

INTELLECTUAL PROPERTY RIGHTS AND CRYPTOCURRENCY: RISING PHENOMENON

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Abstract

Law analyzes and protects Business innovation, and promotes research and development by examining it through a lens of different legal arenas – intellectual property, labour law, completion law and employment laws. The business and finance sector will benefit from the advent of this technology. Distributive ledger technology is evolving, and applications based on it are mostly in the experimental stage. It might take years for its significant impact to emerge. We are unable to find any scientific evidence or data about how the competition laws and intellectual property rights will be applied to this form of technology. Here IPR laws deal with providing exclusivity of the owners' rights where the competition laws encourage healthy competition among businesses within the same industry and other, aims to increase market accessibility. A dichotomy between both laws can be observed. The need for both IPR and competition laws to coexist together and complement each other is on the rise currently. In light of the nation's development and the constitutionality of cryptocurrencies, the article attempts to investigate how IPR laws and competition laws interact. It presses on the need to have better regulation without stifling the innovative aspect of this technology. The lawmakers are having a hard time framing proper legislation regarding cryptocurrencies in the IPR regime which is specially not designed to handle them. There is considerable hype and hyperbole about this product due to the involvement of the commercial interest of many. We feel the need to examine the interplay between the blockchain, copyright law and privacy law because they all move in a vague spectrum with a heavy load of scepticism.

Keywords: *Cryptocurrency, IPR, competition law, technology, economic development, Digital rights management system(DRM)*

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Introduction

The technological transmutation will provide a new mechanism for the management of IPR laws. Gradually the use cases for blockchain technology are increasing, its proponents are of the view that this technology will surely revolutionize a slew of industries.²

We can define Cryptocurrency as a medium of payment validated by a decentralized network which is stored in a digital locker and recorded on a public blockchain accessible by the use of private keys. It is a useful virtual tool for many applications and networks such as online dating, online games, digital apps and another similar kinds of peer-to-peer network areas where to control and manage the transactions cryptography is used.

The whole system of virtual digital currency functions through digital ledger technology managed on the blockchain. Blockchain is a profound technology which records all the events through a distributive and recurring system which can be accessed by entering the hash key in the program by its user. The basic components of this technology are ledger, cryptography, peer-to-peer networks, assets, Merkel trees, consensus algorithms and proof of work.

Blockchain technology not only plays a pivotal role in cryptocurrency but is showing a tremendous scope in various other industries like healthcare, retail, education, travel, fashion, banking, property registration and so on. Thus, we can observe a huge surge in the interplay between blockchain technology-related products and Intellectual property (IP) laws. However, it is observed that the intellectual property rights of blockchain have not gained enough attention because its use case is not prevalent in the media, unlike other applications.

Even though it is a well-known fact that there are risks associated with this technology India is still able to gather \$638 million through this means in the year 2021.³ Similar trends are being noticed worldwide during the pandemic.⁴ It is noticeable that India has emerged as the ninth-largest e-commerce market with worldwide growth of 29%. World Economic Forum(WEF) is of the view that by 2027, this technology will store around 10% of global GDP, which is a matter of concern under competition law⁵. Agencies like the Federation of Indian Chamber of Commerce and Industry (FICCI), Confederation of Indian Industry (CII), Department of Promotion of Industry and Internal Trade(DPIIT) earlier known as the Department of Industrial

² Stephanie M Aronzon, "Blockchain and geographical indications: a natural fit? ", Journal of Intellectual Property Law & Practice, Volume 15, Issue 11, November 2020, Pages 913–925.

³ A. Pandey, "Astounding Turnover of \$638 Million in Crypto This Year"(2022).

⁴D. Vidal-Tomás and R. Caferra, "Who raised from the abyss? A comparison between cryptocurrency and stock market dynamics during the COVID-19 pandemic", 43 p.101954 (2021).

⁵ T. Philbeck and N. Davis, "The fourth industrial revolution", 72(1) Journal of International Affairs 17-22 (2018).

Policy and Promotion (DIPP) working under the Ministry of Commerce and Industry are having a hard time making and protecting the existing right of this industry. It has come to light to formulate legal regulations for making cryptocurrency a payment method even though it is not as important as a stock market. Presently, a unified platform is being developed to cater to all participants of blockchain applications, ensuring comprehensive technical security measures.⁶

Constitutional approach

The Indian government is looking at this innovative technology with scepticism. A very narrow view was made of it when it through. Following a high-level meeting of the Inter-Ministerial Committee (IMC) in November 2017, which was chaired by Shri Subhash Chandra Garg (Secretary, Department of Economic Affairs), RBI issued a circular to officially outlaw virtual digital currency in the nation. Reserve Bank of India (RBI) issued a circular on April 6, 2018, stating no entity will deal in cryptocurrencies looking into the volatile nature of the product is poses a threat to consumer protection, money laundry, and the market. Subsequently, the Indian Supreme Court lifted the ban on this circular after ruling that it violated Article 19(1)(g)⁷ of the Constitution of India.

Using its notifications, the Reserve Bank of India (RBI) is executing the authority granted by Section 35A read with Section 36 (1) a of the Banking Regulation Act, 1949. on 24 December 2013,01, February 2017 and 5 December 2017 made it clear that it does not allow anyone including users, holders and Investors view cryptocurrency trading as a threat to consumer protection rights and potentially facilitates money laundering and financial crimes. On the other hand, the Supreme Court issued a decision regarding virtual currency and discussed a similar issue in the case of Internet and Mobile Association of India v. Reserve Bank of India⁸. The Apex Court of India showed its support and while setting aside the petition on the ground of proportionality three judges bench consisting of The Honorable Sir Rossington Farley Nariman, The Honorable Justice Anirudha Bose and the Honorable Sir. Anirudha Bose Honorable Justice Ramasubramanian thought that using cryptocurrencies to pay for goods and services could be accepted. and RBI must take steps to regulate it and support the innovative technology which does not need any

⁶ Narendra Kumar, "Cryptocurrency, Intellectual property rights and completion law –Challenges and implications" Volume 1 Issue 1(July 2022)

⁷ Constitution of India Article 19 (1) (g)

⁸ Internet and Mobile Association of India Versus Reserve Bank of India [2020] 3 INMLJ 541

third party like a governmental agency for assurance and validation it works on the integrity of distributed data storage.

IP Protection for Blockchain Technology

The rationale behind the protection of intellectual rights is that the innovator must be given the protection of his natural right to enjoy the benefits of his efforts of making that innovation. The state is obliged to protect the innovator from misappropriation of commercial rights as said in the case of *Coco V A. N. Clark (Engineers) Ltd*⁹. It also works in favour of reward theory. There is a need to have a global registry for copyrights and their neighbouring rights to bring it in sync with the current paradigm of laws related to IP. Intellectual property protection is a legal framework that allows its owner to benefit from the work done and prevents others from using it without consent. Without such protection, businesses and individuals can be vulnerable to IP theft which can lead to costly consequences. Bitcoin and blockchain work on an open source platform accessible by all hence granting it trademarks is opposed throughout the world.¹⁰The stupendous growth of the internet and digital ecosystem is observed and appreciated accompanied by rising apprehensions about the competition law's and IPR's capability to address the issue related to online platforms. A rise was seen in the Internet of Things (IoT) or smart devices where blockchain technology can be utilized to share information in a more trustworthy manner. To compete with the other prevalent technologies there is a need to improve the scalability of its handling capacity of the transactions will pose a drawback of the blockchain technology.¹¹

In addition, discussions between blockchain companies and experts competing in various sectors and models will also benefit in terms of access to important information. In general, Bitcoin is treated as a commodity rather than a legal tender, subject to tax laws that provide similar tax benefits from authorities. Digital currencies and their transactions are not considered commercial entities, and they are not legally considered "financial products.". While it is neither restricted nor acknowledged as a security, some nations have concluded that it is neither a currency nor an asset and that it might instead be categorized as a security. As a result, some government organizations have issued advisories regarding the potential for dealing with it. The mode of payment is legitimate.¹² Few

⁹ [1969] 86 RPC 41,51 (Chancery Division).

¹⁰ "Trademarking of Cryptocurrency" (2021).

¹¹ A. Alahmadi, A. Farouk et.al., "Blockchain Platform for Industrial Healthcare: Vision and Future Opportunities", 154 223-235 (2020).

¹² M. Scholes and F. Black, "From Theory to a New Financial Product", 29(2) the Journal of Finance 399- 412 (1974).

countries of the world do not consider it as currency or asset but looking into its technical nature takes them as securities, whereas a few countries express their word of caution on the payment approvals through this means, even though there is no direct prohibition on the usage of it as a means of payment.¹³ What makes a cryptocurrency different from a digital currency is important to know in this situation. Due to the decentralized nature of the network, they are immune to the scrutiny of government regulatory bodies. There is no separating the connection between IPR and cryptocurrency. The new private ordering based on smart contracts and the core idea of copyright law are very different from one another for example limits on formalities, the doctrine of exhaustion and fair remuneration.¹⁴

As the world prepares to leverage blockchain to unlock previously unattainable resources in many areas, intellectual property ownership will gain importance in the years to come.

Intellectual property protection through Digital rights management (DRM)

DRM controls and manages access to copyrighted material through technology. The primary constituents of this system comprise technological protection measures (TPMs) that employ passwords to grant protection to both software and hardware. Additionally, rights management information (RMI) is utilized to safeguard copyrights and their adjacent rights.¹⁵ Both these rights are subject to international treaties. DRM systems legally provide the widest protection in enforcing rights to access and usage of digital content. It uses codes which prohibit content copying or limiting the number of devices that can be accessed. DRM is desirable if used within legal copyright constraints. It can indeed neutralize limits enshrined in the law. It can be very rightly said that DRM may annihilate protection given to a copyright holder such as fair use etc. for the reason that these digital contents can be very easily copied mixed or shared.¹⁶

This technology is at a formulating stage and hence can easily be moulded to promote public policy objectives which will not affect the innovation in the industry. This technology is very successful in enabling authors, musicians, content creators for social media platforms and other digital channels, Vloggers, and moviemakers by protecting their copyrights which safeguards their creative and financial investment. Blockchain-based smart contracts will provide fast and

¹³A.A. Stepanova, O.S. Bolotaeva, “The Legal Nature of Cryptocurrency”, 272(032166) (2019).

¹⁴ Gervais, D.J., Bodó, B., & Quintais, J.P. (2018). Blockchain and smart contracts: the missing link in copyright licensing? *Int. J. Law Inf. Technol.*, 26, 311-336.

¹⁵WIPO Copyright Treaty (WCT), Arts. 11–12, and WIPO Performances and Phonograms Treaty, Arts. 18–19.

¹⁶Valentina Moscon, Michele Finck “Copyright law on blockchains: Between new forms of rights administration and digital rights management 2.0 ” IIC (2019).

fair remuneration to individual copyright holders. Startups like Ascribe, Bittnues and Mycelia are using blockchain technology in the music industry.

Patentability Issue of Blockchain across the Globe

Blockchain-related patent applications are gradually increasing. Few patents have already been granted for this technology is getting maximum patents whereas the maximum applications for patent registrations are coming from China. Most applications filed do not satisfy the patentability criteria.

United States

Promoting the advancement of science and useful art is the purpose of US Constitution Article 1 Section 8 Clause 8. As the curb of innovative spirit, the United States of America believes that laws of nature, natural phenomena, abstract ideas, fundamental truth, motivation, mathematical method, and an original cause cannot be patented. The invention to be patented has to qualify as an inventive step of industrial application. As per —§§ 102 and 103 of The US patents code, there has to be novelty and non-obviousness to be granted patents. A process patent can also be granted to blockchain technology as per §101. Goldman Sachs & Co. New York (US) was assigned a patent, to its inventors Paul Walker and PHIL J. Venables on 30 October 2014 for the technology of its cryptocurrency settlement system SETLcoin.

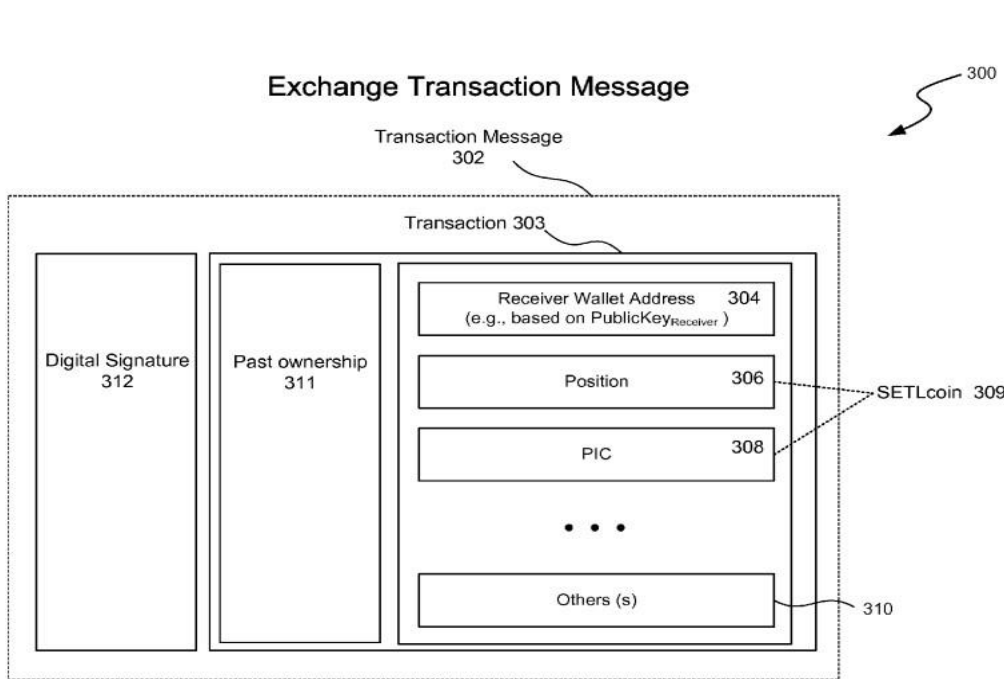


Fig 1.

Fig 1. Describes how a transaction is circulated using this technology

United Kingdom

The United Kingdom Intellectual Property Office (UKIPO) works in a similar line with the United States laws about its requirement of novelty as mentioned in section 2¹⁷ of United Kingdom Patents Act section 7 provides for the requirement to be fulfilled to obtain a patent.¹⁸ Justin Pinkham of MasterCard was granted a patent and he explained his situation as “like many other companies, [MasterCard] is simply filing patents to defend its blockchain inventions—as it always does, in all areas of its work.”¹⁹

India

Indian intellectual property rights comply with Trade-related features of the intellectual property rights (TRIPS) agreement. They are governed by The Patents Act, of 1970 (amended in 2005); Trademarks Act,1999; The Copyrights Act,1957; The Designs Act,2000; The Information Technology Act,2000. They are all based on the same principle and the requirement of fulfilling the eligibility criteria is similar to other countries. Computer-related Invention (CRI) provides guidelines for a computer program that is eligible for patenting. To get the patents in this field the applicant has to show that his programme has to demonstrate that his invention has a technical impact and offers a technical solution to a technical issue.

Around 1593 applications for patenting the blockchain technology are pending as per The Indian Patent Advanced Search system for the word search "blockchain". The first application was filed on 05/05/2016 application no. 201641015689 published on 10/11/2017 by the applicant named Sivakumar Muthlingam from Chennai. The latest one is the application no 202341058379 for patenting the technology to facilitate the exchange of e-commerce waste with virtual currency named "Eco-coins" by an applicant named Dr G B Krishnappa. Section 3(k)²⁰ says that if a computer program provides a technical solution to a technical problem or improves the technical effects of software can be granted a patent. Blockchain qualifies for this

¹⁷ U.K. Patents Act 1977 Section 2

¹⁸ U.K. Patents Act 1977 Section 7

¹⁹ Olga Kharif, “Big Banks Are Stocking Up on Blockchain Patents, BLOOMBERG TECH.” (Dec. 21, 2016).

²⁰ The Patents Act,1970 Section 3(K)

condition. The Indian patent rules require Form 27 to be filed by the patentee stating that the invention has commercial value annually within 3 months of the end of each calendar year by patentees and licensees mentioning their details of activities related to the work in the country failing which they can lose their patent penalties will be levied and can also lead to imprisonment upto 6 months or fine or both if the royalty fee is not paid.

Patent infringement remedies related to cryptocurrency are difficult to determine as its ownership is not certain. The Trademark rules will not be of much help either as the founder of cryptocurrency is not known. This technology is based on interference-free and anonymous transactions. The future of patenting this innovative technology seems bright.

Interconnection of Cryptocurrency with IPR and Competition Law

There is an inexplicable connection between the law and the technology. Both must work in tandem to formulate laws for the emerging and sophisticated blockchain technology.²¹ It's been observed that the intellectual property rights of blockchain have not been discussed much by researchers and media. The number of use cases is on a rise of this technology in the public sector such as health care, banking, voting, and property records, private sectors such as the fashion industry, gaming industry, supply chain smart contracts, and personal data management there is a need to tap its potential and IPR laws must adhere to it even though it works as an open source programme which can be used by a multitude of users in one time using distributive ledger. The blockchain ledger grows with each transaction as a new block referring to the previous transaction as a parent. However, it's still unclear how small a user base would be needed to start challenging the existing state of affairs.²² Given the permeable nature of this technology, legislators must now establish strong guidelines and definitions for smart contracts, which will eventually permeate IP laws and procedures. Blockchain's ownership rights are currently unclear, but this hasn't stopped people from using it.²³

Clark explains in his article emphasizing the need for a registry which is not present as yet "Related is the idea of IP offices using distributed ledger technology to create 'smart IP registries' in the form of a centralized solution run by the IP office as an accountable authority which would create an immutable record of events in the life of a registered IP right. It could include when a trademark was first applied for, registered, first used in trade; when a design,

²¹ V. Moscon and M. Finck "Copyright Law on Blockchains: Between New Forms of Rights Administration and Digital Rights Management 2.0", 50(1), 98 (2019).

²² Ibid.

²³ O. Dalgıç, "Could Regulating Blockchain Technology Improve Competition in Digital Markets?"2020.

trademark or patent was licensed, assigned, and so on. It would also resolve the practicalities of collating, storing, and providing such evidence."²⁴

Smart IP rights can be provided by the help of blockchain technology which will assist in digital rights management and detection of its misuse.²⁵To protect this industry from patent trolls, the non-practicing entities who obtain patents to stifle competition Chamber of Commerce created the Blockchain Intellectual Property Council (BIPC) and promote healthy competition among the industry players. This council provides blockchain-specific patent information and searches out various ways to protect IP rights in this industry. On a more private level a standard-setting organization (SSO) can play a more proactive role in setting some common standards to determine a baseline technology that can be used to decide the prior art, the basis for prohibiting the grant of patents and mitigate future IP-related disputes.²⁶The International Standard Organization (ISO) is also making its efforts to frame a standard for the technology which will prove to be vital for establishing a blockchain infrastructure to put this technology to best use. A public regulator will play an important role in the same. This technology is made in such a way that there is no doubt about the ownership rights or the IP rights.²⁷

Non-Fungible Tokens and Copyrights

'Non-Fungible Tokens' (hereinafter 'NFT') are created by the process called 'minting' on publicly available programs such as Mintbot and Enjin. This process grants an NFT a unique identity and a non-fungible authenticity certificate which will make it impossible to copy. Intellectual property rights provide exclusive rights and monopolies to the copyright holder. NFT which can be traded using smart contracts can be minted as its own NFT by the transferee which will lead to infringing the owner's right to exclusivity. Talking about the copyrights of NFT which is protected by a hash function impossible to duplicate. A copy of the NFT can be made and traded which will result in losses of the original owner of the NFT. The ownership of the IP rights of an NFT is different from the ownership of an NFT. Section 14 of the Indian Copyrights Act, of 1957 provides numerous rights to the owner of copyrights to create, reproduce and modify its content. Because NFT is owned in a decentralized blockchain enforcing IP rights will be challenging. India has no specific rule to protect the IP rights of

²⁴ B. Clark, 'Blockchain and IP Law: A Match Made in Crypto Heaven?', WIPO Magazine, (2018).

²⁵ M.A. Lemley and D.J. Durie, "A Structured Approach to Calculating Reasonable Royalties", 14 Lewis & Clark L. Rev. 627 (2010).

²⁶ S. Yanisky-Ravid and E. Kim, "Patenting blockchain: Mitigating the Patent Infringement War", 83 Alb. L. Rev. 603 (2019).

²⁷ E. Hanapole, "The Metaverse of Intellectual Property"(2019).

NFTs still Indian Copyright Act, of 1957 and the Information Technology Act, of 2000 and their intermediary guidelines and rules will facilitate this one-of-a-kind type of product.²⁸

It can be said that with the advent of this new technology at a raised momentum the law must come to protect as an IP resource must designed to gain additional leverage. A private cryptocurrency Act will be effective in addressing the grey areas of this technology. In the year 2021, the government of India is also planning to draft a new bill by the name.

Today's IP laws are not fully supportive of this blockchain technology amendments must be made to incorporate it into the existing laws. Some major suggestions will be that the condition of sale of NFT and the smart contract must be defined clearly to bring it in the preview of IP rights as to what is permissible and what is not authorized to control and monetize its IP rights. Monitoring of third-party use of IP rights and taking necessary steps in case of infringement is to be done to bring in consumer trust and reap the benefits of its purchase of NFT.²⁹

Even though Indian laws support inventions about computers, they are unreceptive to patenting open-source technology. Therefore, there is an urgent need to simplify the existing regulations to support this expanding industry. The fields of intellectual property law, blockchain technology, and cryptocurrencies are expanding quickly. The roles of innovation and intellectual property law have always been strongly at odds with one another. Because blockchain technology patentability raises complicated legal and technological issues, legal experts in this speciality field are necessary to ensure that innovators receive the best possible legal counsel.³⁰It can be concluded from this point forward that legislation will protect this cutting-edge technology and deal with matters of jurisdiction, privacy, smart contract regulations, and intellectual property rights.

Conclusion

To frame regulations for the newly raging currency and tap the advantages of financial gains from this RBI wished to introduce the ***“Cryptocurrency and Regulation of Official Digital Currency Bill, 2021”***. Soon, the Indian government plans to introduce a less volatile virtual digital currency(VDA) called "Lakshmi."

The view of the Indian Government related to Virtual digital currency is that it cannot be treated as Fiat currency which is backed by the National controlling authority such as RBI for the reasons stated as it is not a stable and reliable type of asset. Consumers dealing with this product

²⁸ Khurana and Khurana, “NFT and Its Relationship with IPR”, (2021).

²⁹ P. Sulakshya, “India: NFT and Its Relationship with IPR” (2021).

³⁰ J. Trivedi, “Dawn of Blockchain Technology in the Indian Patent Regime”, (2022).

must be cautious to prevent financial losses as per the advice of RBI. As it has the potential to act as a means of fraudulent activity and market manipulation.

The suggestion of having its smart IP registry to satisfy its patents, trademark, and copyright requirements is advocated after a profound analysis. The registry will mention when such rights were applied, assigned, and license provided to collate the data for practical purposes. This step will instill confidence and reassurance among its users, insurers, authorities, and consumers.

Aside from traditional currency, cryptocurrencies offer a different way to make payments. This makes it easier for users to carry out financial transactions like purchasing, selling, trading, and transferring money more efficiently, all of which increase income.³¹ With an increasing number of companies accepting it as a means of payment and allowing the conversion from Bitcoin to other currencies by Microsoft, Expedia and PayPal to name a few.³²

The attitude of a libertine in the design of this blockchain technology which works on a peer-to-peer basis and is signed by a private key making it a tamper-proof transaction, has taken over the national and commercial interest of the parties to it. A conservative approach to this emerging and penetrative technology will be a mistake.

The platforms which are used for cryptocurrency transactions are not controlled and regulated even though they provide us with a new currency. Blockchain technology has proven to be a robust technology to run a currency as any transaction done in a blockchain is impossible to change. Any change made in the distributive ledger will result in a new chain, which makes the whole transaction very transparent.

Cryptocurrency regulations are slower to catch up with the growth and reach of this technology. There is a compelling need to frame laws to protect the IP rights of the creators of this revolutionary technology in this internet-connected world. A set of rules must not have a hierarchical control which is perfunctory in nature.

To create a fair legal and regulatory framework for blockchain technology, India needs to take inspiration from nations like Switzerland, Canada, and Japan. In a white paper released shortly before the G20 meeting in India, the Financial Stability Board, the International Monetary Fund, and other organizations that set standards stressed the importance of implementing the crypto-asset reporting framework (CARF) and making changes to the common reporting standard. To conclude we can say that we have only scratched the surface when it comes to the

³¹ Team legal “Cryptocurrency and IPR in India: A legal perspective” (2022).

³² Luke Tredinnick “Cryptocurrencies and the blockchain” Sage (2019) Volume 36 (1) pg. 39-44.

interface between cryptocurrencies and intellectual property rights, thus more research is needed.