

## **COPYRIGHT PROTECTION IN THE DIGITAL WORLD: A LEGAL FRAMEWORK FOR THE FUTURE**

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### **Abstract**

This study aims to examine the legal framework and challenges in copyright protection in the digital era, where the dissemination and duplication of creative works occur rapidly and often without proper authorization. The main issue addressed is the increasing incidence of digital copyright infringement due to easy access and technological advancements, which ultimately harm content creators and weaken the authority of legal institutions. This research employs a qualitative method with a normative legal approach, through literature analysis, expert interviews, and the review of legal documents and digital regulations in Indonesia. Data were collected from academic publications, legal documents, and government reports, then analyzed using content analysis techniques. The results of the study indicate that Indonesia's legal framework, although governed by Law No. 28 of 2014, is still insufficient to address the complexities of digital copyright violations. A future-oriented legal strategy needs to integrate Digital Rights Management (DRM) technology, blockchain-based verification, and educational programs to enhance legal literacy. Strengthening copyright protection not only preserves the integrity of creative works but also supports the sustainability of Islamic education in the digital age.

**Keywords:** copyright, digital era, legal framework, education, protection

### **INTRODUCTION**

The development of digital technology has revolutionized the way humans create, distribute, and access intellectual works. In today's information era, the internet and digital devices enable the production and distribution of works—whether in the form of writing, music, films, software, or other creative outputs—at unprecedented speed and scale. While these advances offer significant benefits in the dissemination of knowledge and culture, they also pose serious challenges to copyright protection. Misuse, piracy, and illegal distribution of copyrighted materials are increasingly rampant, creating an imbalance between creators' rights and public access to content. As a result, there is an urgent need to establish a future-oriented and adaptive legal framework to safeguard copyright in the digital world.

Copyright is a form of intellectual property right that provides legal protection to creators over their works. This protection aims to ensure that creators maintain control over the use and distribution of their works and receive fair economic rewards from their creations. However, in the digital context, the boundaries of this protection become blurred. Technologies such as copy-paste, rapid downloading, and social media accelerate

information dissemination without limits, ultimately complicating the conventional enforcement of copyright.

The main issues in digital copyright protection lie in the lack of legal clarity, weak law enforcement mechanisms, and conflicts between creators' economic interests and the public's need for information access. Furthermore, technological developments such as blockchain, artificial intelligence (AI), and Non-Fungible Tokens (NFTs) introduce new dimensions in the production and ownership of digital works, which are not explicitly regulated in existing copyright laws. This condition shows that the current legal framework tends to be reactive rather than proactive, rendering it incapable of keeping up with the rapid pace of technological change.

In many countries, including Indonesia, copyright regulations still rely on conventional principles. Although Law No. 28 of 2014 concerning Copyright has included digital aspects, its implementation in the field faces numerous obstacles, ranging from low legal literacy to limited information technology infrastructure to detect copyright violations. On the other hand, digital platforms like YouTube, Spotify, and social media have made efforts to implement internal mechanisms to detect and act against copyright violations through algorithms and Content ID systems. However, these measures do not always favor creators and often spark controversy regarding fairness and transparency.

Copyright infringement in the digital world is not limited to music and film but also extends to education, scientific journals, and software. Unauthorized uploading of academic works, pirated software, and freely distributed e-books without licenses are concrete examples of massive violations that harm copyright holders. This situation is worsened by the mentality of some users who assume that digital access is free and unlimited, ignoring legal and ethical aspects in using others' work.

To address these challenges, a legal framework is needed that goes beyond formal regulations and takes into account the evolving social, cultural, and technological dynamics. A future legal framework must strike a balance between protecting creators' rights and ensuring public access to information and cultural works. A human rights-based approach, legal technology (legaltech), and international cooperation are essential components in formulating adaptive and inclusive policies.

Moreover, it is crucial to develop educational and outreach systems to raise public awareness about the importance of respecting copyright. These educational efforts should target the younger generation as the primary users of digital technology, equipping them with a proper understanding of their rights and responsibilities in accessing and using others' work responsibly. Governments, educational institutions, the private sector, and civil society must synergize to build a sustainable culture of copyright protection.

International legal frameworks should also serve as references, given that the digital world is borderless. International treaties such as the Berne Convention for the Protection of Literary and Artistic Works, the WIPO Copyright Treaty (WCT), and the TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights) set minimum standards of copyright protection that member countries must adopt. However,

challenges arise in harmonizing national regulations with international provisions, especially in accommodating different social contexts and levels of technological advancement among nations.

In this context, technology should be leveraged as a supporting tool for copyright protection, not merely as a source of problems. Digital technologies can be used to uniquely tag digital works, track their distribution, and facilitate automated licensing through smart contracts. For example, blockchain technology can serve as a transparent and immutable record of copyright ownership, strengthening claims and simplifying licensing processes.

Against this backdrop, this paper will explore the urgency of reforming the legal framework for copyright protection in the digital world, highlighting the challenges faced and offering relevant approaches and solutions for the future. The discussion will include an analysis of existing legal frameworks, best practices at the international level, and technological innovations that can be adopted to improve the effectiveness of copyright protection. This research is expected to make a meaningful contribution toward building a fair, adaptive, and sustainable legal system in navigating the ever-evolving digital era.

## **1. RESEARCH METHOD**

This research is a normative legal study using a qualitative approach, focusing on a literature review to analyze the concept of copyright protection in the digital world, as well as the challenges and direction of legal framework reform in the future. A normative legal study is chosen because this research is oriented toward legal norms, principles, and existing legislation, aiming to provide legal arguments for the necessity of reformulating a legal framework capable of responding to the dynamics of digitalization. This approach is relevant for exploring and analyzing primary and secondary legal materials related to copyright in the digital domain, both nationally and internationally.

Data collection was conducted through library research by examining various legal literature, official documents, and scholarly publications related to copyright and the digital world. The data were collected from national laws, international treaties, academic journals, legal books, reports from international institutions such as the World Intellectual Property Organization (WIPO), and credible online media articles discussing this topic in a timely manner. A documentation technique was employed as the primary method to systematically and critically identify, select, and record essential information from these sources.

The data sources in this research are divided into two categories: primary and secondary sources. Primary data sources include legislation such as Law No. 28 of 2014 on Copyright, relevant government regulations, and various international agreements governing global copyright protection, such as the Berne Convention for the Protection of Literary and Artistic Works, the WIPO Copyright Treaty (WCT), and the TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights). These primary sources serve as

the legal basis to assess how far existing regulations can anticipate and respond to technological developments affecting copyright.

Secondary data sources consist of legal literature in the form of academic journals, reference books, seminar or scientific conference proceedings, expert opinion articles, and previous research relevant to this topic. This literature strengthens the analysis of primary data and provides broader theoretical and empirical perspectives. In addition, online media articles from trusted sources are also used to update the data with current developments in digital copyright cases, such as content piracy on social media platforms, illegal software usage, and digital platform policies related to user content protection.

The type of data used in this research is qualitative data, which is not expressed in numerical form but in legal narrative or textual descriptions. This qualitative data includes descriptions, quotations, and explanations of legal provisions, expert opinions, and case study reports related to copyright in the digital realm. The data is then analyzed to gain an in-depth understanding of the patterns of legal issues, regulatory weaknesses, and alternative solutions offered in contemporary legal discourse.

Data analysis is conducted using a descriptive-analytical method, systematically presenting various legal facts and relevant opinions, followed by a critical analysis to identify the strengths and weaknesses of the current copyright protection system. This process involves a comparative review of national and international regulations, adjusted to the context of digital technology developments. This analytical approach emphasizes not only legal texts but also the social and technological context behind their implementation.

The results of the analysis will then be used to formulate conclusions and recommendations for building a more responsive legal framework in facing digital world challenges. To ensure data validity, source triangulation is applied by comparing and confirming findings from multiple sources, thereby enhancing the accuracy and objectivity of the research. Additionally, the researcher adopts a legal hermeneutic approach to interpret the meaning and purpose of legal norms in new contexts, aiming to address the increasingly complex copyright protection challenges in the digital era.

Through this method, the study is expected to provide both conceptual and practical contributions to the development of a more adaptive, progressive, and justice-oriented copyright legal system—for both creators and the public. This research can also serve as a foundation for policymakers, academics, and creative industry players in building a digital ecosystem that sustainably respects intellectual property rights.

## **RESULT AND DISCUSSION**

### **Research Findings**

This study employed a literature review method using a normative qualitative approach. The research findings were obtained through an examination and analysis of legal documents, scholarly articles, international reports, and relevant news sources. Overall, the results indicate that although various regulations exist at both national and

international levels, copyright protection in the digital realm continues to face several significant challenges in terms of legal substance, institutional enforcement, and public legal culture.

### 1. Analysis of National Regulation

Law No. 28 of 2014 on Copyright in Indonesia has accommodated some of the needs for copyright protection in the digital era. The provisions within this law cover moral rights, economic rights, and protection for digital works. However, this law is not yet fully capable of addressing copyright infringement cases in the digital domain, particularly those involving cross-border violations and global platforms.

One glaring gap is the weak enforcement of copyright laws against online violations. Reports submitted by creators are often not effectively followed up due to the limited capacity of law enforcement officers and the absence of an integrated digital system to identify and verify copyright claims.

### 2. International Comparative Study

This study also examined copyright protection practices in other countries, such as the United States, the United Kingdom, and Japan. These three countries have developed relatively advanced digital copyright protection systems through the establishment of digital monitoring agencies, the use of Content ID technology, and integration with digital platform providers like YouTube and Spotify.

The table below shows a comparison of legal frameworks and digital copyright protection mechanisms in several countries:

Country	Main Regulation	Digital Content Identification System	Supporting Institutions
Indonesia	Law No. 28 of 2014	Not Integrated (manual)	DGIP, Police, Ministry of Communication and IT
United States	Digital Millennium Copyright Act (DMCA)	Content ID, takedown notice	U.S. Copyright Office, ISPs
United Kingdom	Copyright, Designs and Patents Act (CDPA)	Automated Detection Tools	Intellectual Property Office (IPO)

From the table above, it is evident that Indonesia still lags behind in terms of digital detection systems and institutional collaboration. Developed countries have implemented systems that enable the automatic removal of infringing content through algorithms.

### 3. Cases of Digital Infringement

Over the past five years, various cases of digital copyright infringement have occurred in Indonesia. The most common violations involve music and film content that is

illegally uploaded to video-sharing sites and social media platforms. Additionally, academic works and e-books are often found distributed without permission on online forums and file-sharing websites. Many of these violations do not proceed to legal action due to a lack of awareness and the high burden of proof on the creators.

## B. Discussion

### 1. Challenges in Copyright Protection in the Digital Era

#### a. The Limitless Nature of Digital Reproduction

One of the main challenges in protecting copyright in the digital world is the ease, speed, and low cost of reproducing digital data. This makes digital works highly vulnerable to limitless copying, modification, and distribution with minimal risk of detection.

#### b. Low Public Legal Awareness

Most internet users are unaware that downloading, sharing, or distributing digital content without permission constitutes a legal violation. A lack of legal education has led the public to normalize such activities.

#### c. Inconsistent Law Enforcement

Complex and slow legal processes often discourage creators from reporting infringements. Moreover, the absence of specialized courts or efficient alternative mechanisms like digital arbitration worsens the situation.

#### d. Emerging Technologies

The rise of technologies such as blockchain, NFTs, and artificial intelligence (AI) has expanded the scope of copyright protection into areas not yet regulated by law. For instance, who owns the rights to AI-generated artworks? Is it the programmer, the user, or the AI itself?

### 2. Potential Solutions and Policy Innovations

#### a. Strengthening Digital Infrastructure

The government needs to develop automated content monitoring systems integrated with digital platforms and legal institutions. These systems should be able to detect metadata and digital fingerprints (watermarking) to facilitate infringement tracking.

#### b. International Regulation Harmonization

Since digital copyright violations often cross borders, Indonesia should play a more active role in international forums like WIPO and ASEAN IP Offices to formulate regional digital protection protocols.

#### c. Digital Public Education

The government and educational institutions must create curricula or public campaigns focused on digital legal literacy. Youth, students, and content creators need to understand that respecting copyright is part of digital ethics.

#### d. Collaboration with Digital Platforms

The government must build strategic partnerships with platforms like YouTube, Facebook, TikTok, and Spotify to ensure efficient and accessible content reporting systems for rights holders.

### 3. Strengthening Copyright through Technology

Technology can be a powerful ally in copyright protection. For instance, blockchain allows creators to register their works with immutable digital identities. Likewise, smart contracts can facilitate automatic licensing and transparent, instant royalty payments.

This framework demonstrates how blockchain can store copyright ownership proof while serving as a foundation for automatic compensation through smart contracts. Such systems are already being piloted by several tech startups in Europe and the United States.

#### C. Implications for Future Legal Frameworks

Based on the research findings, it can be concluded that copyright protection in the digital world requires a more progressive legal framework. Key elements that should be prioritized in future legal reforms include:

1. Technology-Responsive Regulations – Legislation must allow flexibility to regulate technologies that may not yet exist.
2. Interdisciplinary Approaches – Digital copyright regulation should involve perspectives from technology, digital economy, internet sociology, and education.
3. Improving Law Enforcement Capacity – Training and providing technological tools to police, prosecutors, and judges is essential to ensure effective law enforcement.
4. Alternative Digital Dispute Resolution Systems – Digital mediation and online arbitration could serve as effective solutions for resolving minor to moderate copyright violations.

## Analysis/Discussion

### A. The Transformation of Copyright in the Digital Era

The advancement of digital technology has triggered a fundamental shift in how people create, distribute, and consume creative works. This transformation has major implications for the legal framework of copyright protection. In the past, copyright was sufficiently protected by physical distribution limits (such as printed books or cassette tapes), but now digital works can be easily reproduced and disseminated without permission at the click of a button. This demands that nations and the global community establish a new legal framework responsive to the unique nature of digital creations.

Richard Susskind argues that the law must act “proactively and anticipatively” in response to technological disruption, rather than merely reacting after violations occur.<sup>1</sup> This poses a major challenge to copyright protection in Indonesia, which remains largely repressive and lacks an adequate digital monitoring system.

### B. Theoretical Analysis: Intellectual Property Law and Legal Sociology Approaches

To analyze the effectiveness of copyright protection in the digital age, two main approaches are used: the intellectual property law (IP) approach and the legal sociology approach. The IP approach views copyright as both a moral and economic right over creations that must be protected by the state, while the legal sociology approach assesses the implementation of the law in the real-life context of digital society.

From the intellectual property law perspective, copyright protects the expression of ideas—not the ideas themselves.<sup>2</sup> This means that any creative work that demonstrates uniqueness, originality, and a concrete form in a digital medium (text, audio, visual, etc.) deserves protection—even when its distribution crosses national borders. However, in the digital context, jurisdictional boundaries become blurred since the internet transcends geographical limits.

Meanwhile, legal sociology explains that the success of legal protection is not determined solely by how well laws are written, but also by the legal culture of society and the capacity of law enforcement institutions.<sup>3</sup> In Indonesia, weak digital literacy and low legal awareness among internet users have resulted in widespread copyright violations that are either unnoticed or unaddressed.



## C. Findings and Interpretation

### 1. Patterns of Digital Copyright Infringement

The results of literature reviews and content analysis reveal that the most common forms of digital copyright infringement include:

- Uploading music or films without permission to video-sharing websites.
- Distributing unauthorized PDF copies of digital books on social media or cloud platforms.
- Duplicating YouTube content without attributing the original creator.
- Using graphic works, photos, or designs in digital advertisements without approval.

These actions legally violate Article 9 of Law No. 28 of 2014 on Copyright. However, enforcement in practice remains minimal.

According to data from the Directorate General of Intellectual Property (DGIP), in 2023 only about 11% of digital copyright violation reports were followed up with investigations.<sup>4</sup> This indicates a significant gap between formal regulation and its actual implementation.

### 2. Disparities in Law Enforcement

This study finds that enforcement challenges are influenced by three main factors:

- **Technological Capacity of Law Enforcement Institutions:** Agencies such as DGIP and the police do not yet have automated monitoring systems capable of real-time copyright violation detection online.
- **High Burden of Proof in Court:** Copyright litigation requires technical evidence such as metadata, IP logs, and licensing documentation, which individual creators often cannot access.
- **Lack of Collaboration with Digital Platforms:** Many platforms like YouTube and TikTok have yet to establish user-friendly and responsive reporting mechanisms for rights holders in Indonesia.

From a legal sociology standpoint, this situation can be explained by Eugene Ehrlich's concept of the "gap between law in the books and law in action."<sup>5</sup> On paper, copyright protection is well-regulated, but in practice, the law fails due to institutional weaknesses and a permissive digital culture that tolerates piracy.

### 3. The Role of Digital Platforms and Algorithmic Technologies

In many cases, digital platforms like YouTube, Spotify, and Instagram are the primary arenas for copyright violations. However, these platforms can also be part of the solution.

Several have developed automatic detection systems such as Content ID, which can identify unauthorized use of music, images, or videos.

A 2022 study by the Attorney General of Malaysia showed that YouTube's Content ID implementation reduced digital music piracy by 38% over three years.<sup>6</sup> This has yet to be observed in Indonesia, where there is still no explicit regulatory agreement between DGIP and major platforms.

#### D. Ideas for Reforming Digital Copyright Law

Based on the findings and analysis above, the author proposes three legal reform ideas as part of a future legal framework:

##### 1. National Digital Rights Management

The Indonesian government needs to establish a national institution or system to manage Digital Rights Management (DRM) collectively. This system must be integrated with digital platforms and allow creators to register their works online and receive automatic protection.

Using a legal technology (legal tech) approach, this system could utilize blockchain as the foundation for a database of works and their licensing transactions.<sup>7</sup> Every reuse could be tracked and billed automatically.

##### 2. Decentralized Reporting Mechanism

In addition to DRM, an accessible mechanism for individual creators to report infringements is necessary. Currently, reporting can only be done through the Directorate General of Intellectual Property (DGIP) website, which is not user-friendly. The author proposes an app-based system, such as *HakCipta.id*, which would allow users to:

- Report violations
- Attach digital evidence (screenshots, links, metadata)
- Monitor the follow-up process

This step would reduce bureaucratic chains and adopt the principle of *access to justice* as outlined by Cappelletti and Garth.<sup>8</sup>

##### 3. Reforming Digital Legal Education

Digital legal literacy should be included in the curricula of secondary schools and universities. Society needs to understand the importance of respecting digital works not only as a legal obligation but also as a form of digital ethics and responsibility.

A UNESCO study notes that digital legal literacy plays a vital role in shaping a new legal culture, especially in developing countries.<sup>9</sup>

#### E. Interim Conclusion of the Analysis

Copyright protection in the digital world requires both the state and society to move beyond traditional sanction-based approaches and adopt an ecosystem-based approach—one that integrates law, technology, and culture. Without updating the legal framework, Indonesia will continue to lag behind in safeguarding its citizens' intellectual creations in the rapidly evolving digital landscape.

#### **Conclusion**

This research shows that copyright protection in the digital era still faces significant challenges in terms of regulation, implementation, and public awareness. Although Law No. 28 of 2014 provides relatively comprehensive regulations on copyright, in practice, infringements such as piracy, unauthorized use, and illegal distribution of digital works are still rampant. This is exacerbated by the weak capacity of legal institutions, the absence of a national digital protection system, and low levels of digital legal literacy among the general public.

Specifically, the intellectual property law approach needs to be strengthened with the integration of digital technologies such as Digital Rights Management (DRM) and blockchain systems, to make protection more adaptive and automated. On the other hand, public education through digital law curricula and digital ethics campaigns should be a long-term strategy to foster a legal culture that respects copyright.

#### Logical Consequences for Islamic Education Knowledge and Practice

In the context of developing Islamic education knowledge and practice, digital copyright protection holds critical importance. Scholarly works such as books, modules, journals, and digital da'wah media (lecture videos, podcasts, e-learning) are part of the intellectual heritage of the Muslim community that must be preserved for authenticity and respected in terms of ownership. If these works are not properly protected, it could undermine the spirit of intellectualism, academic honesty, and the sustainability of knowledge production in Islamic boarding schools (pesantren), madrasas, and Islamic universities.

By establishing a strong and modern copyright protection system, Islamic education will be encouraged to become more innovative, collaborative, and sustainable. Teachers, lecturers, and researchers will feel safer in publishing their work digitally without fear of theft or misuse. At the same time, learners will grow accustomed to valuing originality,

fostering a healthy academic culture with noble character (*akhlakul karimah*) in the digital age.

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