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STREAMING WARS: COPYRIGHT IMPLICATIONS IN THE OTT REVOLUTION

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ABSTRACT

By changing how information is created, shared, and consumed, over-the-top (OTT) platforms have completely transformed the worldwide entertainment sector. The overwhelming power of digital streaming has also led to rising legal and regulatory issues, especially concerning copyright law. OTT platforms handle a number of copyright-related problems, including content piracy, algorithmic content moderation, unfair use conflicts, and illicit distribution. By creating barriers to the availability of content, exclusive license agreements have an impact on consumer rights and competition. Licensing disputes raise costs and encourage content hoarding. Geo-blocking and circumvention laws make it more challenging to access digital content across borders, while piracy in this age of streaming is still evolving with illicit sites that impact revenue streams. Digital watermarking and AI-driven detection are two examples of technological defenses that are essential in the fight against illegal distribution. Since unauthorized streaming of significant events results in legal disputes involving platforms and illegal broadcasters, copyright issues are a recurring problem for live streaming and sports broadcasting. Legal concerns about fair use, transformative works, and platform liability are brought up by the abundance of fan edits, remixes, and user-generated content on streaming platforms. Different jurisdictions have different legislative and regulatory responses to these issues; some have more stringent copyright enforcement laws in place, while others place a higher priority on balanced copyright frameworks that encourage innovation and equitable access to information. It is imperative to establish precise and balanced content moderation standards, strengthen licensing procedures, encourage worldwide cooperation on copyright enforcement, and support a more equitable revenue-sharing model for content providers. In the rapidly developing field of digital

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entertainment, a thorough approach to copyright rules guarantees equitable access to content while safeguarding producers and distributors.

Keywords: *Digital piracy, copyright laws, OTT platforms, streaming services, content licensing*

INTRODUCTION

The media and entertainment industry has been greatly impacted by the expansion of the web and cell phones, particularly in terms of how people consume television. In recent years, OTT services have grown in popularity as a practical and cost-effective option for customers to watch the shows they enjoy while on the road. OTT platforms like Netflix, Amazon Prime Video, Disney+, Hulu, and regional sites like Hotstar and Zee5 have drastically changed how people consume content.

Conventional cable and satellite broadcasting have given way to on-demand digital streaming services. Traditional distribution approaches have been upended by the OTT revolution, which gives users unfettered access to content on a variety of devices as per their convenience. The worldwide OTT share is predicted to expand at a remarkable growth to reach $86.80 billion by 2026[3].

OTT facilities are defined by the US Federal Communications Commission (FCC) as video content that is distributed via a variety of devices with internet access. When Sony Liv and Ditto TV (Zee) were introduced to the Indian market in 2013, OTT saw a major uptick in popularity[4]. OTT platforms first concentrated on offering a digital collection of classic films and TV series. By introducing the idea of on-demand viewing, this creative strategy allowed viewers to access a wealth of content whenever it was convenient for them. OTT platforms grew in popularity as connection and internet infrastructure increased. They quickly changed from being only archives of popular classics to producing and distributing creative content. The fundamental underpinnings of conventional broadcast and cable TV models were rocked by this tactical change[5]. Widespread lockdowns also contributed to the growth of OTT services. Due to people's confinement to their homes, the digital sphere has become a vibrant source of top-notch entertainment that caters to viewers' changing preferences. OTT platforms hosted direct movie premieres, and each week, new digital programs debuted on screens. Leading the way with a wealth of varied material were streaming behemoths like Netflix, Disney+ Hotstar, and Prime Video[6].

Companies in the media and entertainment sector are trying to figure out how to launch their own OTT streaming services and how to stay afloat in a very competitive industry. To compete in the streaming business, established players must rethink their position. Although they lack a clientele and may not have a sizable enough catalog to function independently, right holders have direct access to their primary resource, content. For their own direct-to-consumer (D2C) platforms, they will therefore probably use their assets and retain their content[7]. Then, distributors need to rethink how they source material and figure out how to make their catalogs stand out.

3. Shaik Mahaboob Basha and C Viswanatha Reddy, *The Digital Revolution: Exploring Influential Factors in OTT Platform Adoption* (2024) 1(13) MAK Journal of Engineering and Technology, https://makhillpublications.co/files/published-files/mak-jet/2024/1-13.pdf (last visited February 20, 2025)
4. Swethavimala, *OTT Revolution in India,* TimeToast, https://www.timetoast.com/timelines/ott-revolution-in-india (last visited February 20, 2025).
5. Ajay Bidyarthy, *The Rise of the OTT Platform and Its Impact on the Entertainment Industry by 2040*, Blackcoffer Insights, (August 17, 2023), https://insights.blackcoffer.com/the-rise-of-the-ott-platform-and-its-impact-on-the-entertainment-industry-by-2040/ (last visited February 20, 2025).
6. *Understanding the Rise of OTT in India*, Think with Niche, https://www.thinkwithniche.com/blogs/details/understanding-the-rise-of-ott-in-india (last visited February 20, 2025).
7. Capgemini, *OTT Streaming Wars: Raise or Fold*, Capgemini, (September 2021), https://www.capgemini.com/wp-content/uploads/2021/09/Capgemini-OTT-Study-Report.pdf (last visited February 20, 2025).

After major broadcasters, Netflix and Amazon are now the biggest TV show commissioners.

The switch to OTT platforms has been accelerated by the quick uptake of high-speed internet, reasonably priced smartphones, and changing customer preferences. OTT platforms have become the mainstay in the media industry because of customers' growing preference for globally accessible, tailored, and ad-free content due to the cord-cutting trend. It is impossible to overestimate the significance of copyright in the digital entertainment sector, given the proliferation of OTT services. Owners and creators have the exclusive rights to manage how the original works are used, distributed, and adapted owing to copyright laws. These rights are crucial for maintaining a healthy ecology for content creation, protecting investments, and encouraging creativity. Following the OTT revolution and streaming disputes, copyright issues have become more complex and multifaceted[8]. Traditional ideas of content ownership, distribution rights, licensing agreements, and IP protection are being challenged by the complicated web of concerns related to copyright brought about by the shift toward OTT platforms. Giving readers a comprehensive understanding of the copyright consequences of the OTT revolution is the main objective of this paper. Policymakers, industry stakeholders, and legal professionals looking to negotiate the intricate legal and commercial issues of the digital entertainment sector will find it insightful. The main copyright issues raised by the OTT revolution are also covered in this essay, along with how they affect consumers, distributors, and content producers.

RESEARCH OBJECTIVES

1. To examine how OTT platforms have impacted the copyright landscape, including licensing, distribution, and platform control.
2. To analyze major copyright challenges for OTT platforms, including geo-blocking, piracy, live streaming, and user-generated content.
3. To compare copyright regulations in major nations, including India, the US, and the EU, for OTT streaming.
4. To identify future legal and technological approaches to enhance copyright protection while promoting fair access and innovation in the OTT environment.

EVOLUTION OF COPYRIGHT IN DIGITAL MEDIA

The core of IP protection in the creative industries has long been copyright law, which guarantees that writers, filmmakers, and content creators are compensated for their work. But the quick technical transition out of conventional to digital media has fundamentally changed how content is generated, circulated, and enjoyed. This change has made copyright compliance more difficult, especially in the age of digital consumption, OTT streaming providers, and AI-generated material.

Copyright laws were once developed to secure the rights of original authors and producers, primarily in print media. The British Statute of Anne, which guaranteed authors temporary monopoly over their works, was the first real copyright law passed in 1710[9]. This structure laid the groundwork for modern copyright laws, which were later extended to include a range of media, including as television and movies. For instance, the United States' Copyright Act of 1976[10] created a framework that broadened safeguards to audiovisual works and acknowledged both moral and economic rights.

8. Capgemini, *OTT Streaming wars: Raise or Fold*, Capgemini, (September 2021), https://www.capgemini.com/wp-content/uploads/2021/09/Capgemini-OTT-Study-Report.pdf (last visited February 20, 2025).
9. The Statute of Anne: The First Copyright Statute, History of Information, https://www.historyofinformation.com/detail.php?entryid=3389 (last visited February 21, 2025)
10. Copyright Act of 1976

The growth of the internet brought about a significant change in the distribution of content. Copyright holders faced new challenges as digital content became increasingly prone to illicit copying and distribution via websites that share files and streaming services. The Digital Millennium Copyright Act[11] (DMCA), which was passed in the US in 1998, made it unlawful to bypass technological safeguards in order to address digital copyright issues. OTT platforms are protected from liability for user-uploaded content by the DMCA's "Safe Harbor" provisions[12]. The EU Directive on Copyright[13] was created, which required online platforms to prevent unauthorized uploads and ensured that authors receive appropriate compensation. The EU Copyright Directive (2019), Article 17, makes online platforms accountable in cases of infringing content[14]. The Copyright Act of 1957[15], which has undergone multiple amendments, most recently in 2012, serves as the main legal framework for India's traditional copyright structure for movies and television shows. In India, OTT platforms are subject to the Copyright (Amendment) Act, 2012[16], which mandates that creators receive just compensation. Also, takedown notices for digital content that has been pirated are aided by the Information Technology Act of 2000[17].

COPYRIGHT ISSUES FACED BY OTT PLATFORMS

Enforcing copyright has become more difficult in the digital era. Because the internet is global, traditional enforcement methods are frequently insufficient to solve these problems. The various copyright issues arising in the era of OTT platforms have been discussed below

Changing Dynamics of Content Licensing

Film studios and television networks have historically granted licenses to several distributors. But as OTT platforms have grown in popularity, the market has shifted to exclusive content agreements, in which platforms acquire the rights to stream the content only on their platform. To stream content, OTT platforms frequently license content from producers, distributors, and artists. These licensing contracts outline the content's duration, geographic limitations, and exclusivity[18]. OTT services use a mix of licensed and original content to draw in subscribers. Exclusive contracts and geographical restrictions emerge from licensing, which determines how the content may be streamed. The main issues, besides others, would be, firstly, that Global vs. Regional Licensing would be that customers who desire unrestricted access may be irritated by geo-blocking of content licensed for a specific region. Secondly, due to expiring licenses, TV shows and movies often vanish from platforms, which has an impact on user experience and content duration.

11. United States Copyright Office, *The Digital Millennium Copyright Act of 1998* (US Copyright Office 1998), https://www.copyright.gov/legislation/dmca.pdf (last visited February 21, 2025).
12. US Copyright Office, *Digital Millennium Copyright Act: Safe Harbors*, https://www.copyright.gov/legislation/dmca.pdf (last visited February 21, 2025)
13. Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC, 2019 O.J. (L 130) 92, https://eur-lex.europa.eu/eli/dir/2019/790/oj/eng (last visited February 21, 2025).
14. Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright in the Digital Single Market, 2019 O.J. (L 130) 92, art 17, https://eur-lex.europa.eu/eli/dir/2019/790/oj/eng (last visited February 21, 2025).
15. Copyright Act of 1957
16. Copyright (Amendment) Act, 2012
17. Information Technology Act, 2000
18. Viswanath A and Adhikarla S, *Prominence of OTT Platforms in the Legal Landscape*, International Journal of Arts and Law Review 1(4) (2022), https://ijalr.in/volume-1/issue-4-2/prominence-of-ott-platforms-in-the-legal-landscape-by-vaishnavi-viswanath-adhikarla-shraddha/ (last visited February 22, 2025).

And thirdly, revenue-sharing conflicts among artists, production companies, and studios which can occasionally result in legal issues[19].

Data can be used by content owners to optimize licensing agreements' pricing and distribution choices and boost ad income. OTT platforms use user data, such as watchlists, transaction histories, and ad views, to inform business choices about everything from content acquisition (purchasing, licensing, or producing) to monetization tactics. Content owners should anticipate that a key negotiating tool in deal discussions will be data transparency[20]. By eliminating significant upfront costs, licensing pre-existing content is frequently more economical than creating original content. Nevertheless, license rates are subject to change and accumulation over time, and renewals may result in increased expenses or unavailable content.

The Walled Garden Effect in OTT

The Walled Garden Effect is caused by OTT platforms locking content within their ecosystem through exclusive content agreements that limit consumer access and make it unavailable outside of their service[21]. It is a scenario where to access various content, customers need to have numerous service subscriptions and fair license agreements are difficult to obtain for independent studios and small content producers. Platform exclusivity raises concerns about fair competition and consumer rights because it can result in content monopolization[22]. Warner Bros.' choice to concurrently distribute films on HBO Max and in theaters during the COVID-19 outbreak sparked criticism and disagreements from directors, production firms, and movie theater chains. Also, Warner Bros. received backlash for moving theatrical releases to HBO Max, which had an impact on movie theater revenues and licensing partners[23]. Competition laws have been used to challenge Apple TV+ and Amazon Prime's exclusive sports plans for dominating live sports content. The argument is on striking a balance between giving consumers a variety of entertainment alternatives and allowing content creators and platforms to make money off their work. While popular licensed titles swiftly draw a large audience, original productions aid in establishing brand identity and exclusivity. A solid content strategy is essential, carefully weighing the pros and drawbacks of investing in original productions, concentrating on licensed offers, or finding a mix between the two[24].

Content monopolies are produced by exclusive licensing agreements, which restrict consumer access and give rise to antitrust issues. Licence disputes and lawsuits over contract terms resulted from Netflix's withdrawal of Disney and Marvel content following the 2019 launch of Disney+[25].

19. Seth SB, *OTT Platforms and Their Distributorship Agreement With Content Makers: A Study From the Perspective of Competition Law and Policy in India and Other Jurisdictions,* in Copyright (IGI Global, 2022) https://www.igi-global.com/chapter/ott-platforms-and-their-distributorship-agreement-with-content-makers/300917 (last visited February 22, 2025).
20. *Rise of OTT Platforms in India: A Case Study of Monetisation Models & Regulatory Concerns*, Global Media Journal,(2023), https://www.globalmediajournal.com/open-access/rise-of-ott-platforms-in-india-a-case-study-of-monetisation-models--regulatory-concerns.pdf (last visited February 22, 2025).
21. *What Are Walled Gardens in CTV Advertising*?, Streaming Media (September 24 2024), https://www.streamingmedia.com/Articles/Editorial/Short-Cuts/What-Are-Walled-Gardens-in-CTV-Advertising-166050.aspx (last visited February 22, 2025).
22. *The Impact of OTT on the Walled Garden*, Streaming Media Europe, https://www.streamingmediaglobal.com/Articles/Editorial/Featured-Articles/The-Impact-of-OTT-on-the-Walled-Garden-68554.aspx?pageNum=3 (last visited February 22, 2025).
23. *Directors, Theaters Express Worry Over Warner Bros. HBO Max Deal*, Variety (2020), https://variety.com/2020/film/news/warner-bros-hbo-max-reacts-1234851888/ (last visited February 22, 2025).
24. *Behind Closed Doors! How Walled Gardens Control the Digital Marketing World*, Financial Express (February 27, 2024), https://www.financialexpress.com/business/brandwagon-behind-closed-doors-how-walled-gardens-control-the-digital-marketing-world-3405852/ (last visited February 22, 2025).
25. *Disney Sues to Keep Complete Rights to Marvel Characters*, The New York Times (September 24 2021), https://www.nytimes.com/2021/09/24/business/media/disney-marvel-copyright-lawsuits.html (last visited February 22, 2025).

To acquire the exclusive rights to films, TV shows, and live events, OTT platforms are fighting in bidding wars. It has resulted in content hoarding, when platforms refuse to license content to rivals, lowering content diversity, excessive content licensing costs and higher subscription fees for customers because of high licensing costs. Content hoarding occurs not only because the OTT platforms want to acquire content but also to keep it away from their competitors[26]. Netflix paid $100 million to retain 'Friends' in 2019, which clearly highlights the high content licensing expenditure[27]. Another example is when NBCUniversal customers were forced to switch memberships after NBCUniversal took back 'The Office' from Netflix to introduce its own platform (Peacock)[28].

By locking users into their data and blocking third-party access, these OTT platforms drive maximum revenue through subscriptions and targeted advertising. Moreover, bundling services with hardware or telecom bundles further locks in users. Nevertheless, this strategy also has drawbacks, including subscription fatigue, greater piracy risks, and regulatory oversight of possible monopolistic behaviour. Despite these problems, the walled garden model, which ensures platform management and maximizes content monetization, is a top strategy in the OTT sector.

Reversion of Rights

Reversion of Rights in OTT is the process by which rights over content revert to the original owner after a period, usually after the expiry of a licensing agreement. In the OTT sector, content is licensed by platforms like as Netflix, Amazon Prime Video, and Disney+ for a certain duration. When the agreement is over, the rights go back to the creator, producer, or studio, enabling them to renegotiate, redistribute, or exploit the content elsewhere[29]. This return is an important part of content flow, impacting availability through platforms. To creators, reversion of rights clauses is critical since they open the possibility of remakes, renewed monetization, and syndication. OTT services, on the other hand, tend to seek perpetual or long-term rights to have exclusive libraries and control churn. Strategic management of rights reversion influences the competitive environment in the streaming industry, content access, license prices, and retaining audiences.

After Disney renegotiated exclusive streaming rights, Sony regained the Spider-Man franchise from Netflix in the 2021 case of Sony v. Netflix[30]. Renegotiations take place when licensing agreements expire, which could result in higher expenses or the platform losing content.

Because authors have moral rights under copyright law, their work cannot be changed without permission. As content licenses are transferred, moral rights like the right to attribution must be upheld. Reversion agreements also consider residuals, which are simply the money paid to content creators for the ongoing usage of their work. Streaming residuals are unpredictable, which causes industry disagreements. Johansson sued Disney in Scarlett Johansson v. Disney (2021)

26. *Why Advertisers Are Breaking Free from Walled Gardens*, Exchange4Media (February 6, 2025) https://www.exchange4media.com/tech-talk-news/why-advertisers-are-breaking-free-from-walled-gardens-140668.html (last visited February 22, 2025).
27. *Netflix Will Reportedly Pay $100 Million to Keep Friends in 2019*, IGN (December 4, 2018), https://www.ign.com/articles/2018/12/04/netflix-will-reportedly-pay-100-million-to-keep-friends-in-2019 (last visited February 22, 2025).
28. *NBCUniversal Takes Back The Office from Netflix*, Deadline (November 14, 2019), https://deadline.com/2019/11/nbcuniversal-takes-back-the-office-from-netflix-1202781414/ (last visited February 22, 2025).
29. *Understanding Rights Reversion*, Authors Alliance (2024), https://authorsalliance.org/wp-content/uploads/Documents/Guides/Authors%20Alliance%20-%20Understanding%20Rights%20Reversion.pdf (last visited February 22, 2025).
30. Mendelson S, *How The Netflix/Sony Deal Impacts Theaters, Streaming And Spider-Man*, Forbes (April 8, 2021), https://www.forbes.com/sites/scottmendelson/2021/04/08/netflix-sony-spider-man-marvel-disney-deal-explained/ (last visited February 22, 2025).

for releasing Black Widow on Disney+ without paying her fair share of the box office collection[31].

Geo-Blocking and Circumvention

Geo-blocking and OTT Circumvention pertain to blocking access to content based on the geographical location of a user and the processes used to overcome the blockages. OTT service providers like Netflix, Disney+, and Amazon Prime Video utilize geo-blocking to maintain compliance with the content licensing deal so that a movie, a TV program, or an event is viewed by users in only a selected territory[32]. This is done by using IP address detection, which identifies a user's location and permits or prohibits access accordingly. Users in restricted areas usually see a warning stating that the content is not available in their country when it is geo-blocked.

Users utilize a variety of strategies to get around geo-blocking mechanisms. By rerouting internet connections via servers located in a different nation, VPNs (Virtual Private Networks) conceal the user's true IP address and assign a new one that is connected to the server's location[33]. This circumvents restrictions by giving the impression that the user is accessing the internet from the chosen nation. By rerouting traffic through their own connection and hiding the user's IP address, proxy servers serve as go-betweens between a user's device and the internet. By passing traffic across several servers, the Onion Router (TOR), a network of servers run by volunteers, enables users to access the internet anonymously. This has prompted OTT platforms to tighten their detection abilities, using sophisticated VPN-blocking techniques to bar illegal access[34].

Geo-blocking can infuriate consumers, particularly when content is offered in certain markets but not others because of licensing restrictions. Because certain countries forbid restricting digital activity, geo-blocking also raises legal and moral issues. OTT platforms continue to modify geo-restriction protocols to safeguard content agreements and revenue arrangements despite the persistence of bypassing them.

Legal Implications

One of the biggest legal obstacles is content rights ownership, which requires platforms to get appropriate licensing agreements to stream movies, TV series, and live events. Legal disputes and monetary sanctions may arise from illegal distribution or noncompliance with license requirements. OTT platforms utilize geo-blocking to ensure they respect copyright and license restrictions. Many OTT services' terms of service prohibit using VPNs or other methods for bypassing geo-restrictions. Account suspension or cancellation may result from breaking these terms. While some nations might not have legislation specifically addressing the matter regarding the use of VPNs to access geo-restricted content, others would consider it a breach of copyright. Many users use VPNs to get around geo-blocking, such as when they want to watch Netflix US from India. Netflix and Amazon Prime were sued by the EU in 2018 for limiting access to foreign content. Platforms are required by the EU Digital Single Market Act (2018) to guarantee cross-border access to content within the EU[35]. Netflix banned VPNs in Netflix vs. VPN Providers (2016–2020), however,

31. *Scarlett Johansson Sues Disney Over Black Widow Release*, The Guardian (July 26, 2021), https://www.theguardian.com/film/2021/jul/29/scarlett-johansson-sues-disney-black-widow-release (last visited February 22, 2025).
32. InstaSafe, *What is Geo-Blocking and How It Works?* InstaSafe (2024), https://instasafe.com/blog/what-is-geo-blocking/ (last visited February 21, 2025).
33. Dentons, *Virtual Private Networks: A New Frontier for Copyright Infringement*, Dentons (2024), https://www.dentons.com/en/insights/articles/2024/july/17/virtual-private-networks-a-new-frontier-for-copyright-infringement (last visited February 21, 2025).
34. FlashRouters, *How to Bypass Geo-Blocking in 2024?*, FlashRouters (2024), https://blog.flashrouters.com/2024/02/23/what-is-geo-blocking-and-how-do-i-get-around-it/ (last visited February 21, 2025).
35. *EU Adopts Ban on Unjustified Geo-Blocking*, Kluwer Competition Law Blog (March 9 2018), https://competitionlawblog.kluwercompetitionlaw.com/2018/03/08/eu-adopts-ban-unjustified-geo-blocking/ (last visited February 21, 2025).

there were legal disputes about whether customers had the right to get around geo-restrictions[36].

Piracy in the Digital Era

As digital media, especially streaming, has grown in popularity, piracy has changed dramatically. Since illegal networks provide unlawful access to copyrighted information, illegal streaming has emerged as a major type of piracy. The transition to streaming has not eliminated piracy but has adapted to it. Most common piracy issues are[37]:

1. Illegal Streaming Websites: Pirated websites re-stream the content without acquiring legitimate licenses.
2. Credential Sharing and Account Theft: Password sharing and account theft degrade potential revenue for OTT services.
3. DRM Issues: DRM technology to stop unauthorized copying sometimes comes into conflict with the rights of users to access, raising fair use debates.

Most of the traffic intended for unlawfully getting or viewing movies, as well as 95 percent of TV pirate traffic, originates from illicit streaming services[38]. Finding illicit content is simple; an AFP reporter discovered the most recent episodes of popular programs "Succession" and "White Lotus" on unlawful streaming platforms in a span of few minutes without having to register or pay. Ads and subscription revenues from illegal subscription services that steal movies or TV series generate $2 billion annually[39]. In 2022, there was an 8.8% increase in visits to websites that promote TV content piracy and a 38.6% increase in cinema piracy compared to 2021. 215 billion people visited pirate websites in 2022, an 18% rise over the previous year[40]. Piracy is costing Indian video streaming services between 25 and 30 percent of their total income. India lost $2.3 billion in income last year because of movie and TV piracy[41]. According to reports, piracy costs the sports sector about $28 million annually[42].

Digital watermarking and AI-driven detection can be used to regulate streaming piracy. Adding distinct, undetectable identifiers to digital media, such as audio files, films, or pictures, is known as digital watermarking[43]. A distinct digital watermark, which functions as a covert signature, is applied to every video. This aids in locating the content's source, making it simpler to determine whether the

36. *Netflix's VPN Ban Isn't Good for Anyone—Especially Netflix*, WIRED (January 16, 2016), https://www.wired.com/2016/01/netflixs-vpn-ban-isnt-good-for-anyone-especially-netflix/ (last visited February 21, 2025).
37. Statista, *The Media Industries Most Affected by Piracy*, Statista (2022), https://www.statista.com/chart/30784/media-sector-share-of-global-visits-to-piracy-websites-in-2022/ (last visited February 21, 2025).
38. Digital Information World, *Which Media Industry Is Most Affected by Piracy?*, Digital Information World (September 26 2023), https://www.digitalinformationworld.com/2023/09/which-media-industry-is-most-affected.html (last visited February 21, 2025).
39. Eric Randolph, *Entertainment Industry Struggles with 215 Billion Piracy Site Visits*, France24, (June 1, 2023), https://www.france24.com/en/live-news/20230601-entertainment-industry-struggles-with-215-bn-piracy-site-visits (last visited February 21, 2025).
40. Tyler Aquilina, *215 Billion Worldwide Pirate Site Visits in 2022*, Content Cafe, (February 13, 2023), https://contentcafe.org.au/articles-stories-everything/215-billion-worldwide-pirate-site-visits-in-2022/ (last visited February 21, 2025).
41. *Piracy Biggest Threat to OTT Industry Worldwide*, The Economic Times (2022), https://economictimes.indiatimes.com/industry/media/entertainment/media/piracy-biggest-threat-to-ott-industry-worldwide/articleshow/95188523.cms (last visited February 21, 2025).
42. *Piracy in Sport - Thematic Research*, Research and Markets (2022), https://www.businesswire.com/news/home/20220517005870/en/Piracy-in-Sport-Thematic-Research-Report-2022-Analysis-of-How-the-Sports-Industry-has-Been-Affected-by-Piracy---Sports-Piracy-is-Costing-the-Industry-as-Much-as-28.3-Billion-a-Year---ResearchAndMarkets.com (last visited February 21, 2025).
43. WIPO, *Digital Watermarking for Protecting Intellectual Property*, WIPO Magazine (2021), https://www.wipo.int/wipo_magazine/en/2021/01/article_0005.html (last visited February 21, 2025).

video is being distributed unlawfully[44]. Specialized software can identify the embedded watermark in a pirated video, enabling content producers and distributors to identify the point of distribution chain breach and track down the source of the illegal copy. The data gathered from the watermark can be used as hard proof of the infringement in court against people or organizations engaged in video piracy. Like a distinctive fingerprint, content producers incorporate an undetectable code into their videos. When piracy attacks happen, this watermark helps identify the sources of leaks because it is unaffected by alteration[45].

Live Streaming and Sports Broadcasting

In the absence of the requirement for standard cable and satellite subscriptions, consumers can watch live sporting events at any time, anywhere, on a variety of devices thanks to OTT platforms like ESPN+, Amazon Prime Video, and DAZN. This ease of access coupled with worldwide reach allows OTT services to reach a wider audience, generating revenue through subscription, pay-per-view, or ad-supported streams. But at the same time, ensuring high-grade streaming with little latency is a hurdle. Piracy and regulation issues are persistent challenges. Also, the copyright concerns have become more complicated. Unauthorized use of copyrighted content, including music or video snippets, during a live broadcast may result in accusations of copyright infringement. Unauthorized use may cause delays or the stream to end entirely.

Streamers may rely on the fair use concept in some jurisdictions, which permits limited unapproved use of copyrighted content for things like criticism or commentary. When it comes to content monetization, this defense has a higher burden of proof and is evaluated case by case. Before using third-party content, streamers need to get licenses from copyright holders or performance rights organizations. Before broadcasting, live streamers should register their intellectual property to safeguard their content. This helps establish ownership rights and gives them the ability to seek damages in the event of infringement. Using visible watermarks can also aid in identifying original work.

Many disagreements over what qualifies as fair usage have arisen. The Court ruled in Seven Network Ltd v Commissioner of Taxation [2014] FCA 1411[46] that, under the Copyright Act, transmitting data to a recipient that is not a material embodiment cannot be considered a cinematograph film or broadcast. Therefore, footage that is live-streamed is not protected under copyright or broadcast laws. On the other hand, copyright law protects live streams that have been captured on camera and preserved in a tangible format, such as a video file.

Because live sports events happen in real-time and are in high demand, they are especially susceptible to piracy. For sports leagues, which mainly depend on television agreements for revenue, piracy poses a danger to revenue growth. Illegal streaming is estimated to cost leagues millions of dollars a year, which affects their capacity to make investments in infrastructure and teams. The English Premier League has been involved in several court cases against illicit streaming providers that show games without permission. The league has proven its dedication to defending its broadcasting rights by successfully

44. Gaurav Sharma, *AI-Powered Digital Watermarking to Combat Video Piracy*, Forbes (August 3, 2023), https://www.forbes.com/sites/gauravsharma/2023/08/03/ai-powered-digital-watermarking-to-combat-video-piracy/ (last visited February 21, 2025).

45. Chris Cookson, *How Digital Watermarking Helps Fight Piracy in Streaming Media*, Digital TV Europe (November 7, 2022), https://www.digitaltveurope.com/2022/11/07/how-digital-watermarking-helps-fight-piracy-in-streaming-media/ (last visited February 21, 2025).

46. Seven Network Limited v Commissioner of Taxation [2014] FCA 1411, https://jade.io/article/342817 (last visited February 21, 2025).

blocking nearly 600,000 illicit broadcasts over the past few seasons[47].

Despite these difficulties, live sports streaming on OTT platforms has a promising future because of innovations like 4K transmission, interactivity, and the integration of sports betting, which are anticipated to increase fan engagement and open up new revenue streams.

Fan Culture and User-Generated Content

OTT platforms have been a driving force behind reshaping fan culture and encouraging the production and distribution of user-generated content. Since content generated by users, such as fan edits and remixes of already-released television series and films, may violate the rights of exclusivity, their legality is frequently ambiguous. About 30% of YouTube's most popular videos each year are classified as user-generated content (UGC), including reactions, comments, mashups, and artistic alterations[48]. However, certain uses may be protected under fair use criteria. Marvel fan trailers and different endings for Game of Thrones are excellent instances of fan editing. Such content is identified by OTT platforms due to copyright claims. Dergacheva's Mandate to Over-block?[49] According to the study, platforms are effectively forced by Article 17 of the EU Copyright Directive to censor user uploads, which leads to the omission of legal content including fan edits, commentary, and other innovative user-generated content. It illustrates how genuine fan base and artistic expression may be inadvertently hampered by copyright enforcement practices in the OTT/UGC environment. Fan-driven creativity is increasingly functioning inside stringent platform liability rules, as these regulatory developments demonstrate. OTT's content strategy now heavily relies on the power of fan-driven promotion, whether it is through viral challenges or fan-made trailers.

Fair Use Considerations

Fair use is a fundamental principle in copyright legislation that allows restricted usage of materials protected by copyright without express consent from the rights owners. It facilitates creativity, learning, and commentary while ensuring that original authors maintain control over their content[50]. Reaction videos, reviews, and parodies on YouTube occasionally upset conventional copyright rules[51]. Courts determine the applicability of fair use based on purpose, nature, amount used, and market effect. New AI tools generate content based on already copyrighted material, and issues related to ownership and originality arise. Service providers for UGC must comply with the Digital Millennium Copyright Act (DMCA)[52] plus analogous legislation worldwide. Yet the limits of fair use tend to be unclear, and they are the subject of legal battles between creators of content and platforms. With the emergence of streaming platforms, judges and legislators continue to evolve fair use definitions to weigh innovation against intellectual property rights.

47. *Premier League Awarded High Court Blocking Order*, Premier League, (July 25, 2017), https://www.premierleague.com/news/442401 (last visited February 21, 2025).
48. YouTube, *YouTube Culture & Trends Report 2023*, https://storage.googleapis.com/think/storage/culture-and-trends/en-US.pdf (last visited November 14, 2025).
49. Daria Dergacheva & Christian Katzenbach, *Mandate to Overblock? Understanding the Impact of the European Union's Article 17 on Copyright Content Moderation on YouTube*, Policy & Internet 1–22 (2023), https://www.hiig.de/wp-content/uploads/2024/05/Policy-Internet-2023-Dergacheva-Mandate-to-overblock-Understanding-the-impact-of-the-European-Union-s-Article-17.pdf (last visited November 14, 2025).
50. World Intellectual Property Organization (WIPO), *Understanding Copyright and Fair Use*, WIPO (2024), https://www.wipo.int/copyright/en/ (last visited February 20, 2025).
51. YouTube Help, *Fair Use on YouTube*, YouTube Support, https://support.google.com/youtube/answer/9783148?hl=en (last visited February 20, 2025).
52. Digital Millennium Copyright Act (DMCA), 17 USC § 512.

Remixing Legally

Users may be able to make remixes in some countries under fair use or fair dealing exceptions, which permit transformative works such as commentary, parody, or criticism without obtaining express permission from the owner of the copyrights. Platforms such as YouTube and TikTok make this possible through user-generated content policies that embrace fair use, usually through mechanisms such as Content ID to deal with copyright[53]. The original musician or band must grant copyright rights before one can release a remix lawfully. Remix licensing frequently entails an agreement in which the artist and remixer split the revenues from the remix master which is negotiable.

Creative Commons licenses also enable legal remixing if the terms are respected. There are issues in establishing what is fair use, and copyright strikes can still happen even when content seems to be within legal parameters[54]. Despite all difficulties, platforms create venues for creators to remix material while balancing the safeguarding of intellectual property.

By understanding fair use, respecting Creative Commons licenses, and following the specific terms set by each platform, creators can produce legal remixes while avoiding potential legal challenges. Platforms play an important role in balancing the protection of intellectual property with enabling creative expression, making it easier for users to remix legally within their ecosystems.

OTT PLATFORM HANDLING OF COPYRIGHT CLAIMS

The most widely used platforms have advanced algorithms that swiftly identify instances of copyright violations and eliminate the content. One can expect legal action after being able to get around the algorithms and even making money off the remix. The copyright holders will eventually take away whatever one has earned, plus more.

A video posted by a mother of her child dancing to a Prince song on YouTube in the case of Lenz v. Universal Music Corp. After claiming copyright violation, Universal Music had the video taken down. The court stressed that not all uses of copyrighted content are unlawful when it decided that fair use must be considered when imposing takedown orders[55].

The U.S. Supreme Court in the case of Campbell v. Acuff-Rose Music, Inc.[56], which concerned 2 Live Crew's parody of Roy Orbison's "Oh, Pretty Woman." The Court decided that when parody adds additional expression and meaning to the original work, it can be considered fair use.

In the 2019 case Star India Pvt Ltd v. Moviestrunk.com[57], Star India sued Moviestrunk.com for illegally streaming movies, alleging a violation under Sections 14 and 51 of the Copyright Act, 1957, and the decision was given in favor of Star India, stressing the damaging effects of unlawful streaming on profits and market dominance.

In the 2021 case of Sun TV v. Amazon[58], Sun TV sued Amazon for allegedly violating their copyright as the sole owners of the films by showing them without their consent. Amazon was given an interim injunction by the Madras High Court pending additional proceedings.

OTT platforms address copyright complaints via a blend of content licensing, automatic mechanisms, and human review. Services such as YouTube employ Content ID systems to detect

53. YouTube Help, *Fair Use on YouTube*, YouTube Support, https://support.google.com/youtube/answer/9783148?hl=en (last visited February 20, 2025).
54. Creative Commons, *About The Licenses*, Creative Commons, https://creativecommons.org/licenses/ (last visited February 20, 2025).
55. Lenz v Universal Music Corp 572 F Supp 2d 1150 (ND Cal 2008).
56. Campbell v Acuff-Rose Music, Inc 510 US 569 (1994).
57. Star India Pvt Ltd v Moviestrunk.com (2019) CS (Comm) 307/2019 (Delhi HC).
58. Sun TV v Amazon (2021) CS (Comm) 98/2021 (Madras HC).

and deal with possible copyright infringements automatically by comparing uploaded content with a database of licensed materials. In cases of infringement, they might take down the content, monetize it on behalf of the copyright holder, or redirect it[59]. Users can submit a counter-notice if they think their content was mistakenly reported for copyright infringement. Automated systems facilitate dealing with great amounts of content, yet manual reviews are used by platforms as well for more complicated cases. However, problems such as false claims, the balance between copyright protection and fair use, and regional compliance make the process difficult[60]. Consequently, OTT platforms must keep updating their copyright management procedures to balance intellectual property protection, user creativity encouragement, and conformance to heterogeneous international copyright regulations.

LEGISLATIVE AND POLICY RESPONSES

Legislative and Policy Responses to OTT Platforms are important since the sudden surge in these platforms has created concerns about regulation of content, copyright, privacy of data, and fairness of the market. Governments across the world are bringing legislation to control content on OTT platforms to meet local law requirements. For example, India has brought in the IT Rules 2021, which place burdens on OTT platforms to establish grievance redressal systems and ensure age-rating-based classification of content[61]. In the same vein, the European Union (EU) has enacted the Audiovisual Media Services Directive (AVMSD)[62] that sets provisions for content moderation, banning hate speech, and protecting children against harmful content. OTT services are significantly regulated by copyright legislation since they handle the release of a considerable volume of licensed content. Several nations have evolved their copyright schemes to directly cope with the challenges presented by OTT services specifically.

In response to growing concerns over data privacy, numerous countries have come up with regulations to safeguard users' personal information. The GDPR[63] of the EU that was implemented in 2018 is one of the strongest data protection legislations, making platforms seek express consent for data collection, enable opt-outs, and ensure data transparency. Within the U.S., California's California Consumer Privacy Act (CCPA)[64] also seeks to safeguard users' information by providing them with more autonomy over the way their details are gathered and utilized. Such privacy regulations have compelled OTT platforms to overhaul their data-gathering habits to meet the requirements. Most governments are also re-examining tax policies to ensure that OTT platforms contribute proportionally to national coffers. Other nations such as France and Australia have imposed digital service taxes, mandating OTT players to pay taxes on the revenue earned

59. Uppbeat, *YouTube Content ID Explained*, Uppbeat (November 2023), https://uppbeat.io/blog/youtube/youtube-content-id (last visited February 21, 2025).

60. Wyzowl, *YouTube Content ID: What Is It and How Does It Work?*, Wyzowl (February 23, 2024), https://www.wyzowl.com/youtube-content-id/ (last visited February 21, 2025).

61. Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (Government of India), https://www.meity.gov.in/writereaddata/files/Intermediary_Guidelines_and_Digital_Media_Ethics_Code_Rules_2021.pdf (last visited February 22, 2025).

62. Directive (EU) 2018/1808 of the European Parliament and of the Council, https://eur-lex.europa.eu/eli/dir/2018/1808/oj/eng (last visited February 22, 2025).

63. Regulation (EU) No. 679/2016 on General Data Protection Regulation [GDPR] [2016] OJ L119/1, https://gdpr-info.eu/art-1-gdpr/ (last visited February 23, 2025).

64. California Office of the Attorney General, *California Consumer Privacy Act (CCPA)*, https://oag.ca.gov/privacy/ccpa (last visited February 23, 2025).

within their countries[65]. The aim is to make sure big global players like Netflix, Amazon Prime, and others, who tend to be cross-border, pay taxes in proportion to the revenue they earn. This also encompasses local content requirements in markets such as Europe and India, where platforms are required to invest in and promote local content to sustain local industries[66]. Similarly, the EU' DSA along with DMA work to ensure consumer protection across member states[67].

The lack of consistency in laws between jurisdictions is one of the main obstacles to OTT copyright control. The goal of harmonization initiatives is to make copyright law more uniform and predictable while attempting to maintain a balance among the rights of content producers, distributors, and consumers.

EU COPYRIGHT DIRECTIVE

One important illustration of regional harmonization is the EU's Directive on Copyright (Directive (EU) 2019/790)[68]. Among its primary objectives are: granting news producers greater authority over how web services repurpose their content, attempting to lessen the gap in revenue between content producers and online platforms, and encouraging collaboration between content producers and platforms.

Two of the directive's articles have received special attention:

1. Often referred to as the "link tax," Article 15[69] (previously Article 11) provides newspapers more control over how their information is reused, which may have an impact on news aggregators.
2. Provision 17[70] (formerly Article 13): "Effective and proportionate" steps must be taken by "online content sharing service providers" to stop users from uploading copyrighted materials without licensing. This has sparked worries about whether upload filters are necessary.

Article 17 may result in the employment of automatic recognition and screening systems, which could impede users' freedom of expression, according to the Court of Justice of the European Union (CJEU). The CJEU underlined the significance of protections, making sure that legal uploads are kept accessible and that platforms take "expeditious" action to eliminate content that is infringing by rights holders[71]. The directive must be incorporated into native laws by EU member states within two years. Additionally, the directive mandates that streaming services provide a minimum percentage of European content in their

65. *Digital Service Tax: An Overview*, Tax Foundation, https://taxfoundation.org/digital-service-tax/ (last visited February 23, 2025).
66. *Promoting Local Content on Streaming Platforms*, European Audiovisual Observatory, https://rm.coe.int/promoting-local-content-on-streaming-platforms-english-version-26-01-20/ (last visited February 23, 2025).
67. European Commission, *Digital Services Act Package*, https://digital-strategy.ec.europa.eu/en/policies/digital-services-act-package (last visited February 23, 2025).
68. Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market, 2019 O.J. (L 130) 92, https://eur-lex.europa.eu/eli/dir/2019/790/oj/eng (last visited February 23, 2025).
69. Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market, 2019 O.J. (L130) 92, art 15, https://eur-lex.europa.eu/eli/dir/2019/790/oj/eng (last visited February 23, 2025).
70. Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market, 2019 O.J. (L130) 92, art 17, https://eur-lex.europa.eu/eli/dir/2019/790/oj/eng (last visited February 23, 2025).
71. CJEU backs Copyright Directive Article 17 platform liability provisions, Out-Law, https://www.pinsentmasons.com/out-law/news/cjeu-backs-copyright-directive-article-17-platform-liability-provisions (last visited February 23, 2025).

collections and make monetary contributions to the production of European audiovisual content[72].

While the directive strengthens copyright protection, concerns remain about over-blocking of content and its potential impact on freedom of expression. The directive is an important step towards bringing EU copyright law closer to the realities of contemporary technology, but it will have to be implemented sensitively to prevent unintended consequences.

Regional Disparities

OTT regional differences pertain to variations in access, pricing, content availability, and regulation across various geographical areas. Different local laws, economic situations, cultural preferences, and technology infrastructures all contribute to these variations.

Pricing models are also influenced by economic factors; in order to address affordability concerns, OTT platforms offer lower subscription rates or mobile plans in developing areas. While consumers in underdeveloped broadband regions like sections of Africa and Asia may find it difficult to access material, consumers in developed internet markets like North America and Europe can enjoy high-quality streaming. Additionally, regulatory differences have an effect on how platforms function, for instance, the EU's GDPR[73] on data protection or France's content quotas, while local OTT players control markets in nations like China. Such regional variations make the OTT market a fragmented one, where platforms must respond to varied local needs, regulations, and technological restraints to become global success stories. Various countries have various approaches to regulating digital streaming platforms:

Country	Regulatory Approach	Key Observations
United States	Digital Millennium Copyright Act (DMCA)[74] governs digital copyright enforcement.	Considered outdated for handling modern challenges such as deepfakes and AI-generated content.
India	Copyright Act, 1957[75] (amended 2012) applies to digital media; IT Act supports takedowns.	Lacks clear OTT-specific copyright provisions; absence of a defined fair-use framework complicates content regulation.
China	Strict anti-piracy enforcement paired with censorship and licensing controls.	Foreign OTT platforms face barriers to market entry due to rigid regulatory and approval requirements.

72. European Commission, *Guidance on Article 17 of Directive (EU) No. 790/2019* (July 1, 2021), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0288 (last visited February 23, 2025).
73. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), 2016 O.J. (L119) 1, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0679 (last visited February 23, 2025).
74. Digital Millennium Copyright Act, 17 U.S.C. §§ 512, 1201 (1998), https://www.copyright.gov/legislation/dmca.pdf (last visited February 23, 2025).
75. Copyright Act 1957, https://legislative.gov.in/sites/default/files/A1957-14.pdf (last visited February 23, 2025).

Australia & Canada	Emphasis on ensuring fair compensation for local creators.	Canada's Online Streaming Act (Bill C-11)[76] and Australia's News Media Bargaining Code[77] require platforms to negotiate fair licensing and revenue-sharing with domestic content producers.

Anti-Piracy Laws

To prevent unlawful use and distribution of intellectual information on a range of digital platforms, OTT anti-piracy regulations are crucial. These laws often mandate that OTT services use technologies like Digital Rights Management (DRM) and content recognition technology to detect and erase pirated content in order to forbid unauthorized usage. Collaboration with Internet service providers (ISPs) and law enforcement officials is just as important in the fight against piracy, since the majority of nations are imposing stringent measures like site blocking or awarding injunctions to ban unlawful works. Despite these initiatives, there are still issues, like pirates bypassing DRM solutions, the quick development of piracy techniques, and regional variations in compliance, especially in developing countries, where piracy is more common because of restricted availability of legal content and budgetary limitations. Such nuances call for constant innovation and cross-border collaboration to safeguard the integrity of OTT platforms and enable reasonable compensation to creators.

The CASE Act

The Copyright Alternative in Small-Claims Enforcement (CASE) Act[78] passed by the US was to expedite the resolution of copyright disputes, especially for small creators who are dealing with infringement difficulties to pursue copyright claims (up to $30,000 in damages) outside of federal courts, avoiding costly litigation. Even while the CASE Act strengthens copyright protection, individual rights holders stand to gain more from it than big studios or OTT platforms fighting widespread piracy[79].

Some critics say that the system can be abused by copyright trolls to make frivolous claims against individuals or companies. There are also fears that the opt-in system may result in involuntary participation or unfair results if one party does not opt-in. Furthermore, although the CASE Act provides an easier process, its efficiency in dealing with more intricate or more significant copyright concerns is still to be seen[80].

Site Blocking Orders

OTT site-blocking orders are significant in the context of preventing piracy and safeguarding the copyright holders rights in the online world.

76. Online Streaming Act, SC 2023, c 8 (Canada), https://www.parl.ca/DocumentViewer/en/44-1/bill/C-11/royal-assent (last visited February 23, 2025).
77. Treasury Laws Amendment (News Media and Digital Platforms Mandatory Bargaining Code) Act 2021 (Australia), https://www.legislation.gov.au/Details/C2021A00021 (last visited February 23, 2025).
78. Copyright Alternative in Small-Claims Enforcement Act of 2020, 17 USC § 1501 et seq. (2020), https://www.congress.gov/bill/116 (last visited February 23, 2025).
79. Electronic Frontier Foundation, *The CASE Act Is Just the Beginning of the Next Copyright Battle*, (December 22, 2020), https://www.eff.org/deeplinks/2020/12/case-act-hidden-coronavirus-relief-bill-just-beginning-next-copyright-battle (last visited February 23, 2025).
80. U.S. Copyright Office, *Should I Opt Out from CCB Proceedings?*, (August 10, 2022), https://blogs.loc.gov/copyright/2022/08/should-i-opt-out-from-ccb-proceedings/ (last visited February 23, 2025).

Although effective in restricting access to infringing material, challenges exist, such as the potential for pirates to bypass blocking orders and the possibility of unintended side effects[81]. Notwithstanding these challenges, site blocking remains an important weapon in the battle against digital piracy, providing OTT providers and content producers with a means of protecting their intellectual property while encouraging a legal and equitable online forum for consumers[82]. Site blocking has been criticized for maybe going too far and restricting access to legal content, even if it can be useful in lowering access to pirated information. Courts usually issue site banning orders after copyright holders file lawsuits. Certain URLs or entire domains may be the focus of the orders.

United Kingdom: The British Phonographic Industry (BPI)[83] and Motion Picture Association (MPA)[84] are at the forefront of enforcement operations in the UK, where courts have often granted site-blocking orders against websites that violate the law.

India: Right holders are now able to prevent pirated content from being hosted on mirror websites by using dynamic injunctions issued by the Indian judiciary. This strategy has proven successful in stopping websites that unlawfully stream Indian Premier League (IPL) cricket matches.

Australia: With one of the strongest site-blocking laws in the world, the Australian Federal Court has the authority to direct ISPs to limit access to illegal streaming services and pirate websites.

FUTURE DIRECTIONS AND RECOMMENDATIONS

Enterprises need to be proactive in promoting technology, upholding the law, and safeguarding IP. Strengthening agreements like the Berne Convention and WIPO treaties can create a common legal regime, and harmonizing international copyright laws can reduce jurisdictional problems. Modifying DMCA takedown methods can assist achieve an acceptable compromise between copyright compliance and fair usage, and a public appeals procedure may assist avoid takedown errors. By creating fair licensing techniques like micro-licensing and blockchain-enabled smart contracts, royalty payment can be maximized. Aiming at educating consumers about copyright legislation and encouraging ethical viewing behavior can curtail piracy. Cooperation among governments, creators, and streaming companies is essential to strengthen copyright enforcement. With the ongoing popularity of developing technologies such as NFTs, decentralized streaming, and metaverse entertainment, copyright regimes need to change to suit intellectual property issues in virtual and augmented reality. Implementing these measures will make the OTT business guarantee creators' fair compensation while keeping content accessible to end-users.

Strengthening Copyright Frameworks

According to the Copyright Act of 1957[85], a direct violation of OTT content constitutes a copyright infringement. Intermediaries, especially OTT platforms, are held accountable by the IT Act of 2000 for the unlawful distribution of

81. Information Technology and Innovation Foundation, *Adaptive Antipiracy Tools: An Update on Dynamic and Live Blocking Injunctions*, (October 22, 2020), https://itif.org/publications/2020/10/22/adaptive-antipiracy-tools-update-dynamic-and-live-blocking-injunctions/ (last visited February 23, 2025).
82. UK Government Intellectual Property Office, *Enforcement of Copyright: Blocking Access to Infringing Websites*, (UK IPO, February 12, 2021), https://www.gov.uk/government/publications/enforcement-of-copyright-blocking-access-to-infringing-websites (last visited February 23, 2025).
83. British Phonographic Industry, *BPI Welcomes Landmark Site Blocking Ruling in the UK*, (BPI, July 28, 2011), https://www.bpi.co.uk/news-analysis/bpi-welcomes-landmark-site-blocking-ruling-in-the-uk/ (last visited February 23, 2025).
84. Motion Picture Association (MPA), *UK Court Orders Internet Service Providers to Block Access to Major Piracy Websites*, (MPA, June 20, 2018), https://www.motionpictures.org/press/uk-court-orders-internet-service-providers-to-block-access-to-major-piracy-websites/ (last visited February 22, 2025).
85. Copyright Act of 1957

copyrighted content. More information is required regarding the requirements pertaining specifically to digital content made accessible through various OTT platforms, often without the legitimate owner of the copyrighted material being aware of it. The process needs to be made clear, as well as the degree of each party's obligation in these infringement proceedings. Future actions like these will guarantee the protection of intellectual work creators' rights, ultimately reducing OTT video infringement and piracy.

Enhancing Transparency

To get sole permission for hosting, broadcasting, and selling material online or through digital media, OTT platforms such as Netflix and Amazon Prime enter into agreements with production companies. Data transparency is a critical negotiating weapon that content owners should anticipate. Stressing the dissemination of moral content and legal requirements is crucial.

Public Awareness Campaigns

It is the responsibility of intermediaries to warn users not to share any content that might violate others' property rights. Users can learn about copyright rules and the penalties of violating them through outreach activities.

Leveraging Technology

Technical rights in copyright are provided by the Copyright Act. IP can be safeguarded with DRM and content identification technology. OTT platforms handle user-generated material and any copyright misuse through content moderation protocols and copyright claim procedures. AI is used to identify and remove unwanted streams.

Role of Blockchain and NFTs

OTT platforms' copyright problems can be tackled by using technologies like blockchain and NFTs (Non-Fungible Tokens).

Decentralized Management of Copyright

Autonomous copyright governance on OTT platforms uses smart contracts and blockchain technology to give owners greater ownership over their work. By enabling creators to create readily available, irrevocable ownership records and instantly start compensation when their work is used, blockchain removes the need for middlemen. Blockchain-based digital watermarks and metadata analytics ensure that content usage is tracked and rights are upheld across platforms. However, the decentralized approach is challenged by the absence of a consistent legal framework, barriers to technological adoption, and the challenge of managing disputes. Despite these difficulties, autonomous systems can completely transform the way information is sold and distributed, offering a more efficient and open method of managing copyright in the digital sphere.

Smart Contracts

Smart contracts are autonomous, blockchain-based agreements. They specify the circumstances under which content may be used, including conditions regarding payment, usage limitations, royalties, and licensing agreements[86]. Smart contracts ensure that usage rights are only granted when specific conditions are met. Smart contracts eliminate middlemen, reduce administrative costs, and ensure that content producers get paid fairly for their labor. But there are still issues like complicated implementation, legal recognition, and security threats[87]. Despite these obstacles, smart contracts offer the ability to improve OTT platforms' efficiency, transparency, and equity for all parties involved by lowering the need for middlemen and guaranteeing that creators receive payment.

Immutable Records

Immutable records provide massive benefits to the OTT sector through increased transparency,

86. MDPI, 'Blockchain and Smart Contracts for Digital Copyright Protection' (2025), https://www.mdpi.com/1999-5903/16/5/169 (last visited February 22, 2025).

87. IVIR, *Blockchain and Smart Contracts: The Missing Link in Copyright Licensing*, https://www.ivir.nl/publications/blockchain-and-smart-contracts-the-missing-link-in-copyright-licensing/ (last visited February 22, 2025).

content ownership assurance, ease in distributing royalty, and piracy counter. Immutable records enable OTT platforms to build a protected and verifiable system for content creators, consumers, and distributors with the help of blockchain technology. Scalability, legal acceptance, and the technical complexity of interfacing blockchain systems are still obstacles, although eliminating these challenges might greatly improve OTT ecosystems' trust and efficiency.

NFTs in Streaming

Non-fungible tokens, or NFTs, are distinct digital identifiers stored on blockchains that are used to verify authenticity and ownership. NFTs can facilitate new distribution and revenue-generating strategies while also serving as a representation of ownership of digital content[88]. NFTs can prevent copyright infringement by making sure that NFT holders do not reproduce or exploit content for commercial purposes unless the copyright holder grants them ownership of the underlying asset. A number of challenges, including as market volatility, regulatory issues, and environmental concerns, must be resolved before NFTs can become an essential part of widely used OTT streaming. As technology develops and becomes more sustainable, NFTs have the potential to significantly impact how content is distributed and enjoyed in the age of the internet.

Limited Edition Rights

OTT platforms with limited edition rights create unique material that is only available to a select group of users or for just a short amount of time, which tends to increase the attraction of digital media. To assure the profitability of limited-edition deals, however, issues including managing license agreements, avoiding market saturation, and securing customer happiness must be carefully handled. NFTs can grant specific users' exclusive access to streaming material by creating limited edition rights. An NFT is not the asset itself that is being sold, but rather certain usage rights. Legal involvement becomes essential because, although blockchain ensures the legitimacy of an NFT, it does not automatically preserve the underlying asset's copyright.

Summary of key recommendations

CATEGORY	RECOMMENDATIONS
Legal Measures	Clearer statutory guidelines on transformative use and OTT-specific fair dealing, strengthen dynamic injunctions and streamlined takedowns, and promote cross-jurisdiction harmonization
Technological measures	Adopt DRM, watermarking, AI-based detection, ensure transparency in automated filters, explore blockchain, NFT's and smart contract tools for rights management
Awareness measures	Promote digital literacy on lawful streaming, fair dealing, and permissible UGC, and conduct creator-user awareness campaigns
Global cooperation	Enhance cross-border regulatory enforcement and data sharing to combat transnational piracy

FUTURE RESEARCH DIRECTIONS

As the world of online media expands, future research must examine how emerging technologies like generative AI and metaverse-based multimedia environments alter copyright regulations. Concerns regarding originality, ownership, and accountability for derived or AI-assisted works are raised by generative AI technologies' ability

88. Mugavero T, *Streaming with NFTs Changes Ownership*, CoinGeek (October 3, 2024), https://coingeek.com/streaming-with-nfts-changes-ownership-tony-mugavero-video/ (last visited February 22, 2025).

to produce literary materials, music, and visuals that defy traditional notions of originality. Corresponding to this, interactive metaverse environments bring fresh virtual performances, interactive storylines, and user-generated 3D assets, all of which threaten the copyright frameworks now in place for mainstream media. Further scholarly research on these technological developments will be required to develop flexible copyright rules that remain effective in the next phase of online and OTT innovation.

CONCLUSION

The intention of the study is to understand how the growth of OTT platforms has modified how people access content, leading to new copyright issues. Increase in OTT services has brought up technical, legal, and policy concerns that need to be resolved. It is observed that piracy still depletes revenue, lowers incentive rates for investment, and threatens the long-term sustainability of both service providers and artists. Analyzing how technology affects copyright compliance was another goal, and it was discovered that cutting-edge alternatives like blockchain and AI provide potential but still-developing ways to improve protection across borders. To protect copyright in the OTT era, policymakers, platforms, creators, and audiences must work together.

To build a just and sustainable environment, improved legislative clarity, open licensing methods, technological innovation, and increased public knowledge must all be combined. Lastly, both the OTT revolution and copyright law will continue transforming. Protecting authors' rights without restricting user access or inhibiting creativity should be the main objective going forward.

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