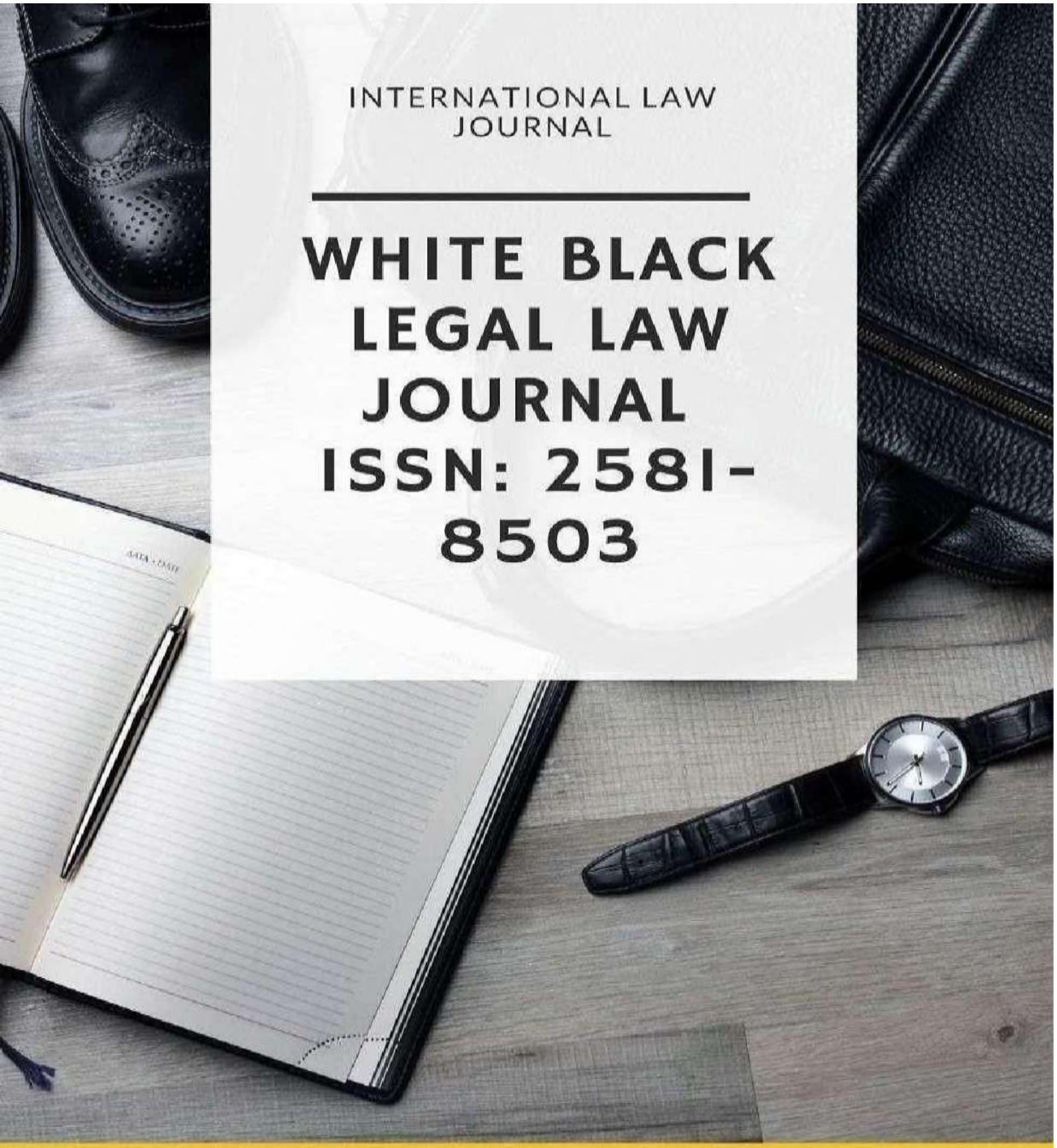

INTERNATIONAL LAW JOURNAL

WHITE BLACK LEGAL LAW JOURNAL

ISSN: 2581-8503

Peer - Reviewed & Refereed Journal

The Law Journal strives to provide a platform for discussion of International as well as National Developments in the Field of Law.

DISCLAIMER

ABOUT WHITE BLACK LEGAL

White Black Legal – The Law Journal is an open-access, peer-reviewed, and refereed legal journal established to provide a scholarly platform for the examination and discussion of contemporary legal issues. The journal is dedicated to encouraging rigorous legal research, critical analysis, and informed academic discourse across diverse fields of law.

The journal invites contributions from law students, researchers, academicians, legal practitioners, and policy scholars. By facilitating engagement between emerging scholars and experienced legal professionals, *White Black Legal* seeks to bridge theoretical legal research with practical, institutional, and societal perspectives.

In a rapidly evolving social, economic, and technological environment, the journal endeavours to examine the changing role of law and its impact on governance, justice systems, and society. *White Black Legal* remains committed to academic integrity, ethical research practices, and the dissemination of accessible legal scholarship to a global readership.

AIM & SCOPE

The aim of *White Black Legal – The Law Journal* is to promote excellence in legal research and to provide a credible academic forum for the analysis, discussion, and advancement of contemporary legal issues. The journal encourages original, analytical, and well-researched contributions that add substantive value to legal scholarship.

The journal publishes scholarly works examining doctrinal, theoretical, empirical, and interdisciplinary perspectives of law. Submissions are welcomed from academicians, legal professionals, researchers, scholars, and students who demonstrate intellectual rigour, analytical clarity, and relevance to current legal and policy developments.

The scope of the journal includes, but is not limited to:

- Constitutional and Administrative Law
- Criminal Law and Criminal Justice
- Corporate, Commercial, and Business Laws
- Intellectual Property and Technology Law
- International Law and Human Rights
- Environmental and Sustainable Development Law
- Cyber Law, Artificial Intelligence, and Emerging Technologies
- Family Law, Labour Law, and Social Justice Studies

The journal accepts original research articles, case comments, legislative and policy analyses, book reviews, and interdisciplinary studies addressing legal issues at national and international levels. All submissions are subject to a rigorous double-blind peer-review process to ensure academic quality, originality, and relevance.

Through its publications, *White Black Legal – The Law Journal* seeks to foster critical legal thinking and contribute to the development of law as an instrument of justice, governance, and social progress, while expressly disclaiming responsibility for the application or misuse of published content.

NON-FUNGIBLE TOKENS AND TRADEMARK INFRINGEMENT: A CRITICAL COMPARATIVE LEGAL ANALYSIS

AUTHORED BY - V.L. SREYASHRI
Student At School Of Law, VELS Institute Of Science, Technology And Advanced Studies (VISTAS), Chennai

CO-AUTHOR- MS. KUMUDHA
Assistant Professor (Law), School Of Law, (VISTAS), Chennai

ABSTRACT

Non-fungible tokens (NFTs) represent a paradigm shift in digital asset ownership, yet their emergence has created pressing intellectual property enforcement challenges across every major legal system. This paper critically examines whether existing trademark law frameworks are adequate to address trademark infringement occurring through the medium of NFTs in the United States, European Union, and India. Through doctrinal analysis of landmark cases including *Hermès International SA v Mason Rothschild* and *Nike Inc v StockX LLC*, the research identifies substantial gaps between trademark law's foundational assumptions, which were developed for physical goods and traditional digital commerce, and the structural realities of blockchain-based, decentralised NFT markets. Courts can resolve unambiguous direct-reproduction infringements, yet they struggle with artistic commentary defences, virtual goods registration, resale exhaustion doctrines, and platform liability. India faces a particularly acute regulatory void, no statutory amendment, Registry guidance, or judicial precedent addresses NFT trademark disputes despite rapid market growth. The paper proposes targeted reforms spanning legislative extension of trademark protection to virtual goods, calibrated artistic-expression defences, dedicated platform liability safe harbours, immediate Registry guidance, blockchain-compatible interim relief mechanisms, and international harmonisation through WIPO and the TRIPS Council.

KEYWORDS: Non-Fungible Tokens (NFTs), Trademark Infringement, Blockchain Technology, Digital Assets, Virtual Goods, Trademark Law Reform, Likelihood of Confusion,

Artistic Expression Defence, Platform Liability, Trademark Exhaustion, Decentralised Markets, Metaverse, Comparative Intellectual Property Law, Indian Trade Marks Act 1999, WIPO and TRIPS

INTRODUCTION

Blockchain technology and non-fungible tokens (NFTs) have significantly reshaped digital asset markets by enabling verifiable ownership of unique virtual goods such as digital art, virtual real estate, and branded collectibles. Following their rapid mainstream adoption, NFT transactions exceeded forty billion US dollars, but this growth has been accompanied by increasing instances of trademark misuse. Unauthorised individuals have minted and traded NFTs incorporating registered trademarks of well-known brands without permission. Existing trademark frameworks including the Indian Trade Marks Act, 1999, the Lanham Act, 1946, and the EU Trade Mark Regulation 2017/1001 were designed around assumptions that NFTs disrupt, such as identifiable infringers, defined consumer bases, territorial limits, and physical markets. Judicial decisions in cases like *Hermès v. Rothschild* and *Nike v. StockX* demonstrate the difficulty of applying traditional doctrines to digital contexts. This paper evaluates the effectiveness of trademark law in addressing NFT-related infringement across the US, EU, and India, highlighting legal gaps and enforcement challenges, particularly in India, and proposing practical reforms to ensure better protection and legal clarity.

1. TECHNICAL ARCHITECTURE AND LEGAL IMPLICATIONS OF NON-FUNGIBLE TOKENS

1.1 Blockchain Technology and the Distributed Ledger

A blockchain is a distributed database maintained concurrently across a peer-to-peer network of computers, each holding an identical copy of a shared ledger.[1] Transaction validity is established through consensus mechanisms, proof-of-work or proof-of-stake protocols that create cryptographic immutability. Once recorded and confirmed on the blockchain, a transaction cannot be altered, deleted, or reversed without recomputing the entire chain faster than the network's honest nodes and a computationally impractical undertaking at any meaningful network scale.[2] This immutability is the foundational technical challenge for trademark enforcement, an infringing NFT, once minted and confirmed, exists permanently in

[1]Satoshi Nakamoto, 'Bitcoin: A Peer-to-Peer Electronic Cash System' (2008) <https://bitcoin.org/bitcoin.pdf>.
[2]Don Tapscott and Alex Tapscott, Blockchain Revolution (Penguin 2016) 6.

the distributed ledger regardless of any subsequent court order or marketplace takedown.

1.2 Non-Fungible Token Creation and the Ownership–IP Distinction

NFTs are created through a process termed "minting," in which a smart contract records a unique cryptographic token on the blockchain and links it to the creator's wallet address alongside metadata, typically a name, description, and URI pointing to associated digital content.[3] The ERC-721 standard, formalised on Ethereum in 2018, assigns each NFT a unique 256-bit integer identifier, eliminating any possibility of duplication. Critically, minting requires no authorisation from any platform, rights holder, or regulatory body. Any individual with blockchain access and sufficient network transaction fees can mint an NFT incorporating registered trademark elements without permission and the permissionless architecture that enables legitimate decentralised creation equally facilitates mass infringement.[4]

The ownership–IP distinction is perhaps the most commercially significant and widely misunderstood feature of NFT transactions. Purchasing an NFT confers ownership of the cryptographic certificate for the right to hold, display, and transfer the unique token. Unless the sale terms expressly provide otherwise, no copyright, trademark licence, or other intellectual property right in the underlying digital content passes to the buyer. Trademark rights in any brand identifier incorporated into the NFT remain with the trademark proprietor. Each act of minting, listing, and transferring an infringing token may therefore independently constitute trademark infringement.

1.3 NFT Marketplaces and Platform Ecosystem

NFT marketplaces function as commercial intermediaries facilitating primary and secondary token sales. Centralised platforms such as OpenSea, Nifty Gateway, Foundation is to maintain servers, operate user interfaces, and enforce intellectual property policies, enabling takedown of infringing listings upon receipt of proper notice. Decentralised marketplaces operate via autonomous blockchain smart contracts with no central operator, rendering traditional notice-and-takedown mechanisms technically impractical. A centralised platform can remove an infringing listing from its interface; it cannot remove the underlying token from the blockchain. Secondary market transfers can occur through direct wallet-to-wallet transactions or alternative platform relisting, circumventing primary marketplace enforcement entirely.

[3]William Entriken and others, 'ERC-721: Non-Fungible Token Standard' (Ethereum Improvement Proposal 721, 24 January 2018) <https://eips.ethereum.org/EIPS/eip-721>.
[4]Vitalik Buterin, *A Next-Generation Smart Contract and Decentralized Application Platform* (White Paper, 2014).

1.4 NFTs in the Metaverse and Virtual Goods Commerce

The metaverse are persistent, interactive three-dimensional virtual environments accessed via digital avatars, has emerged as a significant commercial channel in which NFTs serve as the primary medium of ownership. Virtual land parcels, digital wearables, branded in-world experiences, and virtual storefronts are all minted and traded as NFTs. Major brands including Gucci, Nike, Adidas, Louis Vuitton, and Balenciaga have established authorised metaverse presences, confirming the commercial significance of trademark protection in these spaces. However, the Nice Classification system used for trademark registration was not designed for virtual goods, creating registration ambiguity that directly undermines enforcement capacity.

2 TRADEMARK LAW FRAMEWORK: REGISTRATION, DISTINCTIVENESS, AND INFRINGEMENT DOCTRINE

2.1 Definition, Scope, and Distinctiveness

Trademark law across the three jurisdictions examined shares a common conceptual foundation. The Lanham Act defines a trademark as any word, name, symbol, or device used to identify and distinguish goods and indicate their source. The EU Trade Mark Regulation Article 4 and the Indian Trade Marks Act 1999 Section 2(1)(zb) adopt functionally equivalent definitions, each extending protection to non-traditional marks including trade dress, product configuration, colours, and sounds.[5] These definitions are broad enough in principle to cover three-dimensional digital representations, meaning an NFT incorporating a brand's distinctive visual identity may engage registered trademark rights even where the precise registered mark is not reproduced verbatim.

Distinctiveness in the mark's capacity to identify source of operates on a spectrum from generic (never protectable) through descriptive, suggestive, arbitrary, to fanciful (inherently protectable), as established by the Second Circuit in *Abercrombie & Fitch Co v Hunting World Inc*.[6] A mark's position on this spectrum determines both registration eligibility and the breadth of protection in infringement proceedings. In NFT contexts, a highly distinctive mark such as the Hermès Birkin trade dress or the Nike Swoosh, produces a stronger infringement claim than a merely descriptive or weakly distinctive element.

[5]Trade Marks Act 1999, s 2(1)(zb); Lanham Act 1946, 15 USC § 1127; EU Trade Mark Regulation 2017/1001, art 4.
[6]Abercrombie & Fitch Co v Hunting World Inc, 537 F 2d 4 (2d Cir 1976).

2.2 Likelihood-of-Confusion Standard

The multi-factor likelihood-of-confusion test is the primary instrument for trademark infringement analysis across all three jurisdictions. Under Lanham Act Section 1114, infringement occurs where a defendant's commercial use of a mark is "likely to cause confusion, or to cause mistake, or to deceive."[7] United States circuit courts apply established multi-factor frameworks for the Polaroid factors in the Second Circuit, the Sleekcraft factors in the Ninth Circuit, weighing mark similarity, goods proximity, consumer sophistication, evidence of actual confusion, mark strength, and marketing channels.[8] The Court of Justice of the European Union applies a holistic assessment incorporating visual, aural, and conceptual congruence. Indian courts employ a comparable multi-factor analysis under the Trade Marks Act 1999.

Applying this standard to NFT markets introduces structural difficulties. Empirical research by Barton Beebe confirms that judicial assessments of consumer sophistication are frequently speculative rather than evidence-based, a tendency that is significantly compounded in the technically complex NFT environment.[9] Martin Senftleben has identified what he terms the "consumer heterogeneity problem," NFT purchasers range from sophisticated blockchain investors indifferent to brand endorsement signals to casual digital buyers who may genuinely believe a branded token carries official authorisation.[10] The confusion standard's implicit assumption of a relatively stable and identifiable consumer class does not translate comfortably to decentralised NFT markets where tokens transfer rapidly across globally dispersed purchaser bases with widely varying levels of technical and commercial sophistication.

2.3 Trademark Dilution

The dilution doctrine protects famous marks from uss that, without causing consumer confusion, diminish the mark's distinctive capacity (blurring) or damage its reputation (tarnishment). The US Trademark Dilution Revision Act 2006 lowered the evidentiary threshold from actual dilution to a "likelihood of dilution," substantially broadening protection.[11] EU Trade Mark Regulation Article 9(2)(c) provides analogous protection without

[7]Lanham Act 1946, 15 USC § 1114(1)(a); EU Trade Mark Regulation 2017/1001, art 9(2)(b); Trade Marks Act 1999, s 29.
[8]Polaroid Corp v Polarad Electronics Corp, 287 F 2d 492 (2d Cir 1961); AMF Inc v Sleekcraft Boats, 599 F 2d 341 (9th Cir 1979).
[9]Barton Beebe, 'An Empirical Study of the Multifactor Tests for Trademark Infringement' (2006) 94 California LR 1581, 1584.
[10]Martin Senftleben, 'Trademark Protection for Non-Fungible Tokens' (2022) 53 IIC 973, 979 (the 'consumer heterogeneity problem').
[11]Trademark Dilution Revision Act 2006, Pub L 109-312; Moseley v V Secret Catalogue Inc, 537 US 418 (2003).

requiring proof of confusion. Indian law offers only a narrower analogue under Section 29(4) of the Trade Marks Act 1999, which courts have interpreted restrictively and which has never been applied to NFT-based reputational harm.[12] For NFTs, dilution analysis may prove more reliable than confusion analysis where an infringing token is unambiguously digital art rather than a licensed product in which a luxury brand's mark appearing in a meme-style NFT may not confuse consumers as to source yet materially damages brand reputation.

2.4 Passing Off

The tort of passing off, rooted in English common law, protects commercial goodwill from misrepresentation. The "classical trinity" established in *Reckitt & Colman Products Ltd v Borden Inc* requires a claimant to demonstrate: established goodwill; a misrepresentation likely to induce public belief in claimant association; and damage to goodwill.[13] The Supreme Court of India confirmed in *Cadila Healthcare Ltd v Cadila Pharmaceuticals Ltd* that English passing off principles apply in India, and the doctrine extends in principle to digital goods.[14] For NFT mark owners whose registration does not expressly cover virtual goods, passing off may provide an essential alternative claim though its application to specific NFT scenarios remains unadjudicated in any Indian court.

3 CRITICAL SCENARIOS: DOCTRINAL APPLICATION AND ENFORCEMENT CHALLENGES

3.1 Artistic Commentary and the First Amendment Defence

A doctrinally more contested category concerns NFTs presented as artistic commentary on established brands rather than commercial simulations of their products. The Rogers test derived from *Rogers v Grimaldi*, holds that the Lanham Act does not apply to an expressive work where the trademark's use has artistic relevance and does not explicitly mislead as to source.[15] In *Hermès v Rothschild*, the jury rejected Mason Rothschild's artistic expression defence, finding that MetaBirkins were commercially oriented products rather than genuine artistic commentary. The United States Supreme Court's 2023 decision in *Jack Daniel's Properties Inc v VIP Products LLC* substantially narrowed the Rogers defence, holding it

[12]EU Trade Mark Regulation 2017/1001, art 9(2)(c); CJEU, Intel Corp v CPM United Kingdom Ltd, Case C-252/07 [2008] ECR I-8823.
[13]Trade Marks Act 1999, s 29(4); Reckitt & Colman Products Ltd v Borden Inc [1990] 1 WLR 491 (HL); Perry v Truefitt (1842) 6 Beav 66.
[14]Cadila Healthcare Ltd v Cadila Pharmaceuticals Ltd (2001) 5 SCC 73.
[15]Rogers v Grimaldi, 875 F 2d 994 (2d Cir 1989).

inapplicable where the defendant uses the plaintiff's mark as a source designator for its own products, is a ruling that significantly complicates future NFT artistic cases.[16]

Academic commentary has identified structural weaknesses in this doctrinal area. Rebecca Tushnet argues that the Rogers test presupposes a clear separation between a work's commercial and expressive characteristics, a separation that breaks down for NFTs, which simultaneously function as digital artwork, speculative financial instrument, and traded collectible.[17] Mark Lemley warns that NFTs risk accelerating trademark law's drift away from consumer protection towards brand control, stifling legitimate artistic engagement with culturally pervasive marks.[18]

3.2 Virtual Goods, Registration Gaps, and the Metaverse

Virtual goods and metaverse-based NFTs expose a critical registration infrastructure gap. The EUIPO's 2022 Common Communication classifies NFT-authenticated digital files within Nice Class 9 and specifies that virtual goods should be classified according to their underlying content.[19] The USPTO issued comparable guidance clarifying NFT registration under Class 9.[20] India's Trade Marks Registry has issued no guidance whatsoever. An Indian brand owner asserting registered trademark rights against infringing virtual wearables in the metaverse may find that their existing Class 18 registration for physical goods does not extend to Class 9 digital equivalents, a coverage gap that transfers evidentiary burdens, weakens claims, and creates doctrinal uncertainty fundamentally inconsistent with trademark registration's foundational purpose of clear and predictable rights definition.

3.3 Exhaustion Doctrine and Vault NFTs

The first sale or exhaustion doctrine provides that trademark rights deplete following the initial authorised sale of goods bearing the mark, permitting subsequent owners to resell without infringing. *Nike v StockX* placed this doctrine under acute doctrinal strain.[21] StockX converted physical Nike footwear into "Vault NFTs" tokens linked to authentic shoes held in custodial storage, enabling NFT secondary trading independent of the physical goods. Nike argued the Vault NFT constituted a distinct digital product bearing its marks without authorisation;

[16]Jack Daniel's Properties Inc v VIP Products LLC, 599 US 140 (2023).
[17]Rebecca Tushnet, 'Worth a Thousand Words: The Images of Copyright' (2012) 125 Harvard LR 683, 722.
[18]Mark A Lemley, 'NFTs and the Death of Trademark' (2023) 75 Stanford LR Online 1, 5.
[19]EUIPO, Common Communication on New Types of Trade Marks (October 2022).
[20]USPTO, Examination Guide 3-22: Trademark Identification of Goods and Services for NFTs (June 2022).
[21]*Nike Inc v StockX LLC* (Complaint, US District Court for the Southern District of New York, Case No 1:22-cv-00983, filed 3 February 2022).

StockX contended exhaustion applied to the authorised physical footwear sale from which the token derived.

Parchomovsky and Siegelman argue persuasively that the exhaustion doctrine is structurally inapplicable in this scenario, exhaustion presumes unified goods disposition, but an NFT can be transferred independently of any physical item, rendering traditional analysis unworkable.[22] Indian courts have not addressed this problem; Sections 30(3)–(4) of the Trade Marks Act 1999 remain unapplied to NFT contexts, leaving an enforcement gap that sophisticated actors are well positioned to exploit.

3.4 Platform Liability and Contributory Infringement

NFT marketplaces occupy a structurally pivotal position in the infringement ecosystem. Without the search, listing, payment, and audience-access infrastructure they provide, infringing NFTs would remain largely inaccessible to the consuming public. The foundational authority on secondary trademark liability for online marketplace operators is *Tiffany (NJ) Inc v eBay Inc*, in which the Second Circuit held that contributory liability arises under the *Inwood Laboratories* standard only where the platform continues supplying its services to a seller it knows or has reason to know is engaged in trademark infringement, with platform wide general awareness being insufficient.[23]

This framework encounters three structural difficulties in the NFT context. First, even full compliance with takedown requests cannot remove infringing tokens from the underlying blockchain, limiting the platform's legal exposure to interface level actions rather than effective asset removal. Second, the specific knowledge requirement creates perverse incentives: platforms that actively monitor for trademark abuse may incur greater liability exposure than those that deliberately avoid monitoring. Third, for decentralised marketplaces operating through autonomous smart contracts, there is frequently no identifiable defendant capable of receiving notice or exercising control over listings. No trademark-specific safe harbour exists, unlike DMCA Section 512 for copyright and leaving platforms without clear protection for voluntary notice-and-takedown compliance, further undermining the incentive structure for brand protection.

[22]Parchomovsky G and Siegelman P, 'Towards an Integrated Theory of Intellectual Property' (2002) 88 Virginia LR 1455.
[23]Tiffany (NJ) Inc v eBay Inc, 600 F 3d 93 (2d Cir 2010); Inwood Laboratories Inc v Ives Laboratories Inc, 456 US 844 (1982).

4 COMPARATIVE LEGAL ANALYSIS: UNITED STATES, EUROPEAN UNION, AND INDIA

4.1 United States: Case-Law Leadership with Legislative Gap

The United States possesses the most developed body of judicial precedent on NFT trademark infringement. Three landmark decisions have established the doctrinal contours of the field. In *Hermès v Rothschild*, the Southern District of New York held that marketing MetaBirkins NFTs constituted trademark infringement and cybersquatting, confirming that existing trademark protections extend to digital assets and that the artistic expression defence is unavailable where commercial orientation predominates over genuine artistic purpose.[24] In *Nike v StockX*, the court confronted the unresolved questions of first-sale exhaustion in NFT-mediated product markets.[25] In *Yuga Labs v Ripps*, the court granted summary judgment against a defendant who created a near-identical copycat NFT collection, confirming that likelihood-of-confusion analysis applies to direct NFT reproduction.[26]

The USPTO has provided classification guidance placing NFTs within Class 9 and urging applicants to include NFT-specific descriptions in registrations.[27] The primary structural weakness of the United States framework is its reliance on analogical case-law development in the absence of NFT-specific legislation has a gap that generates doctrinal inconsistency and strategic uncertainty for both rights holders and potential infringers. The *Jack Daniel's* decision has further complicated future NFT artistic expression cases by substantially narrowing the Rogers defence.[28]

4.2 European Union: Regulatory Clarity Without Judicial Precedent

The European Union has taken a proactively regulatory approach. The EUIPO's 2022 Common Communication provided a clear classification framework, placing NFT-authenticated digital files in Class 9. The Markets in Crypto-Assets Regulation (MiCA), operative from December 2023, introduces disclosure and transparency obligations for crypto-asset issuers is indirectly

[24](Hermès Int'l v Rothschild, 590 F Supp 3d 647 (SDNY 2022); jury verdict, US District Court for the Southern District of New York, 8 February 2023).
[25]*Nike Inc v StockX LLC* (Complaint, US District Court for the Southern District of New York, Case No 1:22-cv-00983, filed 3 February 2022).
[26]*Yuga* Labs *Inc v Ripps* (US District Court for the Central District of California, Case No 2:22-cv-04355, Summary Judgment Order, October 2023).
[27]United States Patent and Trademark Office, *USPTO ID Manual* (Trademark ID Manual, updated periodically) accessed 28 April 2026 (including entries such as "downloadable digital files authenticated by non-fungible tokens [NFTs]" in Class 9).
[28]*Jack Daniel's Properties Inc v VIP Products LLC* 599 US ___ (2023) (holding that the *Rogers* test does not apply where a mark is used as a source identifier for the defendant's own goods).

supporting trademark enforcement by requiring truthful representation of what an NFT project involves.[29] The CJEU's reasoning in *Christian Louboutin v Amazon*, a marketplace may incur direct liability where it actively promotes third-party infringing products that holds direct relevance for NFT marketplace operators. The EU framework's principal weakness is the absence of CJEU jurisprudence directly addressing NFTs. Administrative classification guidance cannot substitute for authoritative judicial determination of how the EU Trade Mark Regulation applies to the specific infringement territoriality, designed for physical commercial boundaries, is inherently unsuitable for the internet environment and these challenges intensify in the blockchain context, where transaction records exist globally and in no specific location simultaneously.[30]

4.3 India: Legislative Silence and Institutional Absence

India presents the most acute policy failure in this comparative landscape. The Trade Marks Act 1999 contains no provision addressing NFTs, virtual goods, or blockchain commerce. The Trade Marks Registry has issued no guidance on NFT classification. No reported Indian court decision has adjudicated an NFT trademark dispute. This triple silence occurs against a backdrop of rapid digital economic growth: India ranks as the world's third-largest economy by purchasing power parity and hosts a rapidly expanding NFT market with millions of digitally active consumers. Indian brand owners lack legal certainty about virtual goods protection. Indian consumers are left unprotected against deceptive branded NFTs. Indian creators cannot build legitimate NFT businesses on foundations of legal clarity.

Existing Indian judicial precedents provide a doctrinal foundation, the Delhi High Court's confirmation in *Tata Sons Pvt Ltd v Greenpeace International* that the internet creates no zone of trademark immunity[31], and the Supreme Court's affirmation in *Cadila Healthcare* that English passing off principles apply in India, but neither addresses the distinctive enforcement challenges of blockchain-based commerce. The proposed Digital India Act represents a legislative opportunity to fill this vacuum, but absent immediate Registry guidance, Indian trademark enforcement against NFT infringement remains structurally inadequate. This is not merely an academic gap; it is a commercially significant policy failure with real consequences

[29]Regulation (EU) 2023/1114 on Markets in Crypto-Assets (MiCA), art 6.
[30]Graeme B Dinwoodie and Mark D Gangjee, The Law of Trade Marks and the Internet (2nd edn, OUP 2023) ch 4.
[31]*Tata Sons Pvt Ltd v Greenpeace International* 178 (2011) DLT 705 (Del) (holding that use of trademarks on the internet does not create immunity from infringement or passing off).

for Indian brand owners and consumers.[32]

4.4 Comparative Synthesis and International Framework

Across the three jurisdictions, convergence exists at the level of foundational trademark principles, all three employ likelihood-of-confusion analysis, recognise passing off or its statutory equivalent, and afford protection for famous marks against dilution. Significant divergence appears in classification guidance (present in the United States and EU, absent in India), judicial precedent on NFT-specific scenarios (developed in the United States, nascent in the EU, entirely absent in India), and platform liability frameworks. At the international level, neither the TRIPS Agreement nor the Paris Convention contains provisions specific to digital assets, a silence that incentivises regulatory arbitrage, allowing infringers to situate their operations in jurisdictions where the brand has limited registration coverage.[33]

5 CONCLUSIONS, SUGGESTIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

This dissertation identifies five key findings regarding the inadequacy of existing trademark law in addressing NFT-related infringement.

- First, current legal frameworks are ill-equipped to deal with the unauthorised use of trademarks in NFTs. Although courts in the United States have demonstrated a willingness to restrain clearly commercial misuse, enforcement becomes ineffective where infringers operate pseudonymously, where infringing tokens are immutably recorded on blockchains, or where disputes span multiple jurisdictions.
- Second, the traditional likelihood-of-confusion test is difficult to apply in NFT markets. The anonymity of participants and the absence of clearly identifiable consumer groups make it challenging to assess actual confusion, particularly in decentralised environments lacking a defined territorial nexus.
- Third, the scope of artistic expression defences remains uncertain in the NFT context. Recent jurisprudence, particularly the decision in *Jack Daniel's Properties Inc v VIP Products LLC*, has narrowed the availability of such defences, increasing uncertainty for both creators and trademark owners.

[32]National IPR Policy 2016 (Government of India); Information Technology Act 2000, ss 43, 65–66; Trade Marks Act 1999, s 135.
[33]Agreement on Trade-Related Aspects of Intellectual Property Rights 1994 (TRIPS), art 15; Paris Convention for the Protection of Industrial Property 1883, art 6bis.

- Fourth, existing regulatory frameworks governing NFT marketplaces are inadequate, especially given their reliance on smart contracts and their limited ability to remove infringing tokens from immutable ledgers.
- Finally, conventional remedies that is injunctions and damages are often ineffective, as blockchain permanence, cryptocurrency valuation, and rapid transaction speeds undermine their practical utility.
- Comparative analysis across the United States, European Union, and India reveals uneven legal preparedness for NFT-related trademark issues. The United States has relatively developed case law but lacks NFT-specific legislation. The European Union has issued classification guidance through the EUIPO, yet judicial interpretation remains absent. India faces the greatest gap, with no statutory provisions, regulatory guidance, or case law on NFTs. At the international level, TRIPS and WIPO frameworks remain silent, enabling jurisdictional arbitrage and allowing infringers to exploit regulatory inconsistencies across jurisdictions.

5.2 SUGGESTIONS AND RECOMMENDATIONS

This study proposes targeted reforms to align trademark law with NFT-based commerce.

- First, the Indian Trade Marks Act, 1999 should be amended to expressly include digital and virtual goods, as well as NFT-linked assets, within its scope, thereby enabling brand owners to protect marks in emerging digital environments.
- Second, a calibrated artistic-expression defence should be codified to protect genuine commentary while excluding purely commercial exploitation, bringing clarity after recent judicial uncertainty.
- Third, the doctrine of exhaustion must be clarified to confirm that it does not extend to NFTs linked to physical goods where such tokens constitute distinct digital products.
- Fourth, a trademark-specific safe harbour regime should be introduced for NFT marketplaces, requiring prompt takedown mechanisms, repeat-infringer policies, and, where appropriate, proactive monitoring.
- Fifth, similar compliance obligations should extend to operators of decentralised platform interfaces.
- Sixth, the Indian Trade Marks Registry should issue immediate guidance on NFT classification and registration strategies.

- Seventh, courts should adopt blockchain-compatible remedies, including wallet-freezing orders and updated damages assessment methods.
- Finally, international coordination through WIPO and discussions within the TRIPS framework is necessary to address regulatory fragmentation and ensure effective cross-border enforcement.

CONCLUSION

Non-fungible tokens (NFTs) pose a challenge to trademark law that is both technologically new and structurally significant. Traditional trademark frameworks rest on assumptions such as identifiable defendants, reversible infringements, territorially limited commerce, and clear classification of goods that are disrupted by decentralised, pseudonymous, and immutable blockchain-based transactions. This tension reflects a deeper conflict between a legal regime designed for physical markets and a digital ecosystem operating on entirely different principles. A comparative assessment of the United States, European Union, and India demonstrates that no jurisdiction has yet provided a fully effective response. The United States has developed notable case law, including *Hermès v. Rothschild*, *Nike v. StockX*, and *Yuga Labs v. Ripps*, but lacks comprehensive statutory clarity. The European Union has taken regulatory steps through classification guidance and the MiCA framework, yet judicial interpretation remains limited. India faces the most acute gap, with no specific legislation, regulatory direction, or case law addressing NFT-related trademark issues. Enforcement challenges further complicate the issue, including anonymity, irreversibility of transactions, valuation difficulties, and jurisdictional fragmentation. This paper advocates targeted, practical reforms to modernise trademark law while preserving its core purpose of protecting brand identity and ensuring consumer trust.

REFERENCES

A. PRIMARY SOURCES

Legislation

- Trade Marks Act 1999 (India)
- Information Technology Act 2000 (India)
- Copyright Act 1957 (India)
- Lanham (Trade-Mark) Act 1946, 15 USC §§ 1051–1141 (United States)
- Trademark Dilution Revision Act 2006, Pub L 109-312 (United States)
- EU Trade Mark Regulation 2017/1001/EU (European Union)

- EU Trade Mark Directive 2015/2436/EU (European Union)
- Regulation (EU) 2023/1114 on Markets in Crypto-Assets (MiCA)
- Digital Services Act 2022/2065/EU (European Union)
- Agreement on Trade-Related Aspects of Intellectual Property Rights 1994 (TRIPS)
- Paris Convention for the Protection of Industrial Property 1883 (as revised)
- Nice Agreement Concerning the International Classification of Goods and Services 1957 (as revised)

Cases

- Abercrombie & Fitch Co v Hunting World Inc, 537 F 2d 4 (2d Cir 1976)
- AMF Inc v Sleekcraft Boats, 599 F 2d 341 (9th Cir 1979)
- Arsenal Football Club plc v Reed, Case C-206/01 [2006] ECLI:EU:C:2002:651 (CJEU)
- Cadila Healthcare Ltd v Cadila Pharmaceuticals Ltd (2001) 5 SCC 73 (Supreme Court of India)
- Christian Louboutin SAS v Amazon Europe Core Sàrl, Cases C-148/21 and C-184/21 [2022] ECLI:EU:C:2022:2 (CJEU)
- Erven Warnink BV v J Townend & Sons (Hull) Ltd [1979] AC 731 (HL)
- Hermès International SA v Mason Rothschild, 590 F Supp 3d 647 (SDNY 2022); Jury Verdict (13 February 2023)
- Intel Corp v CPM United Kingdom Ltd, Case C-252/07 [2008] ECR I-8823 (CJEU)
- Inwood Laboratories Inc v Ives Laboratories Inc, 456 US 844 (1982)
- Jack Daniel's Properties Inc v VIP Products LLC, 599 US 140 (2023)
- Louis Vuitton Malletier SA v Akanoc Solutions Inc, 658 F 3d 936 (9th Cir 2011)
- Monsanto Company v Nuziveedu Seeds Ltd, AIR 2018 SC 1035 (Supreme Court of India)
- Moseley v V Secret Catalogue Inc, 537 US 418 (2003)
- Nike Inc v StockX LLC, 22-cv-983 (SDNY, filed 3 February 2022)
- Perry v Truefitt (1842) 6 Beav 66
- Polaroid Corp v Polarad Electronics Corp, 287 F 2d 492 (2d Cir 1961)
- Reckitt & Colman Products Ltd v Borden Inc [1990] 1 WLR 491 (HL)
- Rogers v Grimaldi, 875 F 2d 994 (2d Cir 1989)
- Tata Sons Pvt Ltd v Greenpeace International, 2011 (45) PTC 275 (Del) (Delhi High Court)

- Tiffany (NJ) Inc v eBay Inc, 600 F 3d 93 (2d Cir 2010)
- Yuga Labs Inc v Ryder Ripps, No 22-cv-04355 (CD Cal 2023)

Administrative Guidance, Treaties and Policy Documents

- EUIPO, Common Communication on New Types of Trade Marks (October 2022)
- USPTO, Examination Guide 3-22: Trademark Identification of Goods and Services for NFTs (June 2022)
- WIPO Technology Trends: NFTs and the Metaverse (WIPO Publication No 1070E, 2023)
- WIPO, Uniform Domain Name Dispute Resolution Policy (UDRP) (1999)
- Government of India, National IPR Policy 2016 (Department for Promotion of Industry and Internal Trade 2016)
- Indian Trade Marks Registry, Trade Marks Manual (Revised Edition, CGPDTM 2015)
- EU Blockchain Observatory and Forum, NFTs and Intellectual Property (Publications Office of the EU 2022)

Technical Standards

- Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System" (2008) <https://bitcoin.org/bitcoin.pdf>
- William Entriken and others, "ERC-721: Non-Fungible Token Standard" (Ethereum Improvement Proposal 721, 24 January 2018) <https://eips.ethereum.org/EIPS/eip-721>
- Nick Szabo, "Smart Contracts" (1994) <https://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart_contracts.html>

B. SECONDARY SOURCES

Books

- Barton Beebe, Trademark Law in an Age of Brands (Harvard University Press 2023)
- Graeme B Dinwoodie and Mark D Gangjee, The Law of Trade Marks and the Internet (2nd edn, OUP 2023)

- Mathias Reimann and Reinhard Zimmermann (eds), The Oxford Handbook of Comparative Law (2nd edn, OUP 2019)
- Don Tapscott and Alex Tapscott, Blockchain Revolution (Penguin 2016)

Journal Articles and Book Chapters

- Barton Beebe, "An Empirical Study of the Multifactor Tests for Trademark Infringement" (2006) 94 California Law Review 1581
- Joshua AT Fairfield, "Tokenized: The Law of Non-Fungible Tokens and Unique Digital Property" (2021) 97 Indiana Law Journal 1261
- Dev S Gangjee, "Systematizing the Copyright/Trademark Divide" (2014) 82 George Washington Law Review 1609
- Stuart Haber and Scott Stornetta, "How to Time-Stamp a Digital Document" (1991) 3 Journal of Cryptology 99
- Mark A Lemley, "NFTs and the Death of Trademark" (2023) 75 Stanford Law Review Online 1
- Gideon Parchomovsky and Peter Siegelman, "Towards an Integrated Theory of Intellectual Property" (2002) 88 Virginia Law Review 1455
- Brian Rosenblatt, "Who Actually Owns the IP Attached to NFTs?" (2022) 112 Trademark Reporter 445
- Martin Senftleben, "Trademark Protection for Non-Fungible Tokens" (2022) 53 International Review of Intellectual Property and Competition Law 973
- Aditya Sinha and Ritu Nair, "Virtual Goods and the Indian Trade Marks Act: An Uncharted Frontier" (2022) 27 Journal of Intellectual Property Rights 1
- Rebecca Tushnet, "Worth a Thousand Words: The Images of Copyright" (2012) 125 Harvard Law Review 683
- Rebecca Tushnet, "The Metaboom" (2021) 70 Buffalo Law Review 265