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IPR AND BLOCKCHAIN:

TOWARDS A SMART IP REGIME.

1. INTRODUCTION

Cryptocurrencies have been a hot topic for quite some time, built on the underlying technology of blockchain, which can be said to be information in an open ledger, that can be recorded, tracked and verified, as the exchange takes place in a peer-to-peer network.¹ Any information, once verified is immutable, decentralized and free from changeability and enforces the integrity of information stored.²

In terms of a definition, it can be viewed as a ledger, register, or a database, depending on the use and one ensures the information is immutable, transparent and the distribution is decentralized.³

It is essential to understand the philosophy of intellectual property rights in order to find a cohabitation of blockchain and IP rights. Enforcing IP rights is essential to innovation and protection of such innovation to facilitate a welfare economy that is driven by fair competition.⁴ Thus giving holders of such rights a sense of exclusivity.

¹ Birgit Clark & Baker McKenzie, Blockchain and IP Law: A match made in crypto heaven? WIPO (Feb, 2018), https://www.wipo.int/wipo_magazine/en/2018/01/article_0005.html (last visited Jan 21, 2024).

² *Id.*

³ Daniel Kraus & Charlotte Boulay, 9. Blockchains: Aspects of intellectual property law - researchgate ResearchGate (2019), https://www.researchgate.net/profile/Daniel-Kraus-13/publication/332641100_Blockchains_Smart_Contracts_Decentralised_Autonomous_Organisations_and_the_Law/links/5ded61514585159aa46e7d55/Blockchains-Smart-Contracts-Decentralised-Autonomous-Organisations-and-the-Law.pdf (last visited Jan 21, 2024). Page no. 5.

⁴ *Id.* At 7.

The seeming difference in philosophy makes for an interesting interplay, as one fosters protection through exclusive control and rights and one facilitates security and access to information on a transparent platter and the harmonization of this disruptive technology, with the monopoly that some think IP rights make.⁵

2. IPR PROTECTION OF BLOCKCHAIN TECHNOLOGY.

A blockchain is a complex technology that can store a vast amount of information, the underlying innovation must be afforded some amount of protection. The question is can IP rights provide protection to the technology envisaged and growing rapidly in the digital age.

Under the copyright regime they may be protected as a computer program, the World Intellectual Property Organization Treaty does provide for the same along with TRIPS agreement under Article 10.1, but the open source of blockchain technology and the limitation of copyright to protect software in general is one roadblock to its protection.⁶ As blockchain stores data chronologically it can be under the purview of database protection afforded under copyright, the limitation being identification of owners owing to the decentralized nature of blockchains.⁷ As the technology may be open source or private, copyright protection to a part of code may be detrimental to the use and growth of the technology as a whole.⁸

Patentability of blockchain is another aspect for consideration, the United States have a blanket ban on patentability of software. Canada doesn't have a blanket ban, if the application is of commercial use and having practical applicability. Europe provides patents for entire computer systems. It will be a question of underlying jurisdiction and the

⁵ *Id.*

⁶ *Id.* At 11-12

⁷ *Id.* At 13.

⁸ *Id.* At 14.

harmonization of patent and open-source dichotomy.⁹ This may lead to standardization in terms of regulatory framework in the future.

Trademarks too share an important relationship with blockchain technology, Bitcoin and Ethereum are both registered and is a perfect example of the coexistence of an open and proprietary environment.¹⁰ This will also help distinguish between many cryptocurrencies with similar names, and essential to safety and security of investors.¹¹

3. BLOCKCHAIN PROTECTING IPR.

We have seen that IP rights exist in blockchain technology, now let us explore the use of blockchain technology in protecting intellectual property.

a) Smart Contracts and Digital Rights Management.

IP agreements can be enforced by using smart contracts, including but not limited to licenses, and transfer of payments to IP holders.¹² Storing information in digital form on the blockchain accessible only to the owner is a concrete way cementing digital rights management using blockchain technology.¹³ A smart contract could “*hold, execute and monitor contractual codes*”.¹⁴

b) Reference Point of Use

The blockchain maintains a ledger, this provides with brand owners a reference point for the rights they have, the extent of those rights, and beneficial in determining first use, if proof is

⁹ . Yuhen Tom Zhang, Blockchain – what is it and what are its IP issues? ROBIC (2017), <https://www.robic.ca/en/publications/blockchain-ip-issues/> (last visited Jan 21, 2024).

¹⁰ DANIEL, supra note 3, at 18.

¹¹ *Id.* At 17.

¹² BIRGIT, supra note 1, at 4.

¹³ *Id.*

¹⁴ *Id.*

required for the same in proceeding pertaining to trademark or such IP rights that may require such recognition across jurisdictions, like prior art or a patent claim on publicly aware information.¹⁵ This would prevent duplication of claims, timestamp first use, and prevent misuse.

c) Proof of Ownership

Blockchain provides a trusted platform for verifying the owner of works protected under intellectual property.¹⁶ With the onset of rapid digitalization, emphasis on proof of ownership and tangible registration has increased and the nature of blockchain may provide that security to IP holders.

Registration via the blockchain ledger could be instrumental in corroboration of creation of IP rights and their registration in a court of law, also minimizing litigation pertaining to ownership and registration.¹⁷

d) IP Marketplace and Supply Chain Management

Blockchain can further be used as a place where registered patents can be stored as a ledger, along with a brief description, providing a marketplace of sorts of protected innovations, helping to even identify potential licensees.¹⁸

¹⁵ *Id.* At 3.

¹⁶ Sumit Prasad, The future of Blockchain in intellectual property, automation.com (2021), <https://www.automation.com/en-us/articles/january-2021/the-future-of-blockchain-in-intellectual-property> (last visited Jan 21, 2024).

¹⁷ Sakshi Shairwal, Blockchain & IPR a breakthrough collaboration Lexology (2020), <https://www.lexology.com/library/detail.aspx?g=ac54cb4d-9b47-46ad-81a4-55ef28bd0f96> (last visited Jan 21, 2024).

¹⁸ SUMIT, supra note 16.

Further, brand owners will have the ability to track their goods on an immutable ledger, resulting in easier enforcement of contractual agreements.¹⁹

e) Anti-Counterfeiting Measures

Distinguishing between fake and original products by consumers and customs alike, could arguably be one of the most important uses of blockchain technology, providing a digital tag that can be scanned as verifiable proof of the originality of the product, acting as a immutable security feature, and a useful cog in the wheel of IP protection.²⁰ This could be applicable for standard products, customized products or meeting any such criteria as established.²¹

f) Creating a Global Intellectual Property System

The technology may serve as a problem solver by unifying the patent system across jurisdictions, this could speed up the registration process and the process of innovation by dissemination of accurate information at speed.²² Moving towards blockchain as “admissible evidence” is an important step towards this, as evidenced by the amendments in Delaware and Vermont that allowed for maintaining of records using electronic databases and admissibility of blockchain receipts respectively.²³ While Arizona amended their electronic Act to include blockchain records, and Hangzhou Internet Court admitted blockchain evidence in the case of infringement.²⁴ India does accept electronic records and signatures but is yet to regulate distributed ledger technologies and evidence collected therein.

¹⁹ BIRGIT, supra note 1, at 5.

²⁰ *Id.* At 4

²¹ *Id.*

²² SUMIT, supra note 16.

²³ *Id.*

²⁴ *Id.*

g) Trade Secrets and Version Control

The protection of trade secrets can be facilitated by using technology and storing them in private blockchains.²⁵

Patents, copyright and other digital assets have multiple versions in their lifetime, linking all versions of the underlying asset on a cyclical basis, using it for maintenance under one technological roof.²⁶

4. LIMITATIONS AND DRAWBACKS

The energy consumption associated with the technology is one of the biggest hurdles faced by blockchain based technology, as they develop, more eco friendly options may be developed to offset the high-power cost and consumption associated with them.

Sans regulations, their recognition in the book of law remains a significant hurdle in mass adoption of ledger technology, having different legislations may be detrimental to its overall use in protection of intellectual property.²⁷

The immutable nature could be one aspect that may work against those using smart contracts for payments, registration or distribution. A transaction on a blockchain cannot be reversed, however any error would also find itself permanently etched in the blockchain. Though irreversible, easily identifiable.

5. CONCLUSION

Intellectual property rights and blockchain technology may seem to be at odds with each other, one promoting exclusivity, while one envisages open source and transparency of distributed information. On a closer observation of their relationship, they complement each other and in this vastly growing digitalization of information, and disappearing boundaries, the two may be inseparable.

²⁵ SAKSHI, supra note 17.

²⁶ SUMIT, supra note 16.

²⁷ SAKSHI supra note 17.

Fostering a two-way relationship between the two may further strengthen the IP regime and better serve the rights of holders, consumers, and enforcers, moving towards a standard regulation across jurisdictions, enabling secure economic welfare in the digital era.