INTERNATIONAL JOURNAL OF LAW

MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

Follow this and additional works at: https://www.ijlmh.com/

Under the aegis of VidhiAagaz – Inking Your Brain (https://www.vidhiaagaz.com/)

In case of **any suggestions or complaints**, kindly contact **Gyan@vidhiaagaz.com.**

To submit your Manuscript for Publication in the **International Journal of Law Management & Humanities**, kindly email your Manuscript to **submission@ijlmh.com.**

Contouring the Enigma of NFT and IPR

SOUMIK CHOUDHURY[1]

ABSTRACT

NFTs have become the touchstone of the new digital age. Though the term is in the process of receiving its recognition, its operation and existence is yet to be grasped comprehensively. The build/elements of an NFT churn out the limitations and applications of the asset and what exactly is its scope. This paper in the first part seeks to divulge into the elements of the NFT – the item and metadata and attempt to clear some of the shroud regarding NFT. The second part of the paper is concerned with the legal implications of NFTs and whether NFTs infringe upon existing Intellectual Property Rights (IPRs). At the same time, it discusses the possibility of NFTs being protected by other IPRs. The paper seeks to comprehensively but compactly illustrate how NFTs are currently being utilized and how they may continue to do so without infringing IPRs. It also lays down some solutions as to how we could combat the lacunae of proper protection.

I. INTRODUCTION

One of the pragmatic applications of blockchain is the tokenization of assets. Wherein tokens function as a store of value and exist on the blockchain as immutable data.[2] Tokens may represent a range of commodities from coins to items to art. Tokens though not termed as such, have been in use for quite some time. Established legal instruments demonstrate a similarity in function, for instance – Negotiable Instruments, a standard example, utilising paper to represent debt in the nature of an intrinsic asset; securities, property deeds being other common examples.[3]

Goods may be largely bifurcated into fungible and non-fungible. Wherein fungible is de facto reproducible and interchangeable, viz., currency, gold, grain, etc., one article of a collection can be exchanged for another. Juxtaposed, non-fungible is unique and cannot be duplicated, likewise, one video file containing certain clip cannot be exchanged for another. The Statue of Unity or the Mona Lisa are illustrations of non-fungible goods. Digital or physical work represented in a digital form may be stored on a blockchain with the help of tokens.[4]

---

[1] Author is a student at Jindal Global Law School, India.
[2] Guadamuz, Andres. Non-fungible tokens (NFTs) and copyright. WIPO. WIPO Magazine. (2021)
[3] Juliet Moringiello and Christopher Odinet, "The Property Law of Tokens," Florida Law Review (forthcoming 2022), November 1, 2021, http://dx.doi.org/10.2139/ ssrn.3928901.
[4] *Ibid* 1

II. NON-FUNGIBLE TOKEN (NFTS)

NFTs were originally proposed in the Ethereum Improvement Proposals (EIP)-721[5] which asserted the standard implementation of NFT within smart contracts, pioneered on the Ethereum blockchain. The scope of NFTs were later expanded in EIP-1155[6], developed on the Enjin Blockchain wherein one smart contract was capable of imagining multiple token configurations as opposed to the single configuration of entire token collection in EIP-721, i.e., in a single smart contract there may be one token which represent a cryptocurrency and another which represents a game item. NFTs are at their core digital representations of ownership.[7] They certify ownership of an underlying digital item, in which the certificate is loaded on the blockchain in the form of data.

NFTs can fundamentally be divided into two components:

1. NFT item[8]: Which is the underlying digital item that is described in the NFT metadata, which may not even be stored on the blockchain itself but on a different website, owing to storage capacity limitations of the blockchain.[9]

2. NFT metadata[10]: Metadata basically defines the properties of an NFT, it exists as a combination of a string of numbers, letters and symbols. This is the functional code of information stored on the blockchain which identifies and certifies the NFT item, termed as token. It includes data such as the transactional history of the item its location, the image and other properties that are displayed on screen to the viewer.

This becomes pertinent to understand because multiple NFTs could represent the exact same item, a bronze shield in a game, but the metadata would be unique for each. Therefore, the item in itself need not be unique but the token/certificate will be. This raises the question whether NFTs are actually non-fungible.

An Illustration of a NFT metadata is provided below, wherein on the right-hand side the entire string of code is displayed which contains all the underlying information such as the percentage of royalty to be paid to the creator if the token is resalable. What is the classification of the

---

[5] William Entriken, Dieter Shirley, Jacob Evans, Nastassia Sachs. EIP-721: Non-Fungible Token Standard. Ethereum Improvement Proposals. (2018) https://eips.ethereum.org/EIPS/eip-721

[6] Witek Radomski, Andrew Cooke, Philippe Castonguay, et al. EIP-1155: Multi Token Standard. Ethereum Improvement Proposals. https://eips.ethereum.org/EIPS/eip-1155

[7] U.S. Government Accountability Office, Science & Tech Spotlight: Non-Fungible Tokens (NFTs), GAO-22-105990, June 14, 2022, https://www.gao.gov/products/gao-22-105990.

[8] Kristen E. Busch. Non-Fungible Tokens (NFTs). Congressional Research Service. R47189. July 20, (2022)

[9] The entire work itself may be uploaded on the blockchain in the form of NFTs however, this is not practical as operations on the blockchain require a lot of energy.

[10] *Supra note* 7

token i.e., "category: Art", the mode of trading – either fixed price or auction.

This data is simplified and presented on the left-hand side which provides the code which represents the Token ID (unique), Token Name, Original Creator's digital address, which is linked to the private key, explained below in the 'Loading NFT' section. Reiterating an important theme, the metadata is at the end only a ledger of the relevant data, the NFT item itself may exist on an website such as '*DeviantArt*' which has no relation to the blockchain, the NFT only represents the image that is posted on the other website (unless the image is uploaded on the blockchain itself which at this stage consumes excessive energy to be pragmatic).

NFT Metadata

Item Metadata

Contract Address	Token Metadata
0x8c5aCF6dBD24c66e6FD44d4A4C3d7a2D955AA ad2	{ "symbol": "Mintable Gasless store", "image": "https://d1czm3wxxz9zd.cloudfontnet/ 613b908d 0000000000/86193240282618763854367550160835360531676033165 "animation_url":"". "royalty_amount":true, "address": "0x8c5aCF6dBD24c66e6FD44d4A4C37a2D955AAad2", "tokened" "86193240282618763854367501608353605316760331 "resellable": true, "original_creator": "0xBe8Fa52a0A28AFE9507186A817813eDC1 "edition_number":1, "description": " A beautiful bovine in the summer sun "auctionLength": 43200, "title": "The Clearest Light is the Most Blinding", "url": "https://metadata.mintable.app/mintable_gasless/86193 240 "file_key":"", "apiURL": "mintable_gasless/", "name": "The Clearest Light is the Most Blinding", "auctionType": "Auction", "category": "Art", "edition_total": 1, "gasless": true }
Token ID	
86193240282618763854367501	
608353605316760331651808345700	
0846083267628374028 98	
Token Name	
The Clearest Light is the Most Blinding	
Original Image	
https://d1iczm3wxxz9zd.cloudfront.net/6 13b908d-19ad-41b1-8bfa0e0016820739c/ 0000000000000000/861932402 82618876385436750016083536053 1676033165180834570008460832676 2837402898/ITEM_PREVIEW1.jpg	
Original Creator	
0xBe8Fa52a0A28AFE9507186A817813eD C14 54E004	

Image: Moringiello, Juliet M. and Odinet, Christopher K., The Property Law of Tokens (2021). U Iowa Legal Studies Research Paper No. 2021-44.

III. LOADING NFT

An NFT utilizes digital wallets to store the metadata on the blockchain. NFT wallets are physical

devices or computer programs which assist in encrypting accessibility to data.[11] They are based on the public-key cryptography technology to validate authenticity. Each wallet is made up of two keys – public key and private key, wherein public key operates similar to addresses, account numbers to provide a destination, and allows for verification of the transaction; and private key authorises the key holder and gives access to the data within a wallet.[12] When a transaction takes place the NFT item gets recorded in a user's wallet. This item can be observed on the blockchain, but can be accessed only by the owner of the wallet. The data itself does not exist on the wallet, a wallet 'reads' entries and displays them in a visual format understandable to humans.[13]

IV. OWNERSHIP

'Ownership' of an NFT is a convoluted and misunderstood term. Ownership here refers to the right of title, transfer and use of the blockchain metadata[14]. Though sites flaunt claims such as "owning a Token is just like owning a physical artwork"[15], there is usually no link between ownership and asset. The token is wrongly associated with the ownership of the underlying item. Ownership of the token does not transversely relate to legal or copyright ownership of the associated item, whether digital or physical.[16] The Terms of Service of these NFT marketplaces evidently state that they do not divulge ownership right on purchase/sale of NFTs or Collectibles.[17]

V. COPYRIGHTABILITY

For copyright to subsist in a work, it must be classified as work under S.13[18] of the Copyright Act, which includes original literary, dramatic, musical and artistic works; cinematograph films; and sound recording. A copyrighted work enjoys the exclusive rights of reproduction, distribution, adaptation among other rights specified under S.14.[19] These rights are conferred to the first owner of the copyright, unless specifically contracted to the contrary, who is usually the author, barring special circumstances such as employment wherein the employer is the

---

[11] *Supra note* 7
[12] Private & Public Keys WHAT THEY ARE AND HOW THEY WORK. NYDIG. (2022)
[13] *ibid*
[14] *Supra note* 7
[15] Terms of Service, KNOWNORIGIN (Apr. 23, 2021), https://medium.com/known origin/terms-of-service-3efae6d0c20f
[16] Juliet Moringiello and Christopher Odinet, "The Property Law of Tokens," Florida Law Review (forthcoming 2022), November 1, 2021, http://dx.doi.org/10.2139/ ssrn.3928901.
[17] RARIBLE TERMS OF SERVICE Last Updated: September 8, 2022
[18] THE COPYRIGHT ACT 1957 S.13
[19] *ibid* S.14

owner.[20] NFTs currently represent, in majority, artistic work. However, representation is not equivalent to creation. The original article is located elsewhere on a different website and is only tethered to the NFT stored on a blockchain. Purchase of an NFT does not inherently transfer the subsequent copyright in the artwork. The underlying asset is owned by the author, the purchaser is only vested the right to display. [21] This is the reason why photograph of an NFT is an infringement of copyright as it constitutes a reproduction of the original work. However, once an NFT is sold, the owner no longer has the right to limit further sale of the article, pursuant to the construction of the doctrine of first sale, which entitles the owner to reap economic benefits on one copy once, post further distribution cannot be hampered. The limited rights conferred by the owner are specified in the terms of the smart contracts. As previously mentioned, NTFs are fundamentally strings of code, they link and display the item they are tethered to; the original work is used only initially for the process of creating the metadata. Subsequent owners believe that they have the right to print the NFT on t shirts and create other merchandise, however this is not the case. The author still holds the explicit right to reproduce the NFT.[22]

Assignment of copyright to another party requires the mode to be in writing and signed by the assignor or authorised agent.[23] A smart contract make it possible to create a type of limited agreement such as a license or assign complete ownership of the copyright. For instance – Yuga Labs conferred absolute rights of ownership to the holders of Bored Ape, the digital art, and provided an "an unlimited, worldwide licence to use, duplicate, and exhibit the acquired Art for the purpose of making derivative works based upon the Art"[24]. However, sometimes these specifications are not clearly labelled.

Copyright in a work also entails certain moral rights which subsist even after the partial or whole assignment of the said copyright, it includes i) the right to claim authorship and ii) to restrain or claim damages is respect of any distortion, mutilation, modification of the work or other acts which may be prejudicial to the author's honour.[25] Mentioning this becomes pertinent for the next section of the paper.

(A) Copyright Infringement

---

[20] *Ibid* S.17,

[21] K. Parikshith Arvindan. Non-Fungible Tokens - An Overlap between Blockchain Technology and Intellectual Property Rights. (2021). Jus Corpus Law Journal. ISSN 2582-7820

[22] Gaurav Dhingra. First-principles analysis of the implications of IPR law on NFT. Ipleaders. (2022)

[23] THE COPYRIGHT ACT 1957 S.19

[24] BAYC Terms and Conditions https://boredapeyachtclub.com/#/terms

[25] THE COPYRIGHT ACT 1957 S.57

For infringement, an NFT must have encroached on the exclusive rights of the author. The infringed work may be an exact copy or an excerpt of the original. Keeping in mind that ideas are not copyrightable[26], an element of copyright is that substantial part of it need to have been copied; or a assumption placed in the mind of the audience that the works are identical.[27] In the case of Miramax v Tarantino[28] the writer-director was sued for copyright infringement for minting an NFT on excerpts of the film, Pulp Fiction by the production house, the first owner here becomes the production house as the writer was working under them in the course of employment. The real question which arises is whether the author has any remedy, because essentially NFT is simply a string of numbers and letters and hence may not be a substantial reproduction. The case is still pending.

Copyright Infringement of NFTs are a major concern. There are several instances in which an NFT has been generate by someone passing off as the copyright owner. It is hard to verify an infringed listing when the owner is not well known in the public domain; or the art is esoteric. An illustration of the same can be found in the art by Basquiat, titled 'Free Comb with Pagoda', an NFT was minted for the same by the alleged seller which gave the winning bidder the option of destroying the original physical artwork in relation to other rights once the digital version was sold.[29] There is not only blatant copyright infringement but there is also a disregard for the moral rights of the author.

VI. TRADEMARK

The objective of trademark is to create a mark or sign which is capable of distinguishing goods and services of one person from another. Trademark may be registered for words, logos, shapes etc. The mark must bear some sort of distinctiveness intrinsically or acquired.[30] The broad elements of Trademark Infringement are: i) Unauthorised use of mark in trade; ii) Existence of registered trademark by holder/applicant; iii) Likelihood of confusion if the marks are identical or similar.

An NFT could protect its 'Token Name' and logo with the help of trademarks. A creator could mint the NFT and register its distinctive name so that the same cannot be further used by other NFTs or other goods falling in the same class.

---

[26] Eastern Book Company v. DB Modak (2008) 1 SCC 1
[27] RG Anand v Delux FilmsAIR 1978 SC 161
[28] Miramax v. Tarantino, (C.D. Cal. 2021) (No. 2:21-cv-08979)
[29] Nicholas O'Donnell. No, you probably can't sell your Basquiat as an NFT. Apollo The International Art Magazine (2021) https://www.apollo-magazine.com/basquiat-nft-intellectual-property-copyright/
[30] Trademarks Act, 1999 S.9(1) see also Godfrey Philips India Ltd v Girnar Foods and Beverages

(A) Trademark Infringement

NFTs themselves have however may infringe upon the rights of other parties if they are minted or sold by an unauthorized party capitalizing on a pre-registered trademark. In *Nike, Inc. v. StockX LLC,* StockX, a sneaker marketplace was selling NFTs on products that they had in stock with a right to exchange the NFT for a physical copy of the product. Nike noticed sale of NFTs which were linked to Nike's products and sued for copyright infringement. It claimed StockX utilizing undue leverage to market the goods. Therefore, due caution needs to be exercised while handling NFTs.

Another recent case of trademark infringement is Hermes Int'l v. Rothschild, wherein Hermes sued Rothschild for trademark infringement and dilution, as he minted NFTs titled 'MetaBirkins' which were a collection of images displaying Hermès "Birkin Bag".

VII. PATENTS

Patent Act[31] in India protects an invention in the form of a new product or process which involves a new step and is capable to be applied industrially.[32] An invention is novel if it has no disclosure in a 'prior art'. By virtue, NFTs are similar and cannot by themselves hold patents, however, an NFT may be used to license novel technology utilizing the applicability of an NFT.

An innovative Illustration of using NFT technology was done by Nike, wherein Nike was granted a patent by the US Patent Office for utilizing a system wherein blockchain was used to tether digital NFTs to the physical product. If you purchased a pair of Nike shoes, you would receive a digital asset equivalent to the product, through an assigned cryptographic token termed collectively as "CryptoKick". [33] Further inspired from "CrytoKitties", CryptoKick allows for merging of two NFTs to create a new CryptoKick, and then have this offspring custom made into a new tangible shoe.

A unique application of NFT is that they could substantially speed up the process of Patent application. NFTs could potentially be utilized to track and record patent applications on the blockchain. Creators can sign in and verify themselves with a KYC process.[34] Then upload the metadata of the patent on the blockchain itself or link to another database. This would assist the patent to be timestamped and exist on an immutable record, increasing accessibility and viewing

---

[31] The Patents Act, 1970

[32] The Patents Act, 1970 S.2(j)

[33] Matthew Beedham. Nike now holds patent for blockchain-based sneakers called 'CryptoKicks'. (2019) https://thenextweb.com/news/nike-blockchain-sneakers-cryptokick-patent

[34] Bamakan, S.M.H., Nezhadsistani, N., Bodaghi, O. *et al.* Patents and intellectual property assets as non-fungible tokens; key technologies and challenges. *Sci Rep* **12**, 2178 (2022). https://doi.org/10.1038/s41598-022-05920-6

the remaining term of the patent. Users can then register on the blockchain and request the owner for license to use the patent on adequate remuneration. Since due to the nature of Patent protection, the specifications need to be recorded publicly, the blockchain would not disrupt any secret through its public access.

VIII. SOLUTION

To combat the number of issues that NFT cropped up, it is paramount that primarily the conditions of sale are laid out in detail on what rights they confer. Further, there could be an established third party governing the issuance and display of illicit and unverified NFTs on the marketplaces. Inspections on the validity of minting a work are vital at this stage to protect consumers, an administrative body could take on this task. An accessible database of certified work could also be put up corollary to this. Intellectual Property owners could assist in building this database by registering their copyright, though registration is not a requirement for copyright.

*****