

INTELLECTUAL PROPERTY AND BLOCKCHAIN

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INTRODUCTION

The issue of Intellectual Property Rights [hereinafter, referred to as “IPR”] has become significant in the age of electronic information. IPR is not a new concept but it is only the codification of such laws and their enforcement that have seen gradual evolution along with the development of the technology and its uses.¹ With the passage of time, branding of goods became an assurance of quality. Transposition of intellectual property from real world to the virtual world is not merely a lateral move. In this instance, the domain has in fact made a huge difference not only to the approach to intellectual property, but also to its protection and enforcement of ownership rights.²

The online space has become a threat to the IPR owner. Your work can be easily stolen online without even you getting a sense of it. With the advancement of blockchain technologies, these owners are getting a creative way to protect their intellectual property rights like never before. Just to make things easy to understand, if I create a photograph or record a song, I own it. But, for me to prove the ownership against someone else’s, lack of any official document that could possibly prove which version came first makes it a little hard to establish.

Patents can easily get a protection, but in case of creative work, there is no solid way for one to legitimize the ownership of their work prior to its publication. **The internet and the online space have just added on to the hardship because there is a huge depository of data online, and it is next to impossible for anyone to sift through it.** On the other hand, the advancement of internet has made it possible for anyone to download your work and use it without taking your permission, and you might not be able to do anything much about it. However, the same is not the case if someone is using your intellectual property for commercial gains. It can be easily tracked down and you can get compensated.

However, usage of your Intellectual Property Rights for commercial gains also comes with a twist, as the enforcement of your rights should be done by yourself only after you are able to prove your ownership. The blockchain technology has aided in streamlining the process with which one could defend their intellectual property because it could easily lead to discovering the owner of a particular intellectual property such as copyright. The following article will discuss the introduction to intellectual property and blockchain, how can blockchain help in protecting the IP rights, enforcement of such rights using blockchains and its drawbacks.

WHAT IS AN INTELLECTUAL PROPERTY?

According to the World Intellectual Property Organization (WIPO)³, an intellectual property refers to creations of the mind: inventions; literary and artistic works; and symbols, names and images used in commerce. The division of an Intellectual Property is primarily done into two categories:

- Industrial Property: Includes patents for innovations, trademarks, industrial designs and geographical indications;
- Copyright: Includes literary works (such as novel, poems, plays) films, music, artistic works.

¹ N.S. Nappinai, Technology Laws-Decoded, P. 292 (2017).

² *Ibid.*

³ WIPO ,What is Intellectual Property?, accessible at <https://www.wipo.int/about-ip/en/>.

Similar to any other rights belonging to one's property, IPR allows creators, or owners, of patents, trademarks and copyrighted works to avail benefits from their own work or investment in a creation. The Universal Declaration of Human Rights, under Article 27, states about the benefits which one could avail from the protection of interest, be it moral or material which results from authorship of scientific, literary or artistic productions.

The Paris Convention for the Protection of Industrial Property was one of the foremost, to recognize the importance of Intellectual Property Rights followed by the Berne Convention for the Protection of Literary and Artistic Works in the year 1886. In due course of time, both the Paris Convention and the Berne Convention were administered by the World Intellectual Property Organization (WIPO).

WHAT IS A BLOCKCHAIN?

A Blockchain is a method of storing a list of entries, which cannot be changed easily after they are created.⁴ This is done by using several concepts from cryptography, including digital signatures and hash functions. Blockchain, in simple terms, combines the following two ideas:

- Given some data, it is easy to calculate a checksum over the data, Special hash functions can be designed to calculate this checksum. These functions can be designed to return a value that always has the same length, which is not dependent on the length of the input. This value is called 'hash value'.
- In addition to the hash values, a block typically also contains a timestamp, and some payload. Each block uses a digital signature, which allows detecting any change in the data since the signature was made.⁵

Therefore, blockchains are secured by design and is used where it is essential to keep and maintain correct records.

HOW CAN BLOCKCHAIN HELP IN PROTECTING THE INTELLECTUAL PROPERTY RIGHTS?

The present times have witnessed a **fair share of business being derived out of intangible assets, and hence, success often depends upon the ability to manage and exploit intellectual property.** The introduction and advancement of new blockchain-enabled tools to represent unique assets and to manage the development and payments for IP, will drive innovation across the value chain. Enabling the users to store and transact their IP using blockchains leading businesses will start enhancing and protecting their most valuable resources. The benefits will not only be limited to a particular business but will also impact the content producers, owners of IP, distribution partners and the end consumers.⁶

There are also certain benefits of using blockchain in Intellectual Property transactions. Firstly, use of blockchain will lead to better management as ownership could be proved and attributed to the originating parties of a shared asset. Secondly, by using a shared ledger, multiple auditing by different businesses can be done away with and will need to happen only once. Thirdly, the transaction steps are

⁴ Nikhil Naren & Rodney D. Ryder, Internet Law: Regulating Cyberspace and Emerging Technologies, Bloomsbury Professional India, p. 15.23 (2020).

⁵ Andrew Miller, Arvind Narayanan, Edward Felten, Joseph Bonneau, & Steve Goldfeder, Bitcoin and cryptocurrency technologies: a comprehensive introduction. Princeton: Princeton University Press (2016).

⁶ Ernst and Young, How blockchain can impact the intellectual property life cycle, accessible at https://www.ey.com/en_gl/advisory/how-blockchain-can-impact-the-intellectual-property-life-cycle.

reduced significantly as the movements of values are shared on the network, thereby facilitating the licensing and contract management process.

Use of blockchains will further improve the ways in which rights management takes place. Especially the companies who are in control of copyrights can have a better database inclusive of all the updates of the versions, iterations and contributions to a single asset. Hence, this will result in accessing a comprehensive package at a single time. Blockchains can also help in enabling the ability to improve operations across suppliers, distributors or third parties.

ENFORCEMENT OF THE RIGHTS

In the past, bureaucracy has been a necessary evil. The protection of one's intellectual property rights comes at a cost and safeguarding the right after getting it also involves a lot of money. The entire process generally involves a lot of people and majority of them working in one capacity or the other in the legal system. Hence, the enforcement of the law is majorly a human affair, but today, blockchain enabled systems are on the verge of changing it all.

Artificial Intelligence (AI), has helped tremendously in searching the web and databases to check for the existing intellectual property. Bots can search the entire web and can trace your intellectual property at a single go. This helps the owners in tracking and finding if their IP rights are getting infringed or being used in an unauthorized manner. The result being that the rightful owners of an IP could demand fees for using their work. In order to benefit from this breakthrough, it is important to register your work with a Blockchain based IP protection system.

One of the most important ways to enforce your IP rights is by the means of 'smart contracts'. **Blockchain based IP registration offers the creators the ability to manage sales automatically via smart contracts.** A smart contract would allow an owner of the particular IP to put forth the conditions or terms of use for their IP and then can put one in touch with the interested party who would be willing to either purchase or license one's creation.

DRAWBACKS

The major drawback at present is that the full adoption of blockchain as evidence into law is still far off. This also makes the presence of IP experts necessary for legal matters and examinations. Secondly, the method to connect IP registries across the world through a single distributed ledger is far from simple. The biggest hinderance that could come in the way is the issue of aligning multiple national and regional judicial frameworks and traditions. Blockchain has the potential to be an enormous boon to the IP industry and is ripe for a world that demands greater transparency and accountability. Hence, like any other emerging technology, there are several challenges that must be tackled to ensure a smooth integration of blockchain technology with the intellectual property framework.⁷

CONCLUSION

With the use of blockchain, one can transmit values across a network of participants at a single go. As mentioned earlier in this article about the potential of intangible assets, the success of the company depends upon their ability to optimize the return on investment. Adoption of blockchain in the domain of IP definitely has challenges but I am sure that if we overcome them, the IP life cycle of the future

⁷ Ritu Tyagi and Sanchit Kalra, Blockchain and intellectual property- the de-centralised alliance, accessible at <https://www.lexology.com/library/detail.aspx?g=bc888f34-ed86-4b42-8b5e-801b4e616094>.

will make sure that assets are attributable upon creation, are secure from fraud, and operate on a network that promotes operational efficiency and product innovation.

In present times, emerging technologies such as blockchain have paved way to ensure that one gets fairly paid for their work but it is also equally important to start using this system if one wants to gain benefit from it. At the very outset of this article I mentioned that the online space has become a threat to IPR owners, but after analyzing the opportunities which have been thrown up by the internet and looking at the potential which blockchain holds, it looks like the internet is the best thing that has happened for content creators.