

# Copyright Protection in Online Data Sharing Platforms

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## ABSTRACT:

Copyright laws and enforcement procedures significantly impact peer-to-peer (P2P) platforms, where decentralized sharing and user-generated content challenge traditional intellectual property protections. This article explores the complexities of copyright enforcement in P2P networks, where rapid content exchange and user anonymity often undermine established legal mechanisms, complicating efforts to identify and penalize infringing activity. Legislative frameworks, such as the Digital Millennium Copyright Act (DMCA) in the United States, attempt to place liability on platform operators or implement notice-and-takedown processes. However, the global nature of P2P networks complicates enforcement due to variations in international copyright laws and jurisdictional constraints. Beyond legal challenges, P2P platforms face ethical and technical difficulties in balancing copyright protection with user autonomy, creativity, and privacy. Approaches like digital fingerprinting, content filtering, and takedown protocols may infringe on users' rights to freely share and create content, potentially leading to censorship concerns and impeding the platform's open character. Through case studies and legal precedents, this article highlights the ongoing tension between copyright protection and users' rights, emphasizing the need for balanced, flexible, and internationally coordinated policies. The study advocates for adaptable copyright solutions that respect both copyright holders and users while preserving privacy and innovation in the digital age.

## LITERATURE REVIEW

1. TITLE: Enforcing Copyright on Online Streaming Platforms: Challenges Faced by Rights Holders in the Digital Era

AUTHOR: Zeeshan Rahman

The literature review of this paper investigates the numerous obstacles that copyright owners encounter when trying to enforce their rights on online streaming services. Previous research reveals the increase of unauthorized streaming and file-sharing practices, which severely impact rights holders. Compounding the challenges of enforcement are jurisdictional issues and user anonymity, making it difficult to identify and penalize those who violate copyright effectively. Existing studies highlight the shortcomings of Digital Rights Management (DRM) in curbing copyright infringements, indicating that a comprehensive strategy is necessary. Researchers suggest implementing legal initiatives, international copyright agreements, and partnerships within the industry to tackle these issues. The review additionally considers various anti-piracy methods, ranging from enhanced DRM technologies to licensing agreements. Furthermore, research indicates that while automated content identification tools are available, they are not entirely reliable and require ongoing updates to counteract the evasion tactics used by infringers, such as modifying content and utilizing encryption. This study, extending

upon previous research, seeks to offer practical suggestions for policymakers, emphasizing the need for improved legal structures, enforcement strategies, and collaborative practices within the industry to protect intellectual property on digital platforms.

2. TITLE: “Sharing” Copyrights: The Copyright Implications of User Content in Social Media

AUTHOR: Jessica Gutierrez Alm

The existing literature on copyright in social media underscores the tension between conventional copyright regulations and the collaborative aspects of online platforms. The primary objective of copyright law is to encourage creativity by safeguarding the rights of creators, yet social media promotes sharing, which can result in inadvertent violations of copyright. The Digital Millennium Copyright Act (DMCA) sought to address this disconnect, but the legal environment continues to be complicated due to the swift changes in online culture. In platforms of the first generation, like Facebook, users create their own content, while second-generation platforms, such as Pinterest, mainly enable the sharing of content found by users, exacerbating copyright concerns. Today’s social media terms of use typically require users to provide extensive rights to the platform, which may compromise their initial ownership. Legal disputes such as *Perfect 10 v. Amazon* and *Flava Works v. Gunter* highlight the difficulties of enforcing copyright in a digital environment, and while fair use provides some level of defenses, its application is not consistently reliable. In summary, this discrepancy indicates a pressing need for revised legislation that brings copyright law into alignment with contemporary digital practices.

3. TITLE: An analysis of the fundamental tensions between copyright and social media: the legal implications of sharing images on Instagram

AUTHOR: H. Boshier & S. Yeşiloğlu

The existing research on copyright and social media underscores the fundamental tension between the restrictions imposed by copyright law on unauthorized duplication and the sharing culture encouraged by social media sites, especially Instagram. Investigations show that copyright law primarily aims to safeguard creators' rights by restricting the unapproved use of creative works, whereas social media platforms promote content sharing to enhance user interaction and generate advertising income. This conflict often creates ambiguity for users, who might inadvertently infringe copyright by resharing or posting content that belongs to others. Instagram’s terms of use, which encompass a non-exclusive, transferable, and royalty-free license allowing the platform to utilize user-generated content, illustrate the intricate compromise between fostering user interaction and honoring intellectual property rights. Scholars advocate for clearer terms and increased user awareness regarding copyright consequences to mitigate users' legal risks. Additionally, some propose the adoption of measures such as notice-and-takedown systems to facilitate copyright enforcement while preserving the platform's interactive essence.

4. TITLE: Combatting peer-to-peer file sharing of copyrighted material via anti-piracy laws: Issues, trends, and solutions.

AUTHOR: Wan Man Jason Fung, Avnita Lakhani

The body of work surrounding peer-to-peer (P2P) file sharing, especially related to digital piracy, investigates the legal obstacles and global frameworks designed to tackle copyright violations. Research underscores the increasing significance of P2P technology within the digital marketplace, facilitating the straightforward sharing of high-quality content, which has exacerbated copyright concerns on a global scale. Various legal systems around the world, including those of the U.S., U.K.,

France, Sweden, Japan, and Hong Kong, have implemented diverse anti-piracy measures to address unauthorized distribution, often through laws such as the DMCA, EU Directives, and the copyright regulations in Hong Kong. However, despite these initiatives, enforcement remains challenging due to the decentralized structure of P2P networks, which conceal user identities and make prosecution difficult. As a result, international agreements like the TRIPS Agreement, ACTA, and the Convention on Cybercrime aim to standardize anti-piracy actions, although they encounter criticism for their approach to reconciling intellectual property rights with personal privacy and the freedom of information.

### **RESEARCH PROBLEM:**

While considerable research has been conducted on copyright enforcement in centralized digital platforms, there is a limited focus on the unique challenges posed by decentralized peer-to-peer (P2P) networks. Existing studies primarily address legal frameworks like the DMCA, but they often overlook the complexities of enforcing these laws on P2P platforms, where the lack of a central authority complicates traditional enforcement methods. Additionally, while ethical and technical concerns such as privacy, censorship, and user autonomy are acknowledged, there is insufficient exploration of how these issues interact with the legal frameworks in place, particularly in a global context. This research gap highlights the need for a comprehensive analysis that integrates legal, ethical, and technical perspectives to propose adaptive enforcement strategies for P2P platforms in the evolving digital landscape.

### **RESEARCH OBJECTIVE:**

1. To access the shortcomings of current copyright legislation in confronting the distinct challenges presented by decentralized peer-to-peer (P2P) networks, including concerns related to user anonymity, the absence of centralized oversight, and differences in jurisdiction, particularly within the context of Indian law.
2. To analyse the ethical and technical consequences of enforcing copyright on P2P platforms, emphasizing how existing measures affect user privacy, individual autonomy, and the innovative characteristics of these networks.
3. To develop flexible and actionable recommendations for enhancing copyright enforcement on P2P networks by suggesting legal reforms, technical measures, and ethical standards that balance copyright protection with user rights in a digital, globally interconnected environment.

### **RESEARCH QUESTION:**

What adaptive enforcement strategies can be developed for decentralized peer-to-peer (P2P) networks that effectively integrate legal, ethical, and technical perspectives, considering the unique challenges posed by the absence of a central authority and the complexities of copyright enforcement in a global context?

### **RESEARCH METHOD**

To investigate copyright protection on digital platforms through secondary research, this method entails an in-depth examination of current literature, platform guidelines, legal rulings, and industry analyses. Start by conducting a literature review of scholarly articles and books that concentrate on digital copyright regulations and the challenges of intellectual property in online environments. Following this, analyse significant legal cases related to copyright matters on these platforms, utilizing court rulings and legal

evaluations to understand how copyright law is applied and interpreted in digital settings. This approach offers a comprehensive perspective on the mechanisms of copyright protection, the challenges faced, and the changing legal environment concerning online platforms.

## RESEARCH METHODOLOGY

A doctrinal research method for examining copyright protection on online peer-to-peer (P2P) platforms consists of a thorough investigation of legal principles, statutes, case law, and respected legal commentary. This approach prioritizes the analysis of current copyright laws relevant to P2P networks, concentrating on how legislators and courts interpret these laws regarding digital content sharing and copyright violations. Important resources include statutory regulations (like the Digital Millennium Copyright Act), legal cases involving P2P platforms, and academic articles discussing the effects of these judicial decisions. By methodically reviewing legal documents and court rulings, this methodology seeks to elucidate the legal framework governing copyright enforcement on P2P platforms, evaluate the efficacy and limitations of existing laws, and highlight any legal inconsistencies or gaps. The doctrinal approach will yield a solid understanding of copyright protection mechanisms in the realm of P2P networks, which can help inform recommendations for stronger or updated legal standards.

## INTRODUCTION:

The fast expansion of peer-to-peer (P2P) systems has changed the way digital content is shared and consumed, resulting in a fundamental shift in media and information accessibility. Unlike traditional centralised platforms, which rely on controlled servers and structures, P2P networks are inherently decentralised, allowing users to distribute files directly without the need for a central server to monitor the transactions. This architecture has resulted in platforms that contain user-generated content, which is frequently freely traded between users, undermining traditional intellectual property (IP) restrictions. While peer-to-peer networks promote information accessibility, cooperation, and innovation, they also foster conditions conducive to copyright infringement, posing considerable issues for copyright holders, platform operators, and regulatory agencies.

Copyright laws are primarily intended to protect authors' intellectual property rights by giving them exclusive control over the reproduction, distribution, and public display of their work. For decades, these rules have sought to strike a compromise between encouraging creativity and providing appropriate public access to protected goods. However, with the rise of digital media and the internet, particularly peer-to-peer platforms, protecting these rights has become increasingly difficult. Copyright enforcement measures were initially intended for a physical environment, in which infringing copies might be confiscated and distributors held responsible. Enforcing copyright in the digital age has proven difficult, particularly on P2P networks, because content spreads swiftly and anonymously, with no central authority to govern the exchange.

The decentralised and frequently anonymous nature of P2P services makes copyright enforcement difficult. Traditional platforms allow operators to monitor, flag, and remove content uploads and exchanges. However, P2P services disseminate content across individual users' devices, making it impossible to effectively identify, trace, and remove copyrighted information. The anonymity connected with these platforms complicates the process by allowing individuals to conceal their identity and avoid legal prosecution. This dispersed paradigm, in which individual users serve as both customers and

distributors, frequently renders traditional copyright enforcement tactics, such as takedown notices, ineffective.

Legal frameworks, such as the Digital Millennium Copyright Act (DMCA) in the United States, have developed notice-and-takedown procedures to handle copyright violations on digital platforms. The DMCA allows copyright holders to request the removal of infringing material, and in circumstances of persistent violations, legal action can be taken against infringers and, in some cases, platform operators. While effective for centralised systems, peer-to-peer networks bring unique obstacles. The decentralised nature of these platforms causes disruptions in the notice-and-takedown process, making enforcement difficult. Furthermore, foreign disparities in copyright laws result in jurisdictional limits, prohibiting a single worldwide regulatory strategy.

Beyond legal issues, P2P services pose ethical and technical quandaries in balancing copyright protection with user rights. Measures such as digital fingerprinting, content screening, and automated takedowns may assist enforce copyright, but also risk limiting users' ability to share and produce material. Rigid application of these procedures may result in censorship, the removal of valid content, and the stifling of creativity. P2P services are frequently praised for their transparency and inventiveness, however aggressive regulation may jeopardise these ideals.

Privacy problems impede copyright enforcement. Many peer-to-peer services prioritise user anonymity and encryption, which safeguard users' identities but impede efforts to hold them accountable for copyright infringement. Methods that jeopardise privacy risk alienating users and undermining the platform's integrity.

### **Background on P2P Networks**

Peer-to-peer (P2P) networks, by definition, disseminate data directly between users rather than through a centralised server. P2P networks, which were popularised by platforms such as BitTorrent and older file-sharing services such as Napster, enable users to swiftly and efficiently share massive amounts of data. This decentralised structure has made traditional copyright enforcement procedures less effective, particularly when dealing with unauthorised file sharing. The fast expansion of these networks has sparked worries about the possibility for widespread copyright infringement. P2P networks, while beneficial for lawful purposes, have become synonymous with the illegal dissemination of copyrighted items such as films, music, and software. In India, where digital material piracy is still widespread, enforcing copyright in these decentralised networks brings unique issues.

Copyright infringement through P2P networks complicates enforcement because there is no central server or administrator that can be held responsible. Traditional mechanisms, which often rely on identifying and shutting down a central server or requiring an intermediary to comply with a takedown notice, are not applicable in a decentralized environment. As such, P2P users may not be easily identified or held accountable, raising questions about how to adapt existing laws to this new paradigm.

In India, digital content piracy has been a persistent problem. The Indian government and entertainment sector have been battling with the rise of peer-to-peer networks, which enable the unlawful downloading of protected content. While the Indian Copyright Act and the Information Technology Act (IT Act) provide measures for dealing with copyright infringement, these rules have not kept up with the technical difficulties presented by decentralised systems.

### **Legal Framework for Copyright Enforcement in India**

The Copyright Act of 1957 is the basic legislation governing copyright in India, providing a framework for the protection of original works of authorship. This Act grants authors and creators exclusive rights to

their works, giving them control over reproduction, distribution, performance, and public exhibition. It also describes legal remedies for copyright infringement, including both civil and criminal procedures.

**The Act covers a variety of works including:**

Literary Works:	Books, articles, computer programs.
Musical Works:	Compositions and songs.
Dramatic Works:	Plays and scripts.
Artistic Works:	Paintings and sculptures.
Cinematographic Films:	Movies and documentaries.
Sound Recordings:	Audio recordings

**Section 14<sup>1</sup>** of the Act grants copyright owners exclusive rights to reproduce their work. Distribute copies, Perform the piece in public, Adapt or translate the work. The Copyright Act of 1957 provides a variety of remedies for copyright infringement, divided into civil and criminal categories. The following sections of the Act outline these remedies:

**CIVIL REMEDIES:**

**Section 55:** This section covers civil remedies for copyright infringement. It enables for:  
Injunctions: Courts can grant injunctions to prevent further infringement.

Monetary Damages: The copyright owners may seek damages for losses caused as a result of the infringement.

Account of Profits: The infringer may be asked to account for the profits derived from the infringement.

**CRIMINAL REMEDIES:**

**Section 63** describes the criminal penalty for copyright infringement. The law specifies that offenders can face imprisonment for up to three years, with a minimum sentence of six months. Fines might range between ₹50,000 and ₹2,00,000.

**Section 63A** increases penalties for repeat offenders, including imprisonment from one to three years and fines from ₹1,00,000 to ₹2,00,000.

**Section 65** addresses the consequences for circumventing technological protection measures.

**Section 65B** imposes penalties for unauthorised removal or alteration of rights management information.

**Challenges of Digital Contexts**

Despite its broad scope, the Copyright Act fails to fully address issues of digital piracy or decentralised peer-to-peer (P2P) networks. The law allows for action against digital infringements, but it lacks particular mechanisms for enforcing rights in contexts where content is circulated anonymously and extensively without centralised oversight. This ambiguity presents issues for copyright holders seeking retribution against the unauthorised distribution of their works online<sup>2</sup>.

The proliferation of digital platforms has resulted in an upsurge in unauthorised copying and distribution of copyrighted material. While traditional enforcement techniques may be useful, the decentralised structure of P2P networks hinders these attempts. Legal measures may be challenging because to issues

<sup>1</sup> *Copyright Rules, 1957*, Copyright Office, Ministry of Commerce and Industry, Gov't of India, <https://www.copyright.gov.in/Documents/Copyrightrules1957.pdf>.

<sup>2</sup> iPleaders, *An Overview of the Copyright Act, 1957*, iPleaders (Feb. 23, 2022), <https://blog.ipleaders.in/an-overview-of-the-copyright-act-1957/>

in identifying infringers and the rapid growth of infringing content across many jurisdictions. The Copyright Act of 1957 provides an important legal foundation for preserving intellectual property rights in India. However, as digital technologies advance, there is an urgent need for legal revisions to meet current issues such as digital piracy and the difficulties of decentralised networks. The continued debate between lawmakers, creators, and legal experts will be critical in designing future legislation that reflect the reality of the digital economy while protecting creative rights.

### **Section 79 of the Information Technology Act of 2000.**

Section 79 of the Information Technology Act of 2000 protects intermediaries (such as internet service providers and online platforms) from responsibility for user-generated content. While this rule is important for regulating online platforms, it does not include suitable mechanisms for dealing with copyright infractions in decentralised P2P networks. Enforcing copyright in P2P networks is more difficult because there are usually no apparent intermediaries to hold accountable.

### **CHALLENGES IN ENFORCING COPYRIGHT PROTECTION IN DIGITAL PLATFORMS:**

The enforcement of copyright in peer-to-peer (P2P) networks offers major hurdles due to a number of connected variables, including the lack of centralised control, jurisdictional issues, and user anonymity. These problems impede copyright holders' capacity to successfully defend their intellectual property.

#### **Absence of Centralised Control**

P2P networks have a decentralised model, which means that no central authority can be held liable for copyright infractions<sup>3</sup>. Due to the lack of a controlling organisation, standard enforcement techniques, which normally target a specific violating entity, are useless. Research reveals that without a central point of control, copyright holders find it increasingly difficult to detect and take action against infringers.<sup>4</sup> The decentralised nature of these networks enables users to share content directly with one another, bypassing traditional distribution channels where copyright enforcement is easier.

#### **Jurisdictional issues**

The global nature of peer-to-peer networks presents numerous jurisdictional concerns. Copyright laws vary greatly between countries, resulting in disparities in enforcement. For example, whereas some countries have rigorous copyright protections, others may lack strong legal frameworks or resources to properly enforce these laws. This mismatch hinders efforts to take legal action against infringers who may live in countries with less stringent copyright laws. Furthermore, cross-border issues might result in lengthy legal battles since different legal systems interpret copyright rules differently.<sup>5</sup>

#### **Anonymity And Pseudonymity**

Anonymity is a fundamental feature of many P2P networks, and users frequently utilise virtual private networks (VPNs) or other ways to hide their names and whereabouts. This anonymity is a considerable obstacle for copyright holders that want to trace illegal activity back to specific individuals<sup>45</sup>. According to studies, a significant amount of internet users use VPNs for privacy reasons, complicating the task of

<sup>3</sup> ETB Law, *Digital Copyright Infringement: Challenges and Solutions in the Digital Age*, ETB Law (July 3, 2024), <https://www.etblaw.com/digital-copyright-infringement-challenges-and-solutions/>.

<sup>4</sup> Zeeshan Rahman, *Enforcing Copyright on Online Streaming Platforms: Challenges Faced by Rights Holders in the Digital Era*, 5 Int'l J. for Multidisciplinary Research 1, 1-14 (2024).

<sup>5</sup> A.O. Adetunji & N. Okuonghae, *Challenges of Copyright Protection in the Digital Age: The Nigerian Perspective*, 2022 Library Phil. & Prac. 1, 1-23.

identifying rights holders<sup>4</sup>. The difficulty in locating infringers not only impedes enforcement efforts, but it also encourages potential violators who believe they are immune to penalties.<sup>6</sup>

The lack of centralised control, jurisdictional issues, and user anonymity all make copyright enforcement in P2P networks extremely challenging. These characteristics create an atmosphere in which traditional enforcement tools are ineffectual, leaving copyright holders scrambling to safeguard their rights in an increasingly digital and decentralised world. To address these difficulties, novel solutions must take into account the particular qualities of P2P technology as well as the worldwide nature of internet usage.

### **Technical Challenges in Enforcing Copyright in P2P Networks**

#### **Anonymity and encryption**

One of the most important elements of many P2P networks is the use of encryption and anonymisation techniques, which allow users to conceal their identity and activity. Although these characteristics improve privacy, they also impede copyright enforcement. Encrypted communication, along with the ability to transmit files without revealing the identity of the sender, makes it incredibly difficult to identify and hold individuals accountable for their conduct.

#### **Decentralisation and Peer Authentication**

In older systems, copyright enforcement frequently entails tracking down the source of illicit content or discovering a central server that hosts infringing information. However, decentralised networks spread responsibilities among numerous peers, with each user hosting a portion of the content. This technique makes it impossible to determine the original source of the content and avoids a direct connection between a copyright violation and a specific person.

#### **Content Identification and Detection**

Traditional content identification approaches on decentralised networks (such as using URLs to locate copyrighted content) are ineffective. Instead, methods such as hashing, digital watermarking, and fingerprinting are used to identify copyrighted material. These solutions can be useful for centralised platforms, but they may fail to scale in decentralised networks when material is distributed among multiple users.

#### **Role of Blockchain Technology**

Blockchain technology offers an innovative method for tracking and enforcing copyrights in decentralised systems. Blockchain, which uses distributed ledgers, can securely maintain records of ownership, transactions, and content distribution. Smart contracts on blockchains could automate copyright enforcement by limiting access to copyrighted works without valid authorisation. While still in its early stages, blockchain technology has promise for strengthening copyright enforcement in decentralised systems.

## **GAPS IN INDIAN COPYRIGHT LAW**

### **Absence of specific provisions for P2P networks:**

Indian copyright law, largely governed by the Copyright Act of 1957, lacks explicit measures dealing with the difficulties of peer-to-peer (P2P) networks. While the Act offers generic enforcement procedures for digital contexts, it does not fully address the decentralised sharing networks that characterise modern P2P technologies. This absence causes substantial issues for both rights holders and users, because

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<sup>6</sup> ETB Law, *Digital Copyright Infringement: Challenges and Solutions in the Digital Age*, ETB Law (July 3, 2024), <https://www.etblaw.com/digital-copyright-infringement-challenges-and-solutions/>



standard enforcement techniques are ill-suited to deal with the unique characteristics of P2P networks where users transfer files directly without a central server<sup>7</sup>. The legal repercussions of this gap can be seen in situations such as Napster, where the platform was held accountable for promoting copyright infringement despite not storing the content directly. Such cases underscore the need for specific legal frameworks that acknowledge the decentralised character of peer-to-peer sharing and create explicit standards on liability and enforcement.<sup>8</sup>

### **Need for Technology-Neutral Laws:**

To remain relevant in the face of rapid technological changes, Indian copyright law must adapt to become technology-neutral legislation. This means that regulations should apply equally to centralised and decentralised platforms. Current rules frequently fail to address the consequences of emerging technologies, resulting in inconsistency and enforcement issues. To properly address digital material distribution on P2P networks, existing laws must be amended and new provisions created.<sup>9</sup> According to research, a technology-neutral strategy could allow for stronger copyright protection while still balancing public interests. For example, Digital Rights Management (DRM) technology can be incorporated into legal frameworks to improve protection while respecting user rights and freedom of expression<sup>26</sup>. This balance is critical for creating an environment in which innovation may thrive with strong copyright protections.

### **International Cooperation:**

Given the intrinsic cross-border nature of peer-to-peer networks, international collaboration is required for effective copyright enforcement. India's participation in international copyright treaties, such as the WIPO Copyright Treaty and the Berne Convention, is critical for developing a consistent strategy to managing copyright challenges in decentralised systems. Improving international cooperation can assist address jurisdictional issues and harmonise enforcement methods across borders. According to studies, a unified international framework might reduce the hazards of peer-to-peer sharing by establishing uniform regulations for copyright holders around the world. This will not only improve security but also facilitate lawful uses of P2P technology, such as distributing open-source software or public domain works.

### **Global case studies**

Efforts to curb copyright infringement in peer-to-peer (P2P) networks are a global concern, with noteworthy steps taken in the European Union and the United States.

#### **European Union initiatives**

The European Union has implemented the Directive on Copyright in the Digital Single Market (Directive (EU) 2019/790), which took effect on June 7, 2019. This directive seeks to establish a balanced framework for copyright protection that tackles the issues raised by digital technologies and online platforms. Key aims include:

**Protecting Press Publications:** It gives publishers control over online uses of their publications, ensuring that they are compensated fairly for their content.

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<sup>7</sup> Bytescare, *File Sharing Copyright Infringement*, Bytescare (Oct. 10, 2023), <https://bytescare.com/blog/file-sharing-copyright-infringement>.

<sup>8</sup> *Cyber Sharing Terms in Peer-to-Peer Networks: An Opportunity and Challenge for the Entertainment Industry*, Lawctopus, <https://www.lawctopus.com/academike/cyber-sharing-terms-peer-peer-networks-opportunity-challenge-entertainment-industry/>.

<sup>9</sup> Megha Nagpal, *Copyright Protection through Digital Rights Management in India: A Non-Essential Imposition*, 22 J. Intell. Prop. Rts. 4, 2017.

Liability Framework for Online Platforms: Article 17 of the directive places some responsibility on platforms that host user-uploaded content, requiring them to adopt "effective and proportionate measures" to prevent unauthorised sharing of copyrighted information. This is intended to alleviate the "value gap" between content creators and digital platforms.

The regulation represents a broader plan to harmonise copyright rules among EU member states, providing a well-functioning internal market while encouraging cultural diversity and respecting authors' rights.<sup>10</sup>

In the **United States**, prominent file-sharing networks like Napster and LimeWire have faced significant legal action. These cases created important precedents for digital copyright enforcement. The courts concluded that these sites might be held accountable for promoting copyright infringement by their members, prompting their final closure. The US legal environment continues to evolve, focussing on balancing the interests of copyright holders with those of consumers and technological platforms.

### **Indian Case Study**

In India, attempts to combat copyright infringement have mostly been directed at blocking unauthorised websites that host copyrighted information. The government has used domain blocking as a technique; nevertheless, these measures frequently fail to achieve comprehensive effectiveness due to a variety of restrictions.

### **Legal Frameworks and Challenges**

Indian case law, *Rediff.com India Ltd. v. Cyber booth*, has attempted to address questions around intermediary liability. This case demonstrated that intermediaries may be held accountable for content hosted on their platforms if they fail to act upon receiving notice of infringing material. However, India's legal framework still suffers with decentralised networks, such as P2P systems, where tracing and enforcing copyright can be extremely difficult. Because there are no clear regulations geared expressly for P2P networks, while some action is taken against blatant violations, larger issues go unresolved. The Indian government has not yet created a comprehensive strategy to adequately address the complications brought by digital technology in copyright enforcement.

While global efforts to address copyright infringement in digital contexts have varied degrees of success, India faces unique issues that necessitate more robust legal frameworks and enforcement methods geared to modern digital realities.

### **RECOMMENDATIONS:**

To solve the issues of protecting copyright in P2P networks in India, several essential proposals can be implemented. These ideas focus on enhancing legal frameworks, improving enforcement methods, and using technology to efficiently protect intellectual property rights. To solve the issues of protecting copyright in P2P networks in India, several essential proposals can be implemented. These ideas focus on enhancing legal frameworks, improving enforcement methods, and using technology to efficiently protect intellectual property rights.

#### **• Strengthening legal frameworks**

India should consider establishing dedicated intellectual property courts to accelerate copyright cases. This will ensure that disputes are handled by judges who are experts in intellectual property law, decreasing delays and increasing judgement quality.

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<sup>10</sup> Eleonora Rosati, Copyright in the Digital Single Market: A Taster, *WIPO Magazine* (Apr. 2021), [https://www.wipo.int/wipo\\_magazine/en/2021/04/article\\_0009.html](https://www.wipo.int/wipo_magazine/en/2021/04/article_0009.html).

Enhance Copyright Registration Processes: Simplifying and promoting the copyright registration procedure can assist produce a public record of ownership, which is essential for enforcement. While registration is not required by Indian law, it offers considerable benefits in judicial processes, including statutory damages.

- **Improving enforcement mechanisms.**

Create a national anti-piracy body: Establishing a centralised national organisation tasked with receiving and investigating copyright infringement allegations could help to streamline enforcement efforts across states. This body might work with local law enforcement agencies to ensure prompt action against infringers. Establish Fast Track Enforcement Units: Extending models like the Maharashtra Intellectual Property Crime Unit (MIPCU) to other states can help improve local enforcement capacities. These units should have the resources and training to effectively combat piracy.

- **Leveraging Technology**

Implement Blockchain for Copyright Tracking: Blockchain technology can assist monitor the origin of digital works, allowing authors to prove ownership and define timelines for their work. This might considerably reduce disagreements regarding authorship and copyright claims.

Create a Copyright Claims Tribunal: Establishing a minor claims tribunal for copyright disputes could provide a less formal way for rights holders to seek restitution without paying high legal fees.

- **Improving Awareness and Education Conduct Public Awareness Campaigns**

Raising consumer, educator, and company understanding of copyright laws and the necessity of protecting intellectual property rights can help to minimise infringement rates. Campaigns may entail engagement with industry stakeholders and educational institutions.

Training for law enforcement agencies. Regular training sessions on copyright laws and enforcement strategies can help police and other law enforcement professionals handle piracy cases more effectively. This may also entail emphasising the link between piracy and other cybercrimes.

- **Cross-border cooperation**

Engage in international treaties: Strengthening international collaboration through anti-piracy treaties can assist address jurisdictional issues. India should aggressively engage in global forums to harmonise copyright laws and enforcement methods across borders.

By implementing these ideas, India may establish a stronger framework for enforcing copyright in peer-to-peer networks, protecting creators' rights and encouraging a healthier creative environment.

## CONCLUSION:

In conclusion, the challenges associated with enforcing copyright on peer-to-peer (P2P) networks highlight the pressing necessity for modern legal frameworks that adequately address the distinct issues of decentralized digital platforms. Conventional copyright enforcement mechanisms face difficulties in dealing with the characteristics that define P2P networks, such as user anonymity, absence of centralized authority, and differing international regulations. This study emphasizes the inadequacies of existing frameworks, including the Copyright Act of 1957 and the Information Technology Act of 2000 in India, in effectively addressing digital copyright infringements. To ensure the protection of intellectual property, a comprehensive strategy is required—one that embraces technology-neutral legislation, improved international collaboration, and cutting-edge tracking mechanisms, like blockchain. By adopting tailored legal measures, establishing dedicated anti-piracy organizations, and launching educational initiatives, a



cohesive and flexible copyright enforcement framework can be developed, ensuring the protection of creators' rights while also fostering the innovative capabilities of P2P networks.