring about various discourses related to comparative laws. It will be theme-based bi-monthly newsletter which will promote and enhance academic deliberations from the members of legal fraternity. In an era where development is rapidly taking place and law is everexpanding and growing, the need for such inter-disciplinary approach has to be seriously undertaken. I am glad to present this newsletter to the legal fraternity and civil society and encourage young scholars, academicians and students from various law schools in the country to contribute actively to be a part of this journey and make this effort a grand success. I congratulate the team for their untiring efforts during this pandemic situation in bringing this newsletter to light and wish them a success in their vision and endeavour to reach a wider audience and facilitate scholarly discourse in this area.
Wishing you all the very best !

Regards,
Prof. (Dr.) K. V. S. Sarma
Vice-Chancellor,
MNLU, Aurangabad.

Ritambhara Mittal

Solution Architect-USA

About Me

I have industry experience of 20 years in the field of telecom. I believe in working hard and striving for the best. To give back is my happy mantra of life. One of my life goals is to educate and empower youth to create a better society. In my leisure time, I like reading, acting, photography, runway, running, and spending time with family.

How would you describe the cause and impact of the metaverse and AI on private enterprise?

Meta means beyond. Metaverse is the idea of building virtual space that can remove the barriers of remote communication and make interaction of distant objects and humans real in time and space. Metaverse enables the concept of overlapping digital experiences and blur the line of physical and virtual. It is defined as the next generation internet that is interactive and brings the 3D effect to user's experience. It offers real-time interaction in addition to everyday data web browsing and audio-video media posts and exchanges over social media. Metaverse is an emerging technology that adds the dimension of virtual space, typically created by the convergence of virtual reality, augmented reality, and other immersive technologies. Metaverse creates a computer enabled environment that allows users to interact with other users as if they were in physical space.

The Metaverse is the next step in the evolution of the internet. It has the potential to create life size experiences on the internet. This can benefit private enterprises in a big way to market their products with an art of visualization in the real world. Till date, social media, websites, 3D images, virtual tours are the regular way of online education, retail, banking etc. With Metaverse, Private Enterprises can create their own virtual space, allowing customers to browse and purchase products in more engaging way. Ikea is one notable example that uses AR technology to allow customers to fit the furniture in their living room before they buy. With Online Shopping industry, a big challenge is experience of the product before it is actual delivered. Metaverse can be particularly useful to slow down the return and exchange graph of goods that can positively impact the economy and profits of enterprises. Similarly, in the Online Education Industry, augmented reality sessions can be created in comparison to zoom. Students can be more interactive just like in physical classroom despite being at remote locations. Medical would be another example that can reap great benefits by remote surgery and augmented medical study classrooms extending physical spaces with the enablement of real senses like smell, connect and converge.

The metaverse can impact private enterprises in many ways, such as improved customer experiences, increase sales and productivity using virtual goods, enhance collaboration and communication using digital avatars, launch innovative business models using digital representation and artificial intelligence for customization as per customer need, and enable businesses to work efficiently with remote teams and partners.

Meta and Microsoft are taking the lead in developing Metaverse solutions and there are already headset devices available to get the initial experiences of virtual reality in domestic life use cases like augmented shopping mall to transpose the online goods to the place wherever consumer needs without much mobility, another case be augmented conference calls and similar.

Like with any modern technology, Metaverse has its own concerns about impacting privacy and security, as well as potential regulatory challenges. All In all, Metaverse is no longer a child's dream for playing VR Games like Pokeman but is much beyond and can create a completely new parallel augmented world for humans to be part of internet and not just access the internet.

How do you think AI can affect human-centered experiences and personal interactions?

Artificial Intelligence is the human brain inside out. It is the most creative tool of science that enables computers with decision-making, visual perception, speech recognition, language translation, automation, self -learning, autonomous interaction, and other similar features that needs person's intelligence.

The technology behind AI is based on algorithms and mathematical models that enable machines to learn from data and make predictions or decisions based on that learning. Some of the key technologies that underlie AI include machine learning, deep learning, natural language processing, computer vision, and robotics, among others

These technologies are often used in combination to build more complex AI systems that can perform a wide range of tasks. On one hand, it is highly effective in creating enhanced and personalized experiences, such as providing customized recommendations, predictions, improved customer service, and personalized healthcare. It can also automate many routine and mundane tasks, freeing up people's time to focus on more creative or engaging activities. It can seamlessly assist in all industries ranging from Education, HealthCare, Software Technologies, Retail, Private Enterprise, Government etc. AI is inherently autonomous and based on user inputs, correlate pre-fed information to produce immediate results. With privacy and accuracy concerns taken care of, AI can be a boon and can act as an extended pair of hands to allow human beings to focus on new research and innovations.

On the other hand, there are concerns that AI could replace human interactions and lead to a dull society. For example, Human personal interaction has an enormous impact in building the social structure and synergies in community. Imagine, AI in customer service could be robotic with no greetings and gestures that can diminish interaction capabilities. As they say, Man is a social animal, communication is must. Using AI to replace human jobs massively may drop the humane factor and make humans more mechanical. Another case like the use of AI as an educator could lead to a lack of social interaction and personal connection between teachers and students. Discussions, Debates, Queries are part of developing cognitive skills and that all can be staked if machine starts taking over the ancient methods of learning.

AI has a purpose and place and there are many activities that are tedious and need precision. One such area, AI can be particularly useful in agricultural industry for weather predictions and timely supplying resources to feed land for better produce. There can be many more such fraud detection, e-commerce fulfillment, health and diagnosis, surveillance, smart homes and similar.
Ultimately, the impact of AI on human-centered experiences and personal interactions will depend on how it is developed, implemented, and regulated. It is important to ensure that AI is used in a way that respects human values and fosters positive outcomes for individuals and society.

What new dimensions will the metaverse open for sustainability? And how do you think its development will unfold worldwide?

Metaverse is the next level technology that introduces the concept of living in internet space rather than just observing it in two-dimensional space. The concept is yet finding its way of comprehension in daily consumer life. Metaverse is majorly based on VR and AR technologies that have the potential to create a new virtual environment to participate in real time. Many big technology companies are investing in Metaverse projects to create cohesive virtual digital spaces and digital assets that can be owned and utilized like physical assets. The development of the metaverse is prospective to open new dimensions for sustainability, as it could provide innovative ways for people to collaborate and interact in virtual spaces. For example, it could be used for virtual meetings, training, and simulations, which could reduce the need for physical travel and save time for commuting.

Time and resources can be better managed by achieving real time remote interactions. In addition, it could provide new opportunities for education and training, allowing people to acquire new skills and knowledge in a more sustainable way.

As for the development of the metaverse worldwide, it is difficult to predict exactly how it will unfold. However, it is likely that different regions will approach it in different ways, depending on factors such as technological readiness, cultural norms, and economic conditions. In some regions, the development of the metaverse may be driven primarily by private companies, while in others, it may be a more collaborative effort involving government and academic institutions. Ultimately, the success of the metaverse will depend on factors such as its ease of use, its ability to create compelling and engaging experiences, and its capacity to foster social connections and collaboration across diverse communities.

Internet resources and fast access speeds will be key factors for seamless virtual environments. With the onset of 5G spectrum, development of Metaverse technology may also vary drastically as it highly depends on underline network infrastructure and Operator layouts to support ultra reliable low latency communication. Digital space may also come with its own set of privacy rules and regulations that need to be factored in for sustainability and consumer safety related to digital theft. Metaverse is a costly proposition to begin with as it requires special equipment and software to experience virtual reality.

The driving concept of Metaverse is to blur the digital divide and create a virtual environment that can help to reduce delivery time and create reachability of services without physical presence in a particular place.

Metaverse envisions the goal to enable remote communication in a virtual environment such that a user can assimilate with digital space as an extension of physical space. Sustainability of virtual space can be found in many sectors including education, medical, retail, agriculture and all fields that need remote collaboration and virtual monitoring.

As for its development, the Metaverse is still in its early stage and there are many unknowns about how it will unfold worldwide. It will be important for stakeholders to collaborate and prioritize sustainable development as the metaverse continues to evolve. However, there are many companies and organizations that are investing in its development and exploring its potential applications. It will take some time before the Metaverse becomes mainstream technology, but its impact on society could be significant.

What difficulties do you believe AI poses for the world, particularly for the younger generations?

Artificial Intelligence is a powerful tool based on advanced mathematical algorithms and machine learning skill set. It can perform tasks that would typically require human intelligence. Advancement of AI technology has added efficiency and automation to many time-consuming tasks and is also useful in pattern recognition, predictive analysis, and research areas. But there are several potential difficulties that AI could pose for the world, especially for younger generations. In today's world, the young generation is exposed to technology through smart homes, smart cities and internet enabled education system.

With easy availability and exposure to handy AI interactive tools, there can be privacy and data security issues upon sharing personal information. With the increased use of technology, young people are at risk of cyberbullying, online predators, and exposure to inappropriate content. As AI data is trained based on user input, biased data can cause unfair treatment, discrimination and divide that can impact youth mind. Youth may get affected by social, racial, gender biases and may perpetuate unwanted anger, hatred and anxious behavior patterns that can cause personality disorders.

As technology becomes more prevalent, there is a risk of social isolation, particularly for younger people who might spend more time online than in-person. This could have an impact on mental health and social development. Not only this, with over-reliance of technology and continuous use of AI, youth may risk its ability to problem-solving critical skills. This may create cognitive dependency and curb the thinking power of youth. Youth may not be able to rationally analyze the problem and always depend on readymade and premade way outs in all situations. This will hugely impact the career growth of the younger generation. Innovation and Research will take backseat with human self-created intelligent clone. With developments of AI in fast moving world, it is obvious AI will automate many mundane tasks that are manually performed by humans. This will create a displacement in the job market and may disturb the social balance of harmony and prosperity. With continuous growth of technologies, it is important for youth to consider focusing on enhancement of their skill set and knowledge base to combat with job competitive market and take ownership of their personal growth and safety.

It is important to address these challenges and work towards solutions that ensure AI is used ethically and responsibly.

What suggestions would you give to navigate this new arena of technology in a safe and beneficial manner?

In the century of technologies, ev ery day brings new methods and technical advancement that works towards progressive society. To reap benefits of upgraded lifestyles, it is important to understand the nuances involved. It is crucial to be aware of safety measures required for accessing the world of the internet and keep caution with personal information and follow best safety and awareness practices.

Some of the key ideas include educating oneself and staying informed about potential gains and risks. A user must be aware of privacy policies and terms of service that can help protect personal information from spiteful access. Due to increased frauds, hacking, and fraud events, it is the responsibility to use internet, websites, links, emails, and similar technologies wisely. As part of best practices, one should avoid clicking unknown links and downloading data from untrusted sources. This can save malicious acts of misinformation and prevent virus infliction in user devices. For education and learning purposes, technology is extremely useful, but it is necessary to verify sources of data and strongly recommend following trusted sites, stores, academic journals, media, and reputed sites to access information. 101 is available for first-time users and always a reminder for advanced users, there are some basic steps that must always be taken into consideration.

The list includes setting strong passwords for email ids, not clicking suspicious attachments or links, be cautious of unsolicited messages, use multi factor authentication, report scams, block unwanted sites and spam messages. Installing anti-virus software in devices tops the list of precautions with highly exposed technologies. Along with the growing checklist, one should also consider the fact that every piece of news and information is not to be trusted, and one should think of multiple sources to verify information. One of the best ways of verifying information is to check with subject related public forums, read from multiple reliable sources and stay aware of the facts.

In today's world, advertisements, promotions, and lucrative money-making, career offers are top deal on any platform including social media, emails, messengers, chatbots. Scammers can easily slip in and steal personal information from an average person and cause harm to the assets including money and health. A quite common example is AI enabled virtual assistants that can interact like humans and may collect user data for demographic, individual details, bank information etc. And if data is not stored securely, it can be compromised for nefarious purposes such as identity theft or fraud. Artificial Intelligence has added the autonomous factor to computers, that can produce fake images, videos and much more biased and inappropriate information based on data feed. Such disbursement of distorted and unethical presentation of information can cause a bad stir in community. It can lead to racial bias, gender bias, unemployment, and other discriminations which can disturb the equilibrium of social harmony. Such false representations can also affect an individual's mindset and abilities to learn and comprehend in perspective.

The moral of the story is technology is a boon for advancement of humans. Use technology in moderation and avoid being fully reliant on it. It is up to the user to follow discipline and maintain temperance to utilize technology for the best impetus.

Adv. (Dr.) Prashant Mali

President-Cyber Law Consulting (Advocates & Attorneys), Author & Speaker

What policy measures do you believe the government ought to take in these new technological developments in the field of AI and Metaverse?

India needs to enact AI related Law , india needs this due to ethnic, cultural and languages diversity . Learning data of AI used in India should policy wise only of Indians .

How do you believe AI can impact justice systems around the world and what could be the pros and cons of the same?

I feel AI will largely impact those countries with non procedural codified laws. Having codified procedural laws like India would take some time to adapt as usage of AI needs to find a place in the code . Some work like record statements and easily done with AI and India should use that.

The Metaverse is said to create virtual humans. Who and what is Cyberhuman AI?

Metaverse has virtual human or Avatars which are half bodied animated virtual beings which may or may not mimic real human being . Rights and duties of these virtual humans are yet to be defined and should be defined.

How are human-to-human interactions and privacy bound to be impacted by AI?

Yes and too much interaction with these virtual humans is giving rise to narcissistic human beings . Privacy is a myth and will continue to be so with AI.

What advice would you give to law professionals, students and institutions to handle these developments and explore these spaces in a safe and efficient manner?

AI doesn't give birth to humans but humans make AI. What you sow you reap so what is taught to AI should be ethical for mankind. It is promising career for tech lawyers

METAVERSE AS AN INTERNET OF POSSIBILITIES: EMERGING OPPORTUNITIES AND LEGAL CHALLENGES FOR GOVERNMENTS, BUSINESSES AND INDIVIDUALS

Syed Mujtaba Athar

Abstract

This paper explains the Metaverse and how it works. The Metaverse is the next generation of social networks, where you may engage in a variety of online activities with like-minded people. It is a disruptive technology of the internet. Metaverse platforms will deliver content, experiences, and virtual worlds. The Metaverse will incorporate AR (Augmented Reality) data overlaid on the actual world. When a new technology is nearing development and widespread use, legal and policy experts must assess its risks and regulatory issues. Metaverse might be weaponized to influence us and create new social media manipulation system. Blockchain, virtual worlds, and NFTs have creative uses, but metaverse's future uses are still unclear.

The Metaverse will eventually have several platforms with independent 3D universes. These include a secure and accessible digital economy, interoperable, networked, and permanent 3D environments, and platforms that follow standards. Metaverse platform may transform gaming. Gaming can demonstrate how humans create identities in virtual worlds, which will be crucial to the Metaverse. However, new identities, self-expression, and anonymity must be balanced. Anonymity lets someone commit crime and pretend to be someone else. However, we must distinguish between videogames and real-life games. Similar to regulation in the real world, Metaverse games must be labelled for adults. These platforms must monitor and ban hate speech. Metaverse harassment can be terrifying. This paper examines metaverse dangers to governments, corporations, and people. The paper raises the issue of regulation and governance of metaverse platform. It emphasizes the necessity for ethical platform regulations. This article proposes ways to make this platform a safe and inclusive virtual environment.

If something could have the worst promotion, it was Mark Zuckerberg's series of advertisements promoting metaverse by Facebook inc. The reception of the idea of metaverse in the place of social interaction was so bad that the company had to disallow comments and hide number of dislikes received on its promotional video and advertisement campaigns.[i] However, contrary to the story of bad publicity, metaverse is a technology much beyond Zuckerberg's business interest.[ii] As the future generation of Internet technology, the Metaverse provides an exciting prospect. Within the Metaverse, there will be a variety of platforms providing access to content, virtual experiences, and augmented reality. Augmented reality (AR) information that is superimposed on the real environment will also be a part of the Metaverse.[iii] Metaverse technology has the potential to alter our world once again. It promises to make our lives exactly how we want them to be in the future. It has been called a "disruptive technology," meaning it has the ability to alter the status quo in the same way that other technical revolutions since the first industrial revolution have.[iv] Disruptive technologies typically come with a refined user experience and business model, and these innovations have far-reaching effects on society and our way of life. When one or more applications of a novel technology prove to be extremely successful, this is known as a "emergent phenomenon." The influence of disruptive goods and services extends well beyond the enabling technology. The next technological revolution, the metaverse platform, will have far-reaching effects on our daily lives.

The potential of the Metaverse is enormous, and the massive funding being poured into this technology suggests that it will become increasingly engaging and important in the years to come. Also, the more realistic the experiences are, the harder it will be to tell them apart from the actual world. Unlike a simple video calls, our interactions with loved ones across the globe in the Metaverse will be rich in content and scope. But the technology might equally be used for criminal activities, including mass manipulation or simulated child pornography.[v] When a cutting-edge technological advancement is on the verge of widespread use, it is incumbent upon those working in the fields of law and public policy to investigate the possible regulatory and governance difficulties that this advancement may pose in the future.

And by doing so, we can establish universal norms on how we should and shouldn't utilise this technology ethically. There is bound to be some degree of imitation when creating a new technology, and the same is true when creating a new medium like the Metaverse. After a new technology has been around for some five years to a decade, its genuinely transformative use cases begin to emerge, since by then, we have a much better knowledge of what is actually feasible. The possibility for misuse must be acknowledged early on in order to prepare for future difficulties caused by the rapid pace at which this technology is developing and spreading. People believe that in the future, commerce would be conducted entirely in the virtual realm, known as the "Metaverse."[vi] However, this world will eventually seep into our actual lives, merging the virtual and the real. A new technology is doomed to fail if it fails to provide its consumers with tangible benefits. Digital products and currencies should be able to be traded between platforms with the use of this network. Numerous organisations are hard at work developing the tools that will be essential in realising this goal.[vii] To do this, it has to be regulated by a set of norms, laws, and identifiers that are broadly accepted and embraced by the community at large.

Some individuals claim they don't want to take part in Metaverse transformation, but ignoring the technology by denying its existence and potential possible growth is not the solution. The Metaverse is the convergence of several technologies, norms, and rules. It includes things like AI, 5G (or even 6G), 3D engines, VR/AR gear, block- chain, networking, the cloud, and more. The necessary technology to make this vision a reality already exists or is on the horizon. Additionally, billions of dollars have been invested in perfecting this platform and it seems unlikely that this technology will not play an intrinsic role in the society of the future.

THE MULTIPLE USES OF METAVERSE

Since the metaverse is still in its infancy as a technical platform, it is only natural that it take cues from other mediums and technologies. Working together, we can determine what uses of this technology are reasonable and what are not.

However, since the technology advances and disseminates at a unprecedented rate, it is crucial to develop norms for its ethical and fair usage far before any actual problems may occur.

There are technological experts and entrepreneurs who think that eventually all

business will be done in the "Metaverse," or online.[viii] Yet this world will ultimately permeate our real ones, fusing the virtual and the real. When people don't perceive immediate value in utilising a new technology, it has no chance of becoming widely adopted. The ideal of the Metaverse is a connected collection of 3D worlds and platforms that can be accessed from any device (computers, televisions, mobile phones, augmented reality and virtual reality headgear, etc.). The goal of the network is to make it easier to buy and sell virtual goods and currencies between services. Dozens of thousands of companies, organisations, and people are working tirelessly on various facets of this aim to make it a reality. Some of these components are highly interconnected with others.[ix] As such, it requires a set of standards, laws, and identities that are mutually agreed upon and generally supported.

Those who declare they have no interest in participating should realise that denying the existence of the issue is not a viable option. The Metaverse is the result of the convergence of several technologies, social conventions, and governing principles. Artificial intelligence (AI), 5G (or 6G) networks, 3D engines, virtual reality (VR) and augmented reality (AR) hardware, blockchain, networking, the cloud, and more are all part of this. The technology to make this a reality is either already available to us or will be in the near future.

VIDEO GAMING IN METAVERSE

Successful businesspeople often have a knack for telling intriguing story. In particular, the immersive experience provided by videogames is unparalleled. A story cannot be fully experienced unless you're a part of it, and games are the medium that make that possible. This kind of experience is specifically marvellous for children and teenagers. Because of their malleable brains, they can put themselves in other people's shoes and make decisions based on that. We lose this skill as adults because we grow too acclimated to our routines.

There will be tremendous growth in gaming on metaverse once widespread use of VR gear gets underway. At this point, developers will begin to have the most success with creating virtual worlds specifically for gamers.[x] This is now feasible because of developments in technology, declining costs, and our own ingenuity. Virtual worlds have transitioned into the gaming industry. Video game players have a long history of being among the first to experiment with new

The goal of the Metaverse is to establish a network of closely interconnected societies. For a long time, gaming communities existed as isolated groups of players. They may now communicate with one another in a more organic manner thanks to social media. We can learn a lot about how we construct our identities in a virtual setting via the medium of gaming, which will be crucial in the future of the Metaverse.[xi] Finding a happy medium between reinventing oneself, expressing oneself, and being anonymous is essential. For example, Fortnite is one of the games that successfully merges the gaming and virtual reality worlds. [xii]

Also, ensuring everyone who uses the Metaverse voluntarily agrees to abide by its laws is one of the obstacles that the stakeholders have to overcome as it expands. Metaverse ethics are crucial, and we must think about them seriously. [xiii] There is a need to restrain users and developers and not set a bad example by using violence or making threats. It is important for virtual environments to include both a system for reporting abusive behaviour and repercussions for it.

Without a question, gaming's mechanics and technology have been and will continue to be major influences in the development and growth of the Metaverse.[xiv] However, we must differentiate between the games we play in videogames and the games we play in real life. Just like in the real world, games and places inside the Metaverse need to be properly labelled for an adult audience. The ethical and legal guidelines for the Metaverse have not yet been established universally.[xv] Since playing facilitates the formation of long-lasting memories, it is the most efficient means through which we may acquire new information. The benefits of learning via play include a more enjoyable experience overall.[xvi] Individual sense of spatial orientation will appear handy in these 3D worlds. Not only can it increase behavioural knowledge and understanding via immersion, but it can also be used to develop emotional intelligence and compassion. This is especially true of augmented and virtual reality (VR and AR) technologies, which are currently being employed for this purpose. Use of this technology to improve instruction has several potential upsides. [xvii] To put it another way, games have the ability to make studying and other formerly tedious activities more interesting and enjoyable.[xviii] Developing platforms like these may ushera new era of visual immersion that will be seen not just in the games of the

future but also in

the Metaverse. Truth is, even if only a small subset of the population will be gamers, millions will be exposed to the Metaverse before of the gaming community.

BLOCKCHAIN AND CRYPTO: THE REVOLUTIONARY TECHNOLOGY OF DECENTRALISATION

Blockchain refers to a distributed database that is shared across all of the computers in a network.[xix] In a conventional database, data is kept in blocks rather than rows or columns. In addition to making it very impossible to hack, this generates an unparalleled degree of confidence in the data. All data on a public blockchain may be seen by anyone. It's the backbone of the Metaverse's economy.[xx] Only the people who are in on a particular block's agreement may see its contents in a private blockchain. Because of the need for confidentiality and protection, private blockchains have become more popular than public ones. The mobile and online applications and websites that interact with a blockchain server are a common target for hackers. Although, the blockchain itself is secure; the connection between mobile phones and the server is the weak link.[xxi] This is an area where technical architects still need to do more effort to establish security.

Blockchain technology has led to the emergence of digital assets. Digital assets may be represented by many tokens, but Non-Fungible Tokens (hereafter, NFTs) are the only ones that can prove ownership indefinitely.[xxii] Both NFTs and the subset of them known as digital twins are excellent applications of the blockchain technology. A digital twin is a kind of NFT that can exchange data with its physical counterpart.[xxiii] Blockchain also finds its utility in the automobile industry. The Mobility Open Blockchain Initiative (hereafter, MOBI) is a global alliance for vendor and blockchain technology use in the automobile industry.[xxiv] MOBI has issued guidelines for automobiles. Almost every automaker is represented among the 158 auto sector companies who are MOBI subscribers. [xxv] The automakers may also get a cut of the profits made from the selling of their automobiles. NFTs, or digital twins, have the potential to drastically reduce the business of car chop shops, like the one in the Sotiganj market in Meerut, Uttar Pradesh, maybe even eliminated altogether if this technology develops to its full potential by developing blockchain-based standards to identify vehicles.[xxvi]

Furthermore, the manufacturing of luxury items may benefit from NFTs and digital twins.[xxvii] The yearly resale market for handbags is approximately $500 million, making it a sizable potential.[xxviii]

The rights granted by an NFT may range from the simple right to see and exhibit an object to the more expansive commercial usage or even modification rights.[xxix] An NFT may provide the buyer access to a digital service or product or some other tangible benefit. Smart contracts, which are built on top of the blockchain, make it possible to exercise all of these rights. As platforms, the Metaverse and NFT provide authors with economic opportunities outside the immediate market for their work. Anyone may be a creator, from industrialists (such carmakers) to singers, composers, and fashion designers. In the Metaverse, people may build and trade digital goods that they own long after the original sale or creation. To put it simply, it's a plan for financing originality and creativity. In order to establish a presence in the Metaverse, certain businesses may choose to lease or purchase parcels of property from current landholders. The Metaverse is a new economic model that enables companies to deposit their NFTs into a platform tied to the rights of utilising their IP.[xxx] These rights may be bought by creators or sometimes obtained for free. Companies have the ability to develop and own their own unique brand strategies. NFTs and the Metaverse provide a significant opportunity to revolutionise how businesses engage with their customers. Although without doubt of its immense potential, most of these sites in the metaverse are unregulated, giving con artists an opening.[xxxi] Before putting down any money, the investment need to be very sure and aware. This is where the need for regulation is needed in the long run to retain the confidence of the investors and buyers.

It is in this way that the Metaverse is facilitating the transition to a creator-based economy. It is predicted that eventually, business as usual would not be an option, forcing companies in this industry to find creative solutions to their survival challenges. Nobody knows for sure what the future holds, but just think of all the possibilities that this technology and these companies provide.

A PLETHORA OF BUSINESSES AND GOVERNANCE AVENUES

The Metaverse is the online community, and it's a social, immersive, and commercial hub. As was previously said, the Metaverse has many potential uses in business contexts; however, these uses

often focus on enhancing internal procedures and increasing productivity rather than on Business to Consumer interactions.[xxxii] Just in product development, this opens up a world of possibilities, from real-time product reviews through user assessment and acceptance testing.[xxxiv] Metaverse immersive technologies are also relevant in training and retention of employees. They can create a virtual reality environment for training employees.[xxxv] A recent study discovered that trainees who used a 3D immersive virtual reality (VR) training system reported 30% higher work satisfaction and 70% higher performance on subsequent evaluations.[xxxvi]

This strategy has the potential to foster muscle memory and practical skill with employees' instruments. In a 3D interactive training environment, managers may see how their employees are doing in real time. The process allows companies to establish a production schedule for their new product with more accuracy. It's an excellent practise to go through before going headfirst into building finalised products. It is believed that a person with one year of experience has a 25 percent greater competency than a worker with no experience. Everybody will need to put on a headset like a Microsoft Hololens, which will provide them step-by-step directions on how to do the task at hand.[xxxvii] Putting a 3D model into a Metaverse environment is like imagining a virtual reality for real life. User experiences and providing them with emotional value are at the heart of the Metaverse. Businesses now have the option of making items that live just in the Metaverse. A firm, for instance, may make a pair of branded shoes that are available only in the metaverse.[xxxviii] Next, you may utilise this information to design engaging and enjoyable activities that publicise your new product and company in general. Because of the buzz around NFT technology, this is now a realistic possibility. There are two sides to the Metaverse's economy. Fabricant is only one example of a digital fashion house, while DressX is an example of a digital fashion multi-brand shop[xxxix].

There is tremendous potential in the metaverse for recruiting, developing, and retaining top talent. Virtual reality (VR) and 3D environments may simulate an employee's typical workday in a given department. In addition, this technology may be used to create a realistic exam that would evaluate a candidate's actual skills for a certain profession. The Metaverse can connect all of your digital worlds into one continuous experience.[xl] The transition from using a word processor

to playing a video game on a personal computer in this universe is seamless. Metaverse is about more than simply having fun in virtual environments; it's about making your whole life digital. It is hoped that in the not-too-distant future, virtual reality (VR) and augmented reality (AR) glasses would make it possible for users to switch between, say, a business conference and a round of golf with a friend, without leaving their avatars in either environment. After your virtual meeting with a customer or co-worker is over, you may decide to listen to a digital concert instead. It is essential for businesses to consider how they can get population from Gen X and baby boomers to use this new technology.[xli] The merging of digital and physical worlds is one of the Metaverse's most promising uses[xlii].

In the previous sections of this article, we discussed how digital twins will revolutionise the economy and the user experience. Envision a world where in the near future you can instantly teleport to any street in the world and look around as if you were really there.[xliii] When worn, virtual reality glasses may aid in reading facial expressions to determine if a conversation is heading in the right direction.

CONCLUSION

Science fiction writer C.C. Finlay introduced the idea of a parallel universe, or "Metaverse," in 1992. The novel depicts its characters seeking safety from a crumbling world. The Metaverse is a place where you and your friends can make your own tales come to life. We shall go from being storytellers to living-the-story in the Metaverse. This put us, as people, in the centre of the tale and convince us that it is true.

This method works just as well for instructional purposes as it does for amusement. Users may buy their very own piece of the decentralised platform in the form of a 3D, explorable virtual place inside the Metaverse. If a company operates in the metaverse, the landowners on the platform have a say in a company's working thanks to the voting power proportional to the area of land they hold. Certain property rights will be extended to an individual as a Metaverse resident. That is why it is so important for the development of a digital and creative economy that can support itself with envisioned ethical rules and regulatory norms. Users may take with them their identity (their avatar's look) and virtual assets when they travel from one internet space to another in metaverse (a handbag, pet or car). The end goal is for

individuals to have a smooth and effortless transition between digital and physical spaces. The ability to seamlessly transfer digital items from one platform to another, as well as facilitate cross-platform payments, will be crucial for success. It should not make a difference whether device one uses to enter the Metaverse, since access should be possible from all of them. To what extent, though, might still depend on the devices used to access it.

Included in this category are not only computers and tablets, but also headphones, mobile phones, laptops, and tablets. Millions of users may need to share the same virtual environment at once in the Metaverse. This is not feasible at the present time. According to Pew Research Centre, it is hoped that by the end of 2022, the Metaverse will consist of several platforms, each with its own independent 3D worlds.[xliv]

If an individual is looking for a place to meet new individuals who share its interests, go no further than the Metaverse, the next generation of social networks. It is advocated that people will want to socialise, make friends, and establish communities in the Metaverse just as they do in the real world, even though the campaign of Zuckerberg has received cold response for now.

The industry needs a few key structures in place to give the Metaverse any chance of survival, even if it's still in its infancy. Among them are platforms that adhere to pre-determined norms and standards, 3D environments that can be accessed and used repeatedly, and an open and trustworthy digital economy. With its immense potential for good, the potential for these spaces to be exploited to recruit and radicalise individuals into hate groups is extremely real. Because of this, it's crucial that platforms monitor content for hate speech and that laws be put in place. When you enter the Metaverse, you will be surrounded by individuals from all over the globe, giving us the chance to foster a more tolerant and global perspective within the global community. It is also argued that metaverse will usher a gloomy society with the next generation having serious concerns with the ability to communicate and interact in the real world. As a result, being the target of harassment in the Metaverse may be a terrifying experience. Those who aim to sow discord and strife in society must be shielded from this. We need to come up with effective mechanisms to handle these kinds of problems. One of the mechanism for this could be voting through blockchain technology. Voting prevents other users' avatars from

entering the user's personal zone. These measures may serve as a deterrent to people who might otherwise engage in improper or dangerous behaviour in the Metaverse. The greatest danger lies in the possibility of widespread brainwashing, manipulation, and control. We will be exchanging a great deal of private information with one another in the Metaverse. Based on these findings, algorithms and AI agents might be modelled to elicit a certain emotional response or behaviour from every user. We must thus work for a worldwide agreement on a set of widely accepted ethical principles. Additionally, these norms and guidelines need to be implemented quickly and at the global inter-governmental level.

Self-contained community systems best characterise the likes of Decentraland and Roblox are good examples of successful implementation of metaverse technology. The Metaverse provides the foundation for all interactive platforms and facilitates the mechanisms of authentication, digital identity, commerce, ownership, and content distribution. Each of these systems, some centralised and others decentralised, will make up the Metaverse. Users of decentralised systems are the owners, whereas private or publicly traded organisations (like Meta) will own centralised ones. Rule and standardisation work for the Metaverse as a whole is being done by the Open Metaverse Alliance. These are Metaverse ecosystem under the leadership of the private sector through government and business collaboration.[xlv] Each platform in the Metaverse is attempting to build its own economy and society from the ground up. It is easy to imagine these settlements firmly establishing itself in the gaming industry before the becoming dominant in other sectors. One major advantage of the Metaverse economy will be that due to highly centralised structure no single firm will not be able to claim "ownership" of the whole Metaverse. The content of the Metaverse requires the development of entities with a precautious eyes for those into law and public policy. That is why it's crucial that these rules be framed by bringing in all stakeholders on the board and with the active participation of the governments around to the globe. The governments must also play an active role in the implementation of these ethical standard to make positive stride into the future of internet, social interaction and business.

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Metaverse: A Step Towards Internet Revolution

Naman Goyal

INTRODUCTION

It would not be wrong to say that, people discussing 'what is metaverse?' in 2022 is no different from people discussing 'what is the internet?' back in the 1970s. [1] The stepping stones of a new form of communication had just started to get laid at that time and no one was aware of how reality was going to look. The experts believe that we are in the middle of a big transition and the change we are going to witness will impact our lives hugely. The metaverse is not just any other new technology that comes now and then and is not just limited to one specific technology, but rather it is a broad shift in how we interact with the technology. It would not be surprising if the term 'cyberspace' gets completely substituted by the term 'metaspace'. We have heard the big guns in the technological space such as Mark Zuckerberg and Satya Nadella talk about it quite often recently. But what is all this hype about?

WHO INTRODUCED THE TERM METAVERSE?

The phrase 'Metaverse' was first introduced by American Science Fiction Author Neal Stephenson in his dystopian future setting of snow crash, as a combination of the words 'Meta' and 'Universe', where wealthy individuals escape into a 3rd world reality. The alternative reality begins as a single 65,536 km road encircling a manufactured planet and grows as individual purchases, construct and upgrade virtual properties. In the digital version, there is just one world that links everyone together. People are in charge of their own avatars which can be anything from extremely creative, customized designed objects to inexpensive mass-produced items from Walmart popularly known as "Clints" and "Brandys".[i]

WHAT IS METAVERSE?

Metaverse in laymen's language is an augmented reality that combines the aspects of the physical world with the digital world.[ii] We live in a world where a lot of platforms already have the concept of virtual identities, virtual avatars, and even virtual inventories but the catch here is that all of this is just limited to that one particular platform.

The metaverse will create a digital ecosystem that will connect all these platforms and we will be able to take our digital avatar from one social network to another. It will also allow us to possess digital assets like cars, clothes, and digital real estate and do transactions using digital currency. But are we prepared for this shift?

Every big change brings even bigger challenges within itself and this case is also no different. In the coming future, we are going to see a lot of issues arising around the metaverse and a huge chunk of those issues is going to be in the legal domain such as: -

Privacy Concerns:

Metaverse helps in building completely independent or aligned virtual lives by adding new levels of virtual reality (VR), augmented reality (AR), and mixed reality (MR). For example, for an avatar in the digital world to achieve the utmost accurate depiction of ourselves, our devices will need to read and reflect our body motions, such as the subtle ways our eyes naturally fluctuate while having a conversation, the way we walk-the way we talk, the way we pause and stare at someone among other things as if AI is trying to learn more about humans by imitating them in their day-to-day life. In many respects, these minor nuances keep us from feigning identity and are crucial for building accurate avatars in the metaverse. But how will this data, which is really a fresh cache of personal information, be kept track of?[iii]

Almost every kind of information can be gathered in the metaverse ranging from date of birth to individual bank account and card details and educational qualifications among others. In reality, using VR for just 20 minutes can produce around 2 million different pieces of data. The manner in which you breathe, walk, think, move, or even just stare are examples of this. Isn't that a little creepy?

The companies in charge of managing a specific metaverse(s) that the users choose to join can and conceivably will collect that information from the users. And this is just what VR alone is capable of doing, let alone think of the potential of what AR and MR store. This could involve the things a user decides to buy, the places they go to spend their time, and the people they interact with. Consider how many marketing messages targeting specific audiences will soon arrive in your inbox or on your phone. Hitherto, we have already been targeted by marketing agencies like Google ads based on our search history using cookies and all, just imagine the extent to which these companies will be knowing about

our preferences and what a paradigm shift it be in the international market. [iv]
If we look at the previous trends, we will observe that for formulating laws related to technology, India has always been dependent on other developed countries. The European Union's General Data Protection Regulation has even influenced the Personal Data Protection Bill (PDP Bill), which is the most important law in our country when it comes to the protection of personal data in the digital environment. But with the rapidly increasing internet penetration in India, it becomes immensely important for India to adopt a proactive approach towards formulating laws for ensuring the privacy of its citizens in the digital space.
Currently, there is no clear law in our country that would specifically deal with incidents of copious privacy breaches in the metaverse. The closest law we have regarding this is a small part of the PDP Bill which deals with sensitive personal data (sensitive personal data is any data that contains biometric information).
In the current legal framework, there are no provisions for the protection of the sensitive and personal data of children over metaverse platforms but India is already making moves so that the youth of today can understand the gravity of the digital world and its pros and cons.

Recently, the Central Board of Secondary Education tied up with Meta. This partnership will ensure that around 10 million students are provided with a curriculum in Augmented Reality experience.

Shortage of Data Storage Centres:

According to a report by Credit Suisse, the transition of the digital ecosystem to the metaverse would increase data usage by 20 times in the coming years and for storing this enormous amount of data, a lot of new data centres will also be needed. So, there is a need for a specific law that would enable us to build more data centres, increase their capacity and at the same time adhere to the environmental protocols

Concerns Over Digital Assets:

A recent study shows that a piece of land in the metaverse was sold for 4.3 million dollars.[v] This figure is in itself enough to indicate the interest people are showing in buying virtual real estate, all thanks to the backing of tech giants like Meta and Google.[vi] One of the conditions mentioned in the sale deed of this land was that the land can be bought in cryptocurrency only and if the company's server fails to operate, the land will no longer exist. So it is not very difficult to

guess that people can use virtual assets as a means to commit fraud. And since crypto is still illegal tender money, it would be nearly impossible for the investigating agencies to book the culprits as the shreds of evidence will be extremely weak. Not only this, but since the crypto is non-traceable, it would allow the criminals to purchase real estate in the metaverse with their illegally procured cryptocurrency. It would also provide a safe harbour to criminals who indulge in money laundering.

Concerns Surrounding Horizontal Platforms:

Users interacting with their avatars give rise to certain situations involving a breach of the law as if it took place between two people in the real world. How can an avatar be made liable for his actions online and how can he be sued under the existing laws is a matter of great concern.

By the end of last year, Meta launched a metaverse platform named the Horizon Worlds. An incident of a male avatar groping a female avatar has come into the limelight. Another similar incident involving a woman avatar in Meta's Horizon Venues metaverse disclosed that she had been gang-raped by four male avatars.

This has put forth a great question of law as to whether a virtual body can legally be considered the same as a physical body and can penal provisions be used for addressing the crimes inflicted upon these virtual bodies. As in the instant case, can Section 375 of IPC be used for a virtual person whose modesty is in itself a question of doubt? Whether a woman's avatar possesses modesty and can be outraged virtually is also a gray area? There is no law confirming the modesty of a virtual avatar. The current IT acts and legislations regulating cybercrimes against women were not formulated keeping in mind the possibility of crimes occurring in the metaverse. Furthermore, there is currently no law that punishes sexual assault committed via the internet. It's also tough to track down the perpetrators of such crimes because each person in the metaverse is given a unique identity.

Also, The Competition Act must be well acquainted while dealing with the unfair competition that may arise due to the new technology of the metaverse where the user's data could be used to know their taste and preferences, thus giving a competitive edge to one brand over another. It could jeopardize the government's efforts to create a fair and competitive economy.

Need of the Hour:

There are many concerns and apprehensions surrounding this new technology of the metaverse and all the legal ramifications it will bring along. Metaverse has thrown a slew of hurdles, ranging from the groping of a female avatar to the million-dollar sale of virtual assets that anyone can buy. At the same time, it would be too early to predict its boon and bane considering it to be simply the initiation of an internet revolution. Therefore, the full ramifications of the giant technology can only be realized in another 10-15 years down to come.[vii] Legislators, on the other hand, will have to be proactive in ensuring that Metaverse technology is compliant with data protection standards. This necessitates an early draught of the Metaverse law so that technology evolves within legal bounds and people are rest assured while trying this new technology.

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IMPLICATION OF INTELLECTUAL PROPERTY ON THE FUTURE OF METAVERSE

Sahil SIngh

ABSTRACT

The Metaverse is referred to as a collective sharing of virtual space wherein a convergence emerges between the physical and the virtual world, many have believed the Metaverse to be the next generation of the internet, but it still needs to be developed. The metaverse platform has recently gained prominence due to the ideology of development by major tech companies such as Facebook and Microsoft. It will be crucial for anyone who will be heavily invested in this virtual world of Augmented and Virtual Reality to know the Intellectual Property rights which are associated with this digital component and the future that it withholds, along with the immediate impact on industries concerning gaming, education, finance, and cryptocurrency.

In this article, emphasis shall be laid upon Metaverse, Various sectors of the same, Intellectual Property Rights based in the Metaverse, Non-Fungible Tokens (NFTs), Intellectual Properties: To Watch Out in The Metaverse, Copyright, [i]World Intellectual Property Copyright Treaty (afterward WCT 1996), Trademarks, The United States Patent and Trade Mark Office (USPTO) Class 9, Class 35, Class 36 and Class 42 of the Nice Classification, Design Patents, Issues Regarding Intellectual Property in Metaverse, [ii]the Digital Millennium Copyright Act(after wars DMCA 1998), [iii]Section 230 of the Communication Decency Act, European Patent Organization, BIRKIN V METABIRKIN (FUTURE LANDMARK CASE), Protection of Your Intellectual Property In The Metaverse, Future Of Metaverse

INTRODUCTION

In today's digital era, the rapid expansion of the internet and its evolution has led to the extraordinary development of events wherein, out of nowhere, a technology would be created which would have the power to revolutionize the world and the field of law too. Web 2.0 and cloud computing was the next big thing that allowed users to interact, collaborate and share information online, whereas Web 3.0 is known for further decentralization of data by a gradual transition from hosted clouds to that decentralized blockchains. Users' online experience will evolve; the narrow link between host service and data shall be removed and accessed through various applications

such as the Metaverse. The Science fictional novel by Neal Stephenson 1992 known as Snow Crash coined the term metaverse wherein humans would be programmable as avatars and be able to interact and communicate with one another in a three-dimensional virtual space described as a virtual-based world. The Metaverse employs state-of-the-art technology such as blockchain, non-fungible tokens (NFTs), and augmented and virtual reality (AR & VR). The metaverse platform enables an individual or an association to engage in real-world activities. They are influencing customer and employee relationships and involvement in the innovation and development of a community in a virtual space.

It is seen that a significant invention in the virtual world has gained prominence as there is a scope for futuristic and scientific expansion of technology as seen in the case of Metaverse; although it is believed that Metaverse is a novel concept, it has been under severe deliberation and development for ten years. platforms by major tech companies such as Facebook, Amazon, and Microsoft, leading to enthusiasm for the development of an ecosystem that is compatible with the major companies and players of the metaverse universe and also creates a virtual universe that is accessible to the general users as a whole. The Metaverse has recently developed into a staggering phenomenon, capturing the attention of celebrities, companies, and businesses. Funds invested into the Metaverse and the worldwide metaverse industry are said to surpass a limit of about $1607 billion.

The metaverse universe will likely have an immediate effect on industries concerning gaming, education, finance, and not to forget the usage of cryptocurrency, a virtual currency used in a virtual reality that is almost similar to that of the natural world we live in today. All these changes will be crucial for anyone heavily invested in this virtual world of Augmented and Virtual Reality to know the Intellectual Property rights associated with this digital component. The [iv]Berne Convention, which was established for the Protection of Literary and Artistic Work and ratified by over 181 counties, establishes that each contracting party must grant an exclusive right to the author over any work irrespective of type or form of expression. The World Intellectual Property Copyright Treaty (1996) adapts the Berne Convention to be engaged in a digital environment . It is explicitly mentioned in Article 1(4) of the WIPO Copyright treatment (WCT 1996) that the storage of a protected

work which is said to be in a digital form or electronic media such as non-fungible tokens or any content file is associated with the Metaverse has to be approved by the copyright holder. Then only shall be permitted for reproduction proving that the law has been progressing with time and is adapting to various changes in the digital world. Even though digital assets in a virtual world, along with NFTs, were not significant in the early days, the WIPO Copyright Treaty portrayed a law that would have been vital shortly.

VARIOUS SECTORS IN THE METAVERSE

Soon, Metaverse is estimated to become an $800 billion market, wherein primary users who interact with a company and amongst themselves shall be the beneficiary in this virtual space. Various vital areas and sectors are considered, including Gaming, social media, Entertainment, Ecommerce and Retail, Real Estate, Banking, Finance, etc.

GAMING

Primary investors of the Metaverse are exclusively present in the gaming industry; the technology allows the interaction of players with each other in a virtually connected space. Metaverse concepts such as 3D avatars and world-building are already being incorporated in games like Sim City, Minecraft, and Roblox.

SOCIAL MEDIA & ENTERTAINMENT

The concept of Metaverse for social media has led to the radical transformation of online entertainment for audiences. Users have commenced communicating using digital avatars and clones on the platform for interaction with each other. Facebook has already transitioned its name to Meta, which shows the company's intent to be engaged in the virtual world.

ECOMMERCE AND RETAIL

The Metaverse had the potential to bring about a new dynamic & innovative thinking that would forever revolutionize customer experience with various brands. In 2021 customers would be interested in trying clothes via AR/VR along with a spin in the Metaverse before being able to purchase in the real world. For example, Nike acquired RTFKT, which creates digital collectibles.

REAL ESTATE

With the ability to offer clients an ultimate virtual reality experience of the Metaverse, prospective buyers shall take a real estate tour and explore all the options available at that time; the virtual tour in the Metaverse is adapted according to the client's necessity.

BANKING & FINANCE

Banking sector is provided with a 360-degree angle of view of an overview of the physical bank from the said location. Even without a VR headset, the Metaverse banking application is accessed through a mobile or laptop. Colossal Benefits are provided to the banking sector from the perspective of Blockchain, NFT, and cryptocurrency.

INTELLECTUAL PROPERTY RIGHTS BASED IN THE METAVERSE

The gradual shift in approach from the usage of mobile-based internet towards an augmented virtual and augmented reality known as Metaverse has led to the creation of new opportunities for various investors and brand owners to develop all software and equipment related to the trend of AR and VR devices. The immediate success would provide for enhancing the user-friendly aspect of such devices, which is [v]rudiment for the invention of devices that are cheaper and more durable. Metaverse is said to have a direct implication as other patentable inventions shall be invented and essential to present in the market. IP covers a wide range of creating, from trademark and copyright to patent and trade secrets. In the context of a metaverse, all IP-protectable assets shall range from copyright literary artistic to a trademark, such as brands, virtual goods, and services that would create a virtual trademark domain. Design patent protection would be essential for various configurations of any design-based orientation created in the Metaverse. There will be Protection of Intellectual Property based objects both in the virtual and real-world, which would take the Metaverse and the virtual augmented reality platform to the next level. Protection of your IP is a valuable asset to one's company; the owner shall be given the exclusive right to sue anyone for copying, infringing, or misusing. There is also the aspect of licensing the IP through monetizing. Through licensing and royalties, companies earn a significant part of the revenue.

NON-FUNGIBLE TOKENS(NFTs)

One of the fastest-growing areas of the Metaverse is known as non-fungible tokens (NFTs). It appeals to one's curiosity, creative talent, and investment in the digital art collection. NFTs are digital assets representing physical things such as art, music, and videos purchased and traded online using cryptocurrency. The advent of NFTS and blockchain lead to the verification of guarantee of ownership online NFTs play a crucial part in the space of Metaverse along with serving

as a building block for applications inclusive of TradArt; the sector also plays a vital aspect in virtual real estate constituting land and buildings in the Metaverse.

The Metaverse has recently developed into a staggering phenomenon, capturing the attention of celebrities, companies, and businesses. Funds invested into the Metaverse and the worldwide metaverse industry are said to surpass a limit of about $1607 billion. A non-fungible token s unique and one of its kind; hence, another NFT cannot replace it. While copies of the artwork are possible, determining the extent of the token is easy to gauge the original from the document in the metaverse universe as an artist shall tokenize their digital art and create one copy of such kind which will be similar to that of a physical attribute of the good not prevalent in the Metaverse but rather in the physical world.

INTELLECTUAL PROPERTIES: TO WATCH OUT IN THE METAVERSE

The Metaverse is a global platform involving users worldwide that preset the expansion of a new business. Without protection, a company or an individual shall be vulnerable to lawsuits and other legal action from its competitors. Investors are highly anticipating and looming to increase their investment in IP-based portfolios which would then demonstrate the potential value of the business. Brands seek new business opportunities to expand their reach in the Metaverse as users can buy and sell goods in the Metaverse; the burning question arises of protecting ownership rights in the virtual world.

COPYRIGHT

A copyright is a legal term that describes the creator's rights over their artistic and literary works. Copyright is that part of the Intellectual Property that protects the creator's original work and includes rights that range from texts, images, videos, and other work-related aspects of copyright n the Metaverse. Challenges shall arise when dealing with copyright infringement. It may take several years to tackle this issue until and unless copyright violations are enacted in the Metaverse. Inconsistent regulations and rules between the various platform of the Metaverse require the owners to continuously adjust licensing agreements of the brand product, which would be a tiresome task to adapt to each forum. Calculating the fees for the usage of copyright based on the number of subscribers or viewers, Various platforms of the metaverse universe would have a different set of rules or principles, which would be cumbersome for the owner of the IP to adapt.

TRADEMARKS

A trademark is generally associated with a word, phrase, symbol, or a combination of collective marks which assist the customers in distinguishing between a product or service. Under [vi]The United States Patent and Trade Mark Office (USPTO), virtual goods and services can also be trademarked. In the real world, brands have trademarked their goods and services, and these similar brands should consider registering their mark in the Metaverse. Almost all real-world goods can be converted into interests in the virtual environment. Brand Owner protects their effects by recording them from the usage of the third party. Hurdles that the owner and holder of the Copyright face in the Metaverse are similar to trademark theft which is said to be more cumbersome to deal with than the relatable task in the real world. Trademarks aren't globally valid and registered in each country; the blending of the Metaverse between various platforms ambiguously states to what degree or extent trademarks will shield the holders from infringement in the real world.

PATENTS

An inventor is granted rights by a sovereign authority known as a patent. As per the grant, the inventor is provided exclusive rights for that particular patented process, design, and invention for a designated period in exchange for disclosure of that invention. Generally, the period of a new patent is said to be 20 years from the date of issue and filled, as provided by the United States Patent & Trademark Office.

Patents protect the design process of that new invention from being recreated and profited by any such individual who is not the creator of the same. Unlike copyright, which protects each work, the patent must be registered to cover a specific invention. Companies developing any technology related to Metaverse often adopt the usage of the patent to protect their inventions. Most metaverse patents are either associated with the VR and AR space. Exponential rise of patent fillings has arisen at a rate of 33% since 2010 due to the increasing research and development on spending on Metaverse-related inventions. AR and VR technology includes VR headsets, haptic gloves, and the scanning sensor, the demand for improved hardware will likely increase patent applications, which is interrelated with the Metaverse.

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The very nature of the Metaverse poses additional challenges which in the ordinary physical world would not have been even envisioned by an owner or creator of that intellectual Property. Determining the identity of the given work produced in the Metaverse is cumbersome as the results are of a decentralized collaborative procedure performed by anonymized users behind an avatar. The extent of determining whether digital assets should qualify as a good for a trademark under the current IP regime is still ambiguous since users are behind the screen infringers will be challenging to locate as they are anonymously concealed behind an avatar. Potential patents in the Metaverse is distinguished into two broad categories, i.e., hardware and software-related patent. Hardware patents, often comprised of gears for entering the Metaverse, shall include VR glasses, sensors, processors, or storage mediums, the significant criteria for a patent to be granted is that it needs to be

to be of novelty and have the aspect of inventiveness. A software patent is more complicated as it involves software of the Metaverse simulating the virtual world. Inventions for the procedure of program simulation are tedious to obtain by the states of the European Patent Organization. The possible lack of Protection for simulation would lead to issues about license requirements or infringement issues, especially in the EPO states, as the invention of software is more accessible and obtainable in the USA.

BIRKIN V METABIRKIN (FUTURE LANDMARK CASE)

An IP issue relating to the emergence of the fashion and luxury goods sector had already emerged in the Metaverse. In January 2022, a luxurious French brand known as Hermes sued an NFT creator Mason Rothschild who, through a line of digital assets called Metabirkins, had digitally duplicated a Birkin bag created by Hermes, which was sold for ten of thousand dollars or more in the resale market. While the scope of IP protection in the Metaverse is ambiguous, companies and developers have to carefully consider and view all the necessary IP protection in the Metaverse and be open towards resilience and significantly challenge an infringement relating to IP in the Metaverse.

PROTECTION OF YOUR INTELLECTUAL PROPERTY IN THE METAVERSE

When a brand contemplates selling its branded goods and services in a virtual universe, all transactions are said to take place in an illustrative and augmented reality. The Metaverse is the future of all digital transactions as significant companies and businesses vest all their resources in this digital space. Several companies, such as Nike and Converse, have filed applications for using their marks in interconnection with the virtual world under the United States Patent and Trademark Office.

Companies have been appearing to file for Protection about various classes of goods, such as downloading virtual goods which mainly emphasize Class 9 of the Nice Classification, featuring virtual goods such as entertainment services (Class 35, Non- downloadable virtual goods, NFT (Class 42) and financial services which is inclusive of the digital token (class 36). Digital Millennium Copyright Act(1988) was vitally necessary to the copyright law in the United States, it provides for the Protection of Intellectual Property in the digital environment wherein the DMCA shall provide a take-down notice sent to the digital companies for infringement of Intellectual Property. Digital assets

created or copied shall be protected in the Metaverse by DMCA; by this theory, individuals or businesses can have their rights covered in the Metaverse. The application of existing laws of Intellectual Property is the prerequisite for the Protection of a brand in the Metaverse by assessing the situation at hand and determining the rights of the IP owners, which is perhaps the most vital aspect in deciding about the Protection of IP rights in the Metaverse against the infringer. Right holders are increasingly aware of the importance of adopting preventive measures to protect their rights in the Metaverse. Unlike the physical world, the counterfeit activities of the Metaverse are difficult to ascertain as the infringer's exact location is not accessible to be determined in the unlimited internet space. The recent infringement amongst the Metaverse users portrays that infringement is related primarily to NFTs infringing registering of trademarks and copyright. In the MetaBirkings case, in which Hermes had filed a lawsuit against an NFT artist known as Mason Rothschild, who had created MetaBirkins, 100 NFTS which had a digital version of the bag was produced, this act Rothschild would eventually confuse the customers of Hermes leading to the dilution of the BIRKIN trademark.

Hermes filed a Lawsuit before the US District Court, and Rothschild's claim on dismissing the suit was rejected as Hermes proved sufficient factual allegations that the use of the trademark was not artistically relevant but rather the use of the brand was misleading. The Decision of the case has yet to be produced but would be a landmark decision regarding The shaping of Intellectual Property infringement in the future. An alleged infringer is a person who has identified himself and would not pose the issue of anonymity; it is observed that as long as the person is identifiable, the suit shall be maintainable in the national court.

FUTURE OF METAVERSE

Intellectual Property has a promising future in the development of Metaverse, which will usher in a new type of non-traditional trademark and encompass a wide range of brands and new patentable classification. The gradual shift towards a virtual reality would create an issue regarding trade secret confidentiality creating an additional point about establishing an appropriate means to protect Trade Secret

. This virtual convergence between the virtual and the natural world or a judicious mixture of both will require a new methodology of trademark secrecy.

Beyond the method of signing a nondisclosure agreement. While the Metaverse provides an exciting opportunity for fashion designers, fashion brands, and independent artists, the issue regarding the safety of intangible Property is still looming.

Digital assets created or copied shall be protected in the Metaverse by the Digital Millennium Copyright Act, wherein individuals shall have their Intellectual Property protected in the Metaverse. Facebook has changed its name to Meta, and the world's largest companies, such as Amazon, Apple, Google, and Nvidia, are investing and preparing for this virtual space. Mark Zuckerberg calls Metaverse the successor to the internet and the future as it's designed based on Web 3.0. The Metaverse is built upon decentralization; however, the existing Intellectual Property relies on centralized methodologies such as courts or tribunals. Therefore, this aspect of Intellectual Property in correlation with the current legislations should be relooked at accordingly as per the future expansion of IP in the metaverse universe.)

CONCLUSION

The Metaverse will likely have an immediate effect on industries concerning gaming, education, and finance. Anyone who will be heavily invested in this virtual world of Augmented and Virtual Reality needs to know the Intellectual Property rights associated with this digital component The World Intellectual Property Copyright Treaty (1996) adapts the Berne Convention to be engaged in a digital environment. It is explicitly mentioned in Article 1(4) of the WIPO Copyright treatment (WCT) that the storage of a protected work is said to be in a digital form or electronic media such as non-fungible tokens or any content. Web 3.0 is known for further decentralizing data by gradually transitioning from hosted clouds to decentralized blockchains; users' data shall be removed and accessed through numerous applications prevalent on the Metaverse.

The gradual shift in approach from mobile-based internet to a world of hypothetical iterations of using the internet would likely create new opportunities for various investors and brand owners to develop all software and equipment related to the trend of AR and VR devices. Investors are highly anticipating and looming to increase their investment in IP-based portfolios which

would then demonstrate the potential value of the business. Brands are seeking new business opportunities to expand their reach in the Metaverse; as users can buy and sell goods in the Metaverse, the burning question arises of the Protection of ownership rights in the virtual world. Copyright is that part of the Intellectual Property that protects the creator's original work and includes rights that range from texts, images, videos, and other work-related aspects of copyright n the Metaverse. In the real world, brands have trademarked their goods and services; these similar brands should consider registering their mark in the Metaverse. Almost all real-world goods can be converted into interests in the virtual environment.

Brand Owner protects their marks by registering them from the usage of the third party. Companies developing any technology related to Metaverse often adopt the use of the patent to protect their inventions. Most metaverse patents are either associated with the VR and AR space.

Companies have been appearing to file for Protection about various classes of goods, such as downloading virtual goods which mainly emphasize Class 9 of the Nice Classification, featuring virtual goods such as entertainment services (Class 35, Non- downloadable virtual goods, NFT (Class 42) and financial services which is inclusive of the digital token (class 36). Right holders are increasingly aware of the importance of adopting preventive measures to protect their IP rights in the Metaverse. Unlike the physical world, the counterfeit activities of the Metaverse are difficult to ascertain as the infringer's exact location is not accessible (Class 35, Non- downloadable virtual goods, NFT (Class 42) and financial services which is inclusive of the digital token (class 36). Right holders are increasingly aware of the importance of adopting preventive measures to protect their IP rights in the Metaverse. Unlike the physical world, the counterfeit activities of the Metaverse are difficult to ascertain as the infringer's exact location is not accessible

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i. World Intellectual Property Copyright Treaty (adopted December 20, 1996, entered into force March 6, 2002) CRNR/DC/95 (WCT)

ii. DMCA - Online service providers are exempted from liability if they remove the infringing content once they are notified of the same

ii. Section 230 of 47 USC, Provision of the Communication Decency Act

iv. Berne Convention forProtection regarding Literary and Artistic Works (adopted on September 9, 1886) 828 UNTS, 221

v. Rudiment - the basic principle of

vi. USPTO - it serves as the national patent as well as trademark office in the United States

The Metaverse: A New Frontier in Intellectual Property Right

James Sibi

ABSTRACT

Metaverse refers to a digital world accessible online that enables real-time communication and collaboration among its users. The metaverse is an upcoming decentralised virtual reality platform that allows users to explore an online 3D world. It is a dynamically evolving virtual world which provides a wide range of opportunities for individuals and enterprises. The Metaverse provides an opportunity for businesses and brands to sell their goods and services. Intellectual property has the same risk of infringement in the metaverse, as it does in the real world. In order to maximise return, it is crucial to secure such rights. This article discusses various intellectual property laws and principles that are followed in India and around the world. We believe that current laws need to be changed to meet the challenges of intellectual property infringement in the metaverse.

Keywords: Metaverse, Intellectual Property Rights, NFT, Trademark Protection, Patenting, Copyright

INTRODUCTION

The term "metaverse" was introduced in the 1990s by Neal Stephenson in his novel Snow Crash[i]. It alludes to a digital world accessible online that enables real-time communication and collaboration among its users. Due to the recent rise in the popularity of virtual reality (VR) technology, the metaverse has received a lot of attention.

Metaverse is an upcoming decentralised virtual reality platform that allows users to explore an online 3D world. It is based on a blockchain and allows users to create, own, and monetise their digital environments. The Metaverse team has plans for a variety of different worlds and ways that people can interact with the platform. There will be several games available as well as social media features such as news feeds, discussion forums, and communities. Metaverse is considered to be a decentralised platform because it does not rely on a certain server or hosting provider for data storage. The Metaverse blockchain is responsible for storing the data, just like with Bitcoin or other blockchain-based platforms.

So, what are the pros and cons of using the metaverse? Let's take a look:

THE PROS OF METAVERSE

1. Real-Time Interaction: One of the key advantages of using the metaverse is that users can interact with each other in real time. This opens up opportunities for collaboration, learning, and networking.
2. Increased Productivity: The use of VR can increase productivity as it allows workers to complete tasks faster and more efficiently. For example, surgeons can perform surgery simulations in VR which reduces training time and helps improve outcomes.
3. Immersion: VR technology provides an immersive experience which can be very beneficial for gaming, education, and training purposes. It can also help people connect with others from around the world who they would otherwise never have had access to meet.
4. Increased Social Interaction: One of the best things about the metaverse is that it allows people to socialise with each other in a very fun and engaging way. This is because users can communicate with each other through text chat, voice chat, and even video chat.
5. Greater Connections: The metaverse helps people connect on a deeper level than they would be able to in real life. This is because users can share their thoughts, feelings, and experiences without having to worry about judgement or censorship.
6. Fun for All Ages: The metaverse is enjoyed by people of all ages, from young children to adults. This is because there are games, activities, and content that appeal to everyone.

THE CONS OF METAVERSE

1. Negative Effects on Mental Health: Some experts believe that spending too much time in the metaverse can have negative effects on mental health. This is because some users become so absorbed in it that they start to neglect their responsibilities in real life.
2. Addiction Potential: There is also a risk of becoming addicted to the metaverse if you're not careful. This is because it provides an outlet for escape from reality which can be addictive for some people. 3. High Cost: One downside of using VR technology is that it often comes at a high cost. This limits its accessibility to only those who can afford it. In addition, not many people have access to VR headsets, which further restricts the use of the metaverse.

SIGNIFICANCE OF INTELLECTUAL PROPERTY IN THE METAVERSE

The Metaverse is a dynamically evolving virtual world which provides a wide range of opportunities for individuals and enterprises. To maximise the returns by taking advantage of this emerging field, it is essential to secure intellectual property rights. The metaverse is a global avenue consisting of users from all over the world. If the intellectual property rights of a company are secured, it possesses an opportunity to expand to emerging markets on a global level. Additionally, investors are examining the IP valuations before investing in a company. A company could establish its potential and raise more investment by having a robust IP portfolio.

In the metaverse, infringement of intellectual property can happen at any point. Similar to the real world, trademark infringement can occur when purchasing and selling virtual products. For instance, a miner who is not authorised to mint could sell fake NFT copyrighted paintings in virtual marketplaces. Trade secrets, which could be integral in the metaverse, are also vulnerable to such risks.

According to the Benelux Convention for Intellectual Property, the owner of a registered trademark has the sole authority to deny others from using similar or identical goods and services.[ii] However, companies are still reluctant to register the trademark as the concept is relatively new. When the trademark is registered for such services or goods, necessary action can be taken to protect intellectual property rights.

Countries with significant internet users like India have adopted new regulations to address such issues. The protection of intellectual property rights is largely concerned with the intangible characteristics of a creative work, a unique symbol, or a technological innovation, rather than the physical thing in which they are embedded.

PATENTING IN METAVERSE

Metaverse is a product of a programme which enables us to experience a virtual world. It becomes reality by making use of the hardware. The Metaverse has not yet been the subject of many patent applications in India, but numerous global patent applications have already been made to gain a monopoly in the Metaverse.

Similar to other countries, India's Patents Act, 1970 ("Patents Act") stipulates the three requirements of novelty, non-obviousness, and industrial usefulness for an invention to be eligible for a patent. [iii] Ordinarily, for a computer programme to

be patentable in India, it must ideally cover both hardware and software. The developers would have to prove that their software-based invention can address a current technological issue in order for it to be deemed patentable.[iv] As there is no provision for metaverse to be patented as a whole, each component consisting of Artificial intelligence, Virtual reality or NFTs is patented individually.

COPYRIGHTS IN METAVERSE

Indian Copyright Act, 1957 ("Copyright Act") backed by the Copyright Rules, 2013 is the primary legislation governing copyright in India. The Copyright Act, like most copyright legislations around the world, broadly defines "copyright" and considers it as a collection of rights. The term "copyright" refers to the exclusive right to conduct certain activities or grant a third party the right to perform certain acts, such as duplicating the material, making copies of the work available to the public, presenting it in public, making a movie or sound recording about the work, and adapting the work.[v] Metaverse platforms also allow the co-creation of content to enhance the user experience. The content generated by the users in the Metaverse is accompanied by its own set of issues regarding IP rights.

TRADEMARK PROTECTION

The metaverse provides a tremendous opportunity for businesses and brands to sell their goods. For instance, Gucci sold a digital version of one of its bags for roughly USD 4,000 on the Metaverse platform Roblox. The same bag costs about USD 3,400 in the physical world.[vi] In such circumstances, brands must licence their trademarks to ensure that customers receive authentic products. Companies like Gucci, Prada, Nike, and others have already applied for trademarks concerning "virtual assets" and "virtual goods' ' throughout the world. When companies collaborate with Metaverse platforms, the terms of the licence as set forth by the parties will be crucial in assuring the protection of the trademark of the brand. Given that the Metaverse is a global virtual realm, businesses might want to expand it to new markets all over the world. The Berne Convention stipulates that every nation which is a member shall grant protection for works that were initially published in other nations which are signatories to the convention.[vii] India has ratified the Berne Convention as well. As a result, copyright enforcement is likely to be simpler because copyright protection transcends national borders. To decide whether a defendant can be sued for

intellectual property infringement in India, Indian courts have adopted the idea of "purposeful availment" in many rulings. [viii] To use a trademark for a digital item like an NFT or a virtual product in the metaverse, consent must be obtained from the owner of such a trademark.[ix]
In 2017, AM General vs. Activision Blizzard, AM General LLC, the company that created the Humvee military vehicle, filed a lawsuit against the makers of the Call of Duty video game franchise over the game's depiction of the vehicle, which imitated the design of the vehicle and used the trademark. The use of the vehicle and its trademarks, however, was considered to have artistic merit by the United States District Court for the Southern District of New York because the company wanted to make a video game that properly reflected present warfare. [x] In the 1989 ruling Rogers v. Grimaldi, the court established criteria to determine whether the use of a trademark requires prior consent. It is divided into two sections: a determination of whether the trademark use is "artistically relevant to the defendant's work" and a determination of whether it is "explicitly misleading."[xi]

REGULATION OF IP IN METAVERSE

Civil legislation governs the ownership of tangible property while intellectual property laws regulate the ownership of intangible parts of such property. The two components of intellectual property are the corpus mysticum, an intangible asset, and the Corpus mechanicum is a physical manifestation of an intangible asset. The rights of copyright holders on the Metaverse can be secured by this principle, which has been in use for centuries. In India, there is great scope in the field of copyright laws. Courts in India have not yet had the chance to address the issue of copyright infringement in a virtual world. Given the line of judicial interpretation regarding personality rights, it is likely that they will do so in the future. In some cases, courts in India have used the concept of "long-arm jurisdiction" to resolve disputes involving computer networks. For instance, the high court of Delhi examined the definition of a computer network to decide if Delhi courts had the authority to issue a global injunction.[xii] Indian copyright law expressly restricts the use of the material in a medium that did not exist or was not when the rights were assigned between parties. In such a case, the question arises of how, then, one deals with rights in the metaverse that might not have been present at the time the arrangement was made.

LIMITATIONS OF PRESENT INTELLECTUAL PROPERTY LAWS

One concern that regularly arises in Metaverse is about the right to produce and sell virtual digital assets. Globally, it has been accepted among lawyers who specialise in intellectual property that buying an NFT on its own does not grant the buyer copyright if there are no contractual provisions to do so. According to the Berne Convention for the Protection of Literary and Artistic Works, which has been ratified by 181 nations, contracting parties are required to provide creators exclusive rights over their works, regardless of the medium or mode of expression.[xiii] Other international agreements have also been added to the Berne Convention, such as the 1996 WIPO Copyright Treaty, which modifies the Berne Convention for the digital age. According to the treaty, the digital storage of a patented work in electronic media which includes an NFT or a document that includes content for the metaverse constitutes a reproduction that requires the prior consent of the copyright holder.[xiv]

While, in general, one must obtain permission to use a trademark of a company on a digital platform, courts have found that some descriptive expressions of trademarks do not require their prior approval.[xv] Similar to social media platforms, metaverse owners should also inculcate robust policies to monitor and safeguard against copyright infringement. Assuming a brand can convince a network to take action, it is relatively easy for the network to suspend or deactivate the infringing content. From an Indian perspective, rethinking the concept of fair use and fair dealing with copyright is another important step. Fair use and its equivalent principles along with the four-factor test on copyright which is applied in various common law jurisdictions have to be applied differently in the metaverse.[xvi] The market and value aspects of the test may have to be evaluated differently due to possible variations in value in the metaverse in comparison to the real world.

CONCLUSION

Metaverse possesses numerous challenges in safeguarding intellectual property rights, most of which cannot be foreseen. Therefore, we must analyse the emerging metaverse or any other new digital phenomena in light of the rules and regulations already in place, which are settled after extensive deliberations. The efficacy of these laws has been proven over many years and in numerous contexts

However, we must also have to acknowledge that copyright law has not fully evolved to tackle all the current issues. Such regulations must allow for some degree of reform in order to handle the potential issues that the metaverse may create.

i. NEIL S TEPHENSON , SNOW CRASH 20 (2000).
ii. Benelux Convention on Intellectual Property was signed on 25 February 2005 and entered into force on 1 September 2006.
iii. ThePatents Act, 1970; § 3, 1970
iv. Telefonaktiebolaget LM Ericsson v. Intex Technologies (India) Limited, 2015 SCC Online Del 8229
v. The Copyright Act 1957; §14, 1957
vi. Jing daily, A digital Gucci bag sold for US$4,000 on gaming platform Roblox -will virtual fashion really become a US$400 billion industry by 2025? (june 7, 2021 , 2.28 pm) https://www.scmp.com/magazines/style/news-trends/article/3136325/digital-gucci-bag-sold-us4000-gaming-platform-roblox
vii. Berne Convention for the Protection of Literary and Artistic Works of September 9, 1886 subsequently modified several times (Berlin, 1908; Rome, 1928; Brussels, 1948; Stockholm, 1967; and Paris, 1971).
vii.Tata Sons Private Limited v. Hakuna Matata Tata Founders & Ors., CS(COMM) 316/2021.
[ix] Andy Ramos,The metaverse, NFTs and IP rights:to regulate or not to regulate, (june , 2022) https://www.wipo.int/wipo_magazine/en/2022/02/article_0002.html
x. M Gen. LLC v. Activision Blizzard, Inc., 17 Civ. 8644 (GBD) (S.D.N.Y. 2020) (GBD)
xi. Rogers v. Grimaldi, 875 F.2d 994 (2d Cir. 1989)
xii. Swami Ramdev & Ors. Vs Facebook,Inc. & Ors, 263(2019)DLT689
xiii. Arentfox Schiff, Protecting and Enforcing IP Rights in the Metaverse, JD Supra, (April 22,2022). https://www.jdsupra.com/legalnews/protecting-and-enforcing-ip-rights-in-6271723.
xiv. WIPO Copyright Treaty 1996, Article 1(4) (1996)
xv. Peps Industries Pvt. Ltd. versus Kurlon Limited, CS (COMM) 174/2019
xvi.Joseph Story in Folsom v. Marsh, 9 Cas 342 (1841).

What is Robotic Process Automation?

Organizations become more lucrative, adaptable, and responsive as a result of workflows being automated using robotics. Eliminating boring chores from their workdays, also raises employee satisfaction, engagement, and productivity. To speed up the digital transformation, RPA may be quickly installed and is non-intrusive. It also makes virtual desktop infrastructures and legacy systems without APIs for automating tasks perfectly. Workflows around the world are altering as a result of RPA technology.

Software robots do mundane, low-value tasks such as login into programmes and systems, moving files and directories, extracting, copying, and inserting data, filling out forms, and generating regular analysis and reports in place of human workers. Even cognitive tasks like language interpretation, conversational interaction, processing of unstructured data, and applying cutting-edge machine learning models to make complicated decisions are cognitive tasks that advanced robots can undertake.

Robots can do monotonous, high-volume operations, freeing humans to focus on the things they excel at and find more fun, such as developing, collaborating, creating, and communicating with clients. Increased output, effectiveness, and resilience are other advantages for firms. It makes sense that RPA is changing the story of labour.

Today, RPA is enabling new efficiencies and liberating individuals from monotonous repetitive tasks across a wide range of industries and procedures. RPA has been used in areas as diverse as finance, compliance, legal, customer service, operations, and IT by businesses in a variety of industries, including healthcare, manufacturing, retail, and much more. And that's simply to get things going. RPA is widely applicable, which explains why it has gained so much traction. Virtually any high-volume, business-rules-driven, repeatable process is a perfect candidate for automation, and this is increasingly true of cognitive activities that call for more advanced AI capabilities.

MEET THE TEAM

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CONVENOR - Rishi Raj (Batch 2019)

ADVISORS - Abhijeet Mittal and Indronil Choudary (Batch 2018)

CO-CONVENOR - Nandini Tyagi and Shivek Jhanda (Batch 2020)

HEAD OF OPERATION - Harshita Singh (Batch 2020)

HEAD OF RESEARCH AND DEVELOPMENT - Kritika Gautam (Batch 2021)

HEAD OF SOCIAL MEDIA AND DESIGN - Shubhaangi Thakur (Batch 2021)

CO-ORDINATORS - Devesh Shukla (Batch 2022)