

# STEERING A TECHNO-LEGAL APPROACH AGAINST ONLINE DIGITAL FILM PIRACY: REWORKING PROTECTION STANDARDS FOR CINEMATOGRAPHIC WORKS

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## Abstract

*The Cinematograph (Amendment) Act, 2023 criminalises acts of online digital film piracy. However, there is an absence of any definite legal principle to resolve questions on liability for indirect copyright infringement of cinematograph works over the internet. This article commends strategising enforcement measures for protection of Cinematograph works against infringement from Online Piracy under the Copyright Act, 1957 in alignment with the Cinematograph Act, 1952 and Information Technology Act, 2000. A Techno-Legal Approach encompassing technically advanced legal provisions are proposed to resolve online piracy of film. A critical take on the legal provisions under the Indian Copyright Act, 1957, the Information Technology Act, 2000 and the Cinematographic (Amendment) Act, 2019 read with Cinematograph (Amendment) Act, 2023 is engaged with a view to propose constructive amendments. Application of Disintegrated Market Theory in juxtaposition to Intersection Matrix Model Theory is proposed for navigating a change in the existing business circles and entertainment content distribution channels.*

**Keywords:** Cinematograph Films, Copyright Infringement, Intersection Matrix Model, Disintegrated Market Theory, Safe Harbour, Online Film Piracy, Copyright Law, Information Technology Law

## 1. Introduction

The Cinematograph (Amendment) Act 2023 promises to obliterate ‘Online Digital Film Piracy’ by criminalising acts of internet/digital piracy. Considering the prolonged ignorance to mitigate the adverse impact of piracy legally<sup>1</sup>- by way of dissolving the benefit of immunities which are behind its existence, it is imperative to strategise the protection of Cinematographic works against online piracy through a Techno-Legal Approach by aligning the provisions under Copyright Act, 1957,

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<sup>1</sup> CISCO, “CISCO Annual Internet Report, White Paper, 2018-23” (March, 2020).

Cinematograph Act, 1952 and Information Technology Act, 2000 with special reference to underlining piracy as infringement of Copyright in cinematograph works. A ‘Cinematograph Film’ is any work of visual recording and includes a sound recording accompanying such visual recording and a ‘Cinematograph’ includes any work produced by any process analogous to cinematography including video films.<sup>2</sup>

Further, ‘Visual Recording’ means the recording in any medium, by any method including the storing of it by any electronic means, of moving images or of the representations thereof, from which they can be perceived, reproduced or communicated by any method.<sup>3</sup> A ‘Motion Picture’ is “a length of film (with or without sound) with a sequence of images that create an illusion of movement when projected”.<sup>4</sup> Section 3 read with Section 2(y) of the Copyright Act, 1957 clarifies that publication of any work includes making available to the public copies of the said work by issuing its copies or communicating the work to the public. Further, Section 2(ff) defines communication to the public to mean “making any work or performance available for being seen or heard or otherwise enjoyed by the public directly or by any means of display or diffusion other than by issuing physical copies of it, whether simultaneously or at places and times chosen individually, regardless of whether any member of the public actually sees, hears or otherwise enjoys the work or performance so made available”. Hence not only the release of the film in theatres or multiplexes comes with ‘communication to public’, but transmission through cable TV or DTH services and marketing the films over CD/DVD/VCR/FlashDrive or any other means of storage falls within the ambit of communicating the cinematograph work to the public at large.<sup>5</sup>

Several judgements of the courts have broadened the definition of the term ‘Cinematograph’ under Section 2(e) to include both video and television - held to be an apparatus, jointly and severally, used for the representation of moving pictures or series of pictures.<sup>6</sup> A VCR too, when used for playing pre-recorded cassettes of movies on television screens, is said to be an apparatus falling within the scope of the term

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<sup>2</sup> The Copyright Act, 1957, (Act 14 of 1957), s. 2(f).

<sup>3</sup> *Id.*, s. 2(xxa).

<sup>4</sup> KwaZulu-Natal Film Commission, “Film-Induced Tourism Strategy: Final Report”, v (2022).

<sup>5</sup> The Copyright Act, 1957 (Act 14 of 1957), “Practice and Procedure Manual issued by Indian Copyright Office”, 3 (2018).

<sup>6</sup> *Balwinder Singh v. Delhi Administration*, AIR 1984 Del 379 (DB); *Tulsidas v. Vasantha Kumari*, (1991)1 LW (Mad) 229; *Restaurant Lee v. State of Madhya Pradesh*, AIR 1983 MP 14.

cinematograph.<sup>7</sup> Adding further, the decision in *Entertaining Enterprises v. State of Tamil Nadu* ruled that the exhibition of a film on a television set through video tapes in which the former is recorded, would also fall within the definition of the term cinematographic films.<sup>8</sup> Though we have the Copyright Law, 1957 which protects films as a cinematograph work, the Cinematograph Act, 1952 to regulate the distribution of films across various exhibition windows, and the Information Technology Act, 2000 to regulate the transmission of information over the internet and web-based platforms - there is still an absence of a clear definition of Film Piracy as it is still being glorified both as a victimless act and behaviour. Post the Cinematograph (Amendment) Act, 2023, which criminalised online film piracy, the Ministry of Information and Broadcasting announced that the Censorship Board shall also have powers to remove pirated film from websites including YouTube. A primary *locus standi* in this regard has been given to Copyright holders and/or their agents by filing a complaint.<sup>9</sup> This article seeks to bridge the understanding of Film Piracy over the internet and digital platforms and protection of cinematograph works against infringement by piracy under the Law of Copyrights, Cinematograph and Information Technology taken together. The article proposes policy revisions with the intention to restructuring the Business and Revenue Distribution Model for the films and pulling out the *safe harbour clause exemption* for the web-based platforms allowing hosting, sharing and making pirated content easily accessible.

## 2. Technological Revolution dismantling Copyright Regime for Cinematograph Works

Each Film is believed to have a certain shelf-life including the specific ‘windows’ of exhibition which are the various revenue sources, both domestically and internationally. These ‘exhibition windows’ help in recouping the investment cost and generating profits in addition to copyright protection. These are very lucrative, especially after their theatrical release. From cable television networks, to DTH systems, to WiFi build-in modems and fire TV sticks, video content dissemination platforms have widened the scope and ambit of both media dissemination and peer file sharing websites and

<sup>7</sup> *Dinesh Kumar Hanumanprasad Tiwari v. State of Maharashtra*, AIR 1984 Bom 34.

<sup>8</sup> *Entertaining Enterprises v. State of Tamil Nadu*, AIR 1984 Mad 278.

<sup>9</sup> Andy Maxwell, “Film Censors given powers to remove pirated movies from YouTube, Telegram”, *The Torrent Freak*, Nov. 4, 2023, available at: <https://torrentfreak.com/film-censors-given-powers-to-remove-pirated-movies-from-youtube-231104/> (last visited on July 18, 2024).

enabled unauthorised copying of content meant for dissemination through licensed exhibition windows.<sup>10</sup> Though there are several other authorised platforms which strictly adhere to following the copyright norms including the iPlayers and PPLive in the UK and China respectively, the volume of P2P video traffic still remains substantial. Reports indicate that such unauthorised video streaming services have surpassed the former in recent years. Some of the examples of such websites and mobile applications include Telegram,<sup>11</sup> DailyMotion pictures, 123movies, etc. Before 2005, online video distribution was only limited to adoption of broadband services on a commercial rental basis. However, with multiple options available at the consumers' disposal to choose from in order to watch the content over the internet, has led to rise in the demand for pirated content, thereby leading to violation of copyright holders' rights and end user license agreements. With the dawn of smartphone culture, mobile television services have taken over the demand sector in the market, thereby multiplying the number of portable and viable options available for the consumer to gain access to content over the internet platforms.<sup>12</sup> Free Wi-Fi zones and reduction of internet costs have further amplified the usage of portable devices by the users to stream content, irrespective of the fact that the same may also be pirated.

There are three major forms of online video: commercial, user-generated and two-way. Commercial video services are traditional cable television channel content over web-based platforms. Internet Television Protocol services and use of Set-top boxes help in the transmission of several online video content which is licensed and streamed across several OTT platforms - Netflix, Hulu, PPLive, SonyLiv, etc. Streaming of video and audio content is also made possible through mobile television networks which provide for a linear distribution mechanism through mobile phones. The latter uses a separate terrestrial or satellite spectrum. Generally, the streaming services which have separate mobile applications fall under this category including Disney+Hotstar, SonyLiv, Voot

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<sup>10</sup> Mario Nascimento, "Peer-to-Peer: Harnessing the Power of Disruptive Technologies" 32(2) *ACM SIGMOD Record* 57-58 (2003).

<sup>11</sup> Zoe Bernard, "People are using the messaging app Telegram to share pirated movies and stolen Netflix and Spotify accounts," *The Business Insider*, Apr. 13, 2018, available at: <https://www.businessinsider.in/tech/people-are-using-the-messaging-app-telegram-to-share-pirated-movies-and-stolen-netflix-and-spotify-accounts/articleshow/63752901.cms> (last visited on July 18, 2024).

<sup>12</sup> Andy Chatterley, "Coronavirus, Contagion, and the Movie Industry: The New Going Viral", available at: <https://www.forbes.com/sites/andychatterley/2020/03/05/the-new-going-viral/> (last visited on July 18, 2024).

etc. User Generated Content (UGC), is another parallel category of content which is created, curated and disseminated over internet to millions of users through several social media applications and intermediary platforms like YouTube, BlipTv and Vimeo in USA, DailyMotion in France and Tudou in China. The users and content consumers on such platforms have also come to be known as ‘prosumers’ as they are creating and consuming content at the same time. Two-way content includes those that are created over video conferencing and online meetings.<sup>13</sup> These new arenas of video creation and content distribution have led to the emergence of three parallel screens at the consumers disposal - the television sets, computer/laptop screens and mobile screens. These have led to several technologically disruptive practices including cord-cutting and unbundling. These are concepts where the user or consumer seeks to surpass the authentic channels of distribution for viewing the content and resist the payment of subscription fees and choose to opt for “free” over-the-air digital television services. These too, however have fallen easy prey to film piracy across multiple applications which work on the P2P File sharing model.<sup>14</sup>

The tectonic changes effected in the relationship dynamics of the Film and Entertainment Industry *vis-a-vis* the New Communication Technologies have infused the culture of exhibition of the film on multiple platforms ranging from the introduction of Video Cassette Recording (VCR) and Digital Video Recording (DVR) to the Internet. Predominantly, there is a comprehensive revolution in the variety of entertainment content available, their methods and sources of dissemination and revenue disbursement.<sup>15</sup> Simultaneously unauthorised distribution of content and its ubiquitous diffusion in violation of the copyrights held by the author in such works is also the brainchild of technological developments.<sup>16</sup> It is the age of ‘shared economy’ where people generate and manage their own (commons) content, that has endangered the

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<sup>13</sup> OECD, “The Development and Diffusion of Digital Content” *OECD Digital Economy Papers, No. 213*, 16 (OECD Publishing, Paris, 2012).

<sup>14</sup> Nisha Qureshi, “As OTT platforms lose up to 50% subscription revenue to piracy, CII on war mode to tackle problem”, *available at*: <https://bestmediainfo.com/2021/02/as-ott-platforms-lose-up-to-50-subscription-revenue-to-piracy-cii-on-war-mode-to-tackle-problem/> (last visited on July 10, 2024).

<sup>15</sup> William F. Fisher III, “*Promises to Keep: Technology, Law, and the Future of Entertainment*” 13-14 (Stanford University Press, California, 2004).

<sup>16</sup> Paolo Sigismondi, *The Digital Glocalization of Entertainment; New Paradigms in the 21<sup>st</sup> Century in Global Mediascape* 81 (Springer, New York, 2011).

traditional copyright regime which provided against unauthorised use.<sup>17</sup> The dawn of Experience Economy in the Entertainment Industry has unfolded the culture of ‘open platforms’ have made available ‘accessible content’ to anyone and everyone.<sup>18</sup> The convergence of technology and popular media goods on the internet that led to the advent of a ‘convergent consumption market’.<sup>19</sup> The element of purchase is subordinate to the element of use, which is opposite of a traditional commodity consumption market. A borderless internet platform facilitates exchange of popular media goods, including films and music, that are freely made over the internet.

The internet technology threatens copyright works either by developing new uses of the copyright work thereby threatening the existing business models, or fostering new cheaper ways of infringing the copyright works. The internet has disturbed the centralised mass media distribution, thereby paving way for disaggregated individuals to come together to create, collaborate, curate and disseminate the content which is merely accessible, but not owned.<sup>20</sup>

### **3. Online Piracy- an (In)Direct Copyright Infringement of Cinematograph Content**

Copyright endows the right of excluding any unauthorised use and unwarranted commercial advantage. Infringement of a work defined under Copyrights includes acts done by any person, the exclusive right for which has been granted only to the author of such work or permits the use of any place for communication to public of an infringing copy of such copyrighted work, without the permission of the author or in contravention of the provisions under the law.<sup>21</sup> An infringing copy of a cinematographic work means a copy of the film made on any medium or by any means, including an imported infringing copy, in contravention of the means and medium of its creation or distribution as prescribed under the law.<sup>22</sup> Hence, use of copyright work without any authorisation by

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<sup>17</sup> Jim Parsons, “Remix: Making Art and Commerce Thrive in the Hybrid Economy”, 7(1) *Journal of Teaching and Learning* 57 (2010).

<sup>18</sup> David Bollier, “Intellectual Property in the Digital Age” in Ben Walmsley (ed.), *Key Issues in the Arts and Entertainment Industry* (Goodfellow Publishers Ltd., Oxford, 2011).

<sup>19</sup> Joseph Pine, James Gilmore J, “The experience economy: past, present and future”, in *Handbook on the Experience Economy*, (Edward Elgar Publishing, UK, 2013).

<sup>20</sup> Tatjana Cvetkovski, *Copyright and Popular media: Liberal Villains and Technological Change* (Palgrave Macmillan, New York, 2013)

<sup>21</sup> *Supra* note 2 at s. 51.

<sup>22</sup> *Id.*, s. 2(m)

way of license or assignment, including reproduction, distribution, public display, issuing copies of the work or importing the same constitutes infringement. According to Nimmer, the fact of substantial similarity can be proved in cases where either there is ‘comprehensive non-literal similarity or fragmented non-literal similarity’. The presence of the former constitutes infringement when the fundamental essence of the work is copied, while the latter includes cases where there is literal infringement and no more than a line, or paragraph, or page of the copyrighted work has been appropriated.<sup>23</sup>

An Indirect Copyright Infringement of a work occurs where there is supervisory control over the activities which cause or facilitate the infringement of the copyright work. Indirect Infringement may give rise to several forms of liability, including-secondary, contributory and vicarious. These include activities where the work is shared on infringing platforms, or the infringer contributes to providing such infringing platforms for transmission of copyright content. Unauthorised transmission of copyright content over the internet is a form of Indirect infringement too. This may be in the form of uploading or sharing of copyright content via P2P file-sharing technology, knowingly contributing towards sharing of content over platforms that facilitate unauthorised downloading or streaming of content, or by posting of copyright content owned by others on publicly accessible servers.<sup>24</sup>

In the context of cinematograph films, any such act of uploading, downloading or illegally streaming film/movie content constitutes an act of Digital Piracy or Media Piracy. According to IP Crime Group: “Piracy involves the illegal copying of content such as music, film, sports events, literary works, broadcasts, computer games and software for commercial gain. Copyright infringement also includes illegal copying and downloading of digital content”.<sup>25</sup> It is a form of convergent consumption and is said to include- consumption, possession, receipt, interference and conversion of copyrighted

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<sup>23</sup> H.R. Rep. No. 94-1476, at 52-53 (1976) “The definition of fixation would exclude from the concept purely evanescent or transient reproductions such as those projected briefly on a screen, shown electronically on a television or other cathode ray tube, or captured momentarily in the memory of a computer” from, Report for Congress, ‘*Fair use on Internet*’ Order Code RL31423, (2002), available at: <http://fas.org/irp/crs/RL31423.pdf> (last visited on July 13, 2024).

<sup>24</sup> “Falling for the entertainment industry in India: 10 things you need to know about file sharers in India”, available at: <https://www.tecxipio.com/single-post/entertainment-industry-india-10-things-about-indian-file-sharers> (last visited on July 13, 2024).

<sup>25</sup> IP Crime Group, “IP Crime Report” 6 (Newport: IP Crime Group, 2009).

materials without permission or authorisation, with or without any financial benefit to the creator. This is facilitated by P2P file-sharing or streaming media, aggregator websites, and Internet rogue websites which allow users to upload copyright content.<sup>26</sup> Further, obtaining unpaid digitised copies of a film, either illegally downloaded from Internet or reproducing an illegal copy using DVD or VCR and further sharing it across several online and digital platforms available on the internet which are available to other users as rogue websites or applications is also its part.<sup>27</sup> The law is unclear on ‘public’s right to copy’ and ‘formal shift of work for personal use’.

#### **4. Infringement of Films under Information Technology Law**

The Safe Harbour exception for Internet Intermediaries against copyright infringement tends to have far reaching implications on the status of liability implicating the Online Service Providers. Though the IT Act, 2000 regulates transmission of information/data over computer networks, and provides penalties in cases of violations, it misses to deliberate liability for online piracy of Films.

The infamous Section 79, popularly known as the Safe Harbour Clause, provides an intermediary indemnity in any copyright infringement suit for any infringing content found over its platform. The intermediaries are only expected to passively act for the transmission of any form of information over its platform. In case any infringing content is posted over an intermediary’s platform, besides the mandate for due diligence to issue the graduated response mechanism in the form of take-down notices, internet intermediaries are free to assume blanket protection from indirect copyright infringement. Proviso to Section 81 of the IT Act is non-obstante to exercise of any rights existing under the Copyright Law. Though, vide Section 52(1) (c) read with Rule 75 of the Copyright Rules 2013, a positive link is said to be established between Fair Dealing Exception and Safe Harbour by stating to imposes a positive duty upon the internet intermediary to refrain from facilitating the access of such website within a period of twenty-one (21) days of receiving a complaint in writing from the owner of the work in which the

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<sup>26</sup> Eric Johnson, Dan McGuire, Nicholas Willey, “The Evolution of Peer to Peer File Sharing Industry and the Security Risks for Users”, in *Proceedings of the 41<sup>st</sup> Hawaii International Conference on System Sciences* 383 (2008).

<sup>27</sup> Rafael Rob, Joel Waldfoel, “Piracy on the Silver Screen” 55(3) *The Journal of Industrial Economics*, (2007).



copyright is alleged to have been infringed,<sup>28</sup> the provision burdens the copyright owner with the duty to substantiate evidence to prove that the transient copy of the work is indeed an infringing copy and hence beyond the protection of Section 52 of the Copyright Act, 1957. The owner of the work is also required to inform about the location where the transient and alleged infringing content is displayed and details of the person or entity behind such unauthorised display. The owner is required to also submit an undertaking to file a suit of infringement in the court having suitable jurisdiction and produce before the Copyright office a copy of the said judgment within twenty-one (21) days. These bulky provisions are further cowed under the ineffective cyber security provisions which lack mechanisms to find out the person behind uploading of such infringing content- in most instances these identities are forged, unidentifiable or untraceable.

A film can be said to fall within the meaning of the term image provided under Section 2(v) information,<sup>29</sup> 2(t) electronic record,<sup>30</sup> and Section 43(j)(ii) computer data-base.<sup>31</sup> Further, Section 66E(b) defines the term capture with respect to an image to mean and include a video-tape, film or record by any means.<sup>32</sup> These interpretations lead us to conclude that a cinematograph work falls within the term information and may be treated as an electronic record or computer data-base for the purposes of transmission through any computer network or computer programme. A film record or copy transmitted or used for transmission over any computer network by any means or over any medium would therefore fall well within the scope of IT Act, 2000. Further, under Section 43(b), which provides for a penalty in cases where a person “downloads, copies or extracts any data, computer data-base or information from any removable storage medium where such information or data is held”, film piracy may be construed to fall within this clause.

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<sup>28</sup> *Supra* note at s. 52(1)(c).

<sup>29</sup> The Information Technology Act, 2000, (Act 21 of 2000), s. 2(v) “Information includes [data, message, text,] images, sound, voice, codes, computer programmes, software and databases or microfilm or computer-generated microfiche”.

<sup>30</sup> *Id.* at s. 2(t) “Electronic Record means data, record or data generated, image or sound stored, received or sent in an electronic form or microfilm or computer-generated microfiche”.

<sup>31</sup> *Id.* at s. 43(j)(ii) “Computer data-base means a representation of information, knowledge, facts, concepts or instructions in text, image, audio, video that are being prepared or have been prepared in a formalized manner or have been produced by a computer, computer system or computer network and are intended for use in a computer, computer system or computer network”.

<sup>32</sup> *Id.* at s. 66E(b), “Capture with respect to an image, means to videotape, photograph, film or record by any means”.

However, no direct reference has been made under the IT Act for determining the liability of any person who uploads, or provides access to pirated copies of the film content.

A corollary interpretation of the above discussion implies that a film which is transmitted through any computer network shall be considered for the purpose of determining if the platform or network service provider which is facilitating such transfer would fall within the exemption provided under Section 79 of the Information Technology Act, 2000, inserted vide an amendment in 2008. However, Section 79 of the IT Act provides for exemption from liability of an intermediary under certain circumstances when an information available or hosted over its platform is being provided by a third party. This exemption shall prevail in the following circumstances:

- When the intermediary is only functioning as a communication system. All telecom service providers and internet service providers shall fall under this clause.<sup>33</sup> This will include websites like BitTorrent, DailyMotion and applications like Telegram, which are merely acting as communication bridge between multiple internet users; or,
- When the intermediary does not get involved in initiating transmission, selecting the receiver, or selecting or modifying the information contained in the transmission. These would include web-hosting service providers and search engines. YouTube, Instagram and several other social media applications providing access to its users with user-generated content; or,
- When the intermediary observes the due diligence duties on their behalf. For example, Telegram, WhatsApp, Discord. With the Information Technology (Intermediary Guidelines and Digital media Ethics Code) Rules, 2021 there are mandatory procedural formalities on due diligence which social media intermediary and a significant social media intermediary are required to follow.<sup>34</sup>

The above provisions are merely disjunctive interpretations, thereby leading to an obvious conclusion that either of the above conditions are to be only fulfilled in alternatives. Further, Section 79(3) clarifies that in cases where it is proved that an

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<sup>33</sup> Prachi Tyagi, "Social Media and Copyright: An Indian Perspective", 28 *Journal of Intellectual Property Rights* 407 (2023).

<sup>34</sup> *Id.* at 408.

Intermediary has conspired, abetted, aided or induced the commission of any unlawful act, or despite receiving the actual knowledge that the intermediary platform is being used for the purpose of unlawful actions or unlawful activities are being committed, thereby fails to comply to take down actions, expeditiously remove or disable access to that material, then the intermediary shall be held liable and shall not be provided with any exemption from liability whatsoever.

The Information Technology Act does not define the boundaries of infringement of any copyright work over any digital platforms. This is a major drawback of the Act as there is no common thread between the infringements under Copyright Law and violations of rights under the Information Technology Act. Considering that every such platform including rogue websites and piracy applications which fall within the definition of intermediary, the failure of the law to highlight remedial solutions, further implies its redundancy in the current digital era. Further, India being a signatory to the WIPO Copyright Treaty which seeks to streamline protection of copyright works over digital platforms, one such work- cinematograph works - have not been provided enough safeguards in either of the two major laws which regulate such works over digital platforms. Hence analysis of the consumer behaviour of digital content consumers over digital laws, requires IT Act in India is only such law which may regulate digital content consumer behaviour, intention, willingness and attitude towards piracy.<sup>35</sup>

All of these provisions are merely injunctive in nature, failing to provide any compensatory or criminal liability. They are merely restrictive without any effective enforcement strategies to effectively regulate repeated instances of such actions. However, instead of providing penalties to reiterate the onus of balance of rights between the society and right holder, the law in its current form safeguards 'affirmative and authorised infringement' ostensibly under the garb of the Safe Harbour clause.<sup>36</sup>

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<sup>35</sup> Gunjan Chawla and Nidhi Buch, "Impact of Online Digital Piracy on the Indian Film Industry: An Empirical Investigation into Consumer Behaviour", 28 *Journal of Intellectual Property Right* 23 (2023).

<sup>36</sup> Preethika AR, "Safe Harbour Provisions for Intermediaries in India and US", available at: <https://blog.iplayers.in/safe-harbour-provisions-for-intermediaries-in-india-and-us/> (last visited on August 18, 2024).

## 5. Critical Analysis of the Existing Legal Regime and Corollary Findings

The existing Copyright regime has been significantly undermined due to reversal of “access-to-content into control-of-content”. Copyright Law merely provides for “copy control protection” rather than “access control protection” provision. It is this conundrum which is both a victimless behaviour and a victimless act at the same time. Multiple unauthorised channels including mobile phone applications like Telegram and Discord and websites like BitTorrent, MyFlixer, Fmovies, TinyZone, PikaShow, MegaUpload, MovieRulz, OpenLoad, DailyMotion, TamilRockers etc. are visited by viewers. There are instances where the film reels once leaked, are made available over the internet platforms.

The consumer piracy demands are catered through a Pyramid Structure of Internet Piracy comprising the following of *the Suppliers*, who are the primary sources of the pirated copies of the new released films and movies by way of using different tools of Cam cording and recording the theatrical exhibits of the film itself. These copies are sold to Replicators who re-produce copies as DVDs. Next are *the Release Groups*, who diffuse pirated version on the Internet by converting copies into clusters of high-speed computers called the Topsites. Further, the facilitator’s act as *the Internet directories*, thereby enabling browsing of pirated versions. At this stage, the coordination of the mass downloading and exchange of pirated content takes place with the downloaders who are internet users and also fall within the category of consumers who prefer to watch the pirated versions of the film. Finally, *the File Sharers and the Downloaders* transfer the illegal copies of the movies from the Internet to computer by peer-to-peer software.<sup>37</sup>

The Information Technology Act, 2000 is unable to strike against this Pyramid Structure because of its age-old reliance upon the Safe Harbour principle as discussed in the section above. The clause on Actual Knowledge may actually be an Implied Knowledge for Intermediary as it causes a debilitating effect owing to the following reasons:<sup>38</sup>

<sup>37</sup> Peggy E. Chaudhry, Sohail S. Chaudhry, *et.al.*, “Piracy in cyber space: consumer complicity, pirates and enterprise enforcement”, *Enterprise Information Systems* 3-4 (2011).

<sup>38</sup> Saumya Kapoor, “Tracing the development of ‘intermediary liability’ in India”, *available at*: <https://www.lexology.com/library/detail.aspx?g=be8df572-55b1-499a-85cf-8b44b59ee0bc> (last visited on July 13, 2024).

- i. Absence of any actual knowledge is an unreliable excuse platform have an implied knowledge and understanding of the usability of their platform for hosting of infringing content.
- ii. An implied knowledge about its use as a medium of communication-including transfer, upload and downloading of information and data across different computer networks copyright infringing content or,
- iii. An implied knowledge that the internet users are availing the facility provided over their platform for user generated content to be uploaded, downloaded, shared and otherwise streamed; or,
- iv. The definition of the term intermediary provides blanket protection the host websites which intend to facilitate sharing, downloading, streaming and uploading of copyright infringing content.
- v. Further, the pre-condition of actual knowledge to initiate show-cause or take-down notice may be used by Intermediaries to tweak the actual knowledge clause and make claims about their lack of knowledge about the users making use of their platforms for the purpose of transferring infringing content. Telegram has widely used its mobile application as a pirated content sharing platform.<sup>39</sup>
- vi. There is no clarity under the IT law on the issue of cross-border jurisdiction and the intermediary liability in cases of end-to-end encryptions. The fact that URLs and domain names are easily replaced with those from any other jurisdiction, further makes it very easy for hosting of infringing content over rogue websites. The under-equipped cyber laws via Virtual Private Networks (VPN), proxy servers and TOR networks to alter/modify/delete the IP address may also be easily and quickly making it difficult to be traced. DRM circumvention further enables an internet user to use the IP address domain of a completely different jurisdiction.

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<sup>39</sup> Andy Maxwell, "Court Orders Telegram to Block Pirated Movies, TV Shows and Music", *available at* <https://torrentfreak.com/court-orders-telegram-to-block-pirated-movies-tv-shows-and-music-210210/> (last visited on July 11, 2024).

## **6. Disintegrated Market Theory and Intersection Matrix Model Theory- the way ahead**

With the National IPR Policy 2016, the Central Government's initiative under *Azadi Ka Amrit Mohatsav*, a major agenda of the Government is to ensure that there is awareness among the people of the country regarding the IP policies, enforcement strategies and protection mechanisms with respect to every form of IP. Enforcement and execution is far more important than merely enacting the Law. In this regard a Techno-Legal Approach to resolve the problem of Online Digital Film piracy may be initiated with the following amendments in the existing legislative regime:

### **6.1. Amending the Copyright, IT and Cinematograph Laws**

Every infringement may be an act of piracy but vice-versa is not always true. It is imperative to define boundaries of infringement of Cinematograph works under Copyright, Information Technology & Cinematograph Act. The definition of Infringement under Section 2(m) the Copyright Act, 1957 may be extended to include sub-clause (c) as "acts of Film Piracy- both online and theatrical which includes all such acts of unauthorised exhibition of a film over platforms which are neither licensed or provided on commercial rental by the authorised distributor of the film including internet, digital and web-based platforms.<sup>40</sup> The term 'communication to public' may further be amended to include "exceptions in the form of websites or platforms facilitating distribution of film content, otherwise than those which are to be exhibited over authorised platforms and exhibition windows" under Section 2(ff). Further, the Information Technology Act, 2000 may be amended to directly take cognisance of 'Acts of Online Piracy in Films as Copyright Infringement'. Information Technology Act, 2000 may provide for clauses determining the meaning of online film piracy and categorising it as an illegal act under the provisions of law thereby attracting punishments - including both civil and criminal.

Definition of Internet Intermediaries may be extended to bring within its suspicion such website or platform which facilitates access to any form of digital content

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<sup>40</sup> The Copyright Act, 1957 (Act 14 of 1957), s. 2(m): Infringing copy as a- (c) any other recording embodying the same sound recording, made by any means or the sound recording or a cinematographic film

to the user. To this effect, the term ‘digital content’ may be defined to ‘include prints of films and videos which are made available and accessible across any internet platforms.’ Safe Harbour defense must be amended such that it is not made available to Internet intermediary or websites which enable connecting to platforms and websites hosting infringing content. The ‘actual knowledge’ under Section 79 may be repealed and rather be deemed as a presumption in cases where websites are found hosting infringing content, thereby shifting the burden of proof upon such Internet intermediaries. This may deter Internet intermediaries from enabling their platforms to be used for infringing any form of digital copyright content. The Cinematograph Act, 1952 may re-institute the recommendation of the Indian Cinematograph Committee, 1928 suggested that the individual films intended for exhibition in India may compulsorily be mandated to be registered, similar to the film registration system followed in England under the Cinematograph Act, 1927. The registration would make difficult the grant of any such exhibition license to anyone, except the registered persons or production houses. In its present form, seeking a mandatory Registration for procuring Film Exhibition License by Production Houses, Distributors and Authorised Licensed Partners before exhibiting the film on any platform, may be made condition precedent.

## **6.2. Adopting Technological Measures for Content Surveillance to address Online Digital Piracy**

### *i. Blockchain and Encryption Technology with Smart Contracts*

A Film Distribution Model based on Blockchain<sup>41</sup> and Encryption Technology and Smart Contracts may be used to better protect the copyright in films and the interests of the right holders against piracy. The Smart Contracts may be embedded with rules encoded for execution between the closed nodes, usable with a corresponding code, for registration, distribution and management of that very specific cinematograph film copy. This would maintain the integrity of the copyright in the cinematographic work, transparency about the channels of distribution of work and provide secured encrypted channel for its dissemination.

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<sup>41</sup> Steve Wong and Björn Obermeier, “Blockchain & the Hollywood Supply Chain” in SMPTE 2017 Annual Technical Conference and Exhibition, *available at*: <https://ieeexplore.ieee.org/abstract/document/8281393/> (last visited on May 24, 2024).

There are several blockchain based video-streaming companies already in use including<sup>42</sup> - Dlive on Lino blockchain, Livepeer on Ethereum, Flixxo on BitTorrent Plus. Further companies like Theta, VideoCoin and LBRY own their blockchain platforms over which they provide video-streaming services. Further, Hierarchical Multi-Blockchain System (HMBS) using the Smart Propertised Digital Content and Manager Programme is one such form of blockchain technology over which digital content may be distributed and managed.<sup>43</sup> There are a few blockchain technologies that are working towards combating online piracy in music and films. These include- Vevue which uses content surveillance and digital watermarking to track the lifecycle of any media content; White Rabbit which acts as an intermediary between content creators and users by way of locking smart contracts;<sup>44</sup> Custos Media Technology which uses blockchain and cryptocurrency to incentivise users to report pirated content<sup>45</sup> and Disney, which patented a blockchain based media distribution process which secures copyright content against leaks from content delivery networks.<sup>46</sup>

ii. *Metaverse Technology*

Metaverse may provide creative ways for production, distribution and consumption of films. Though not very economical, the viewers may encounter a completely different film viewing experience. NFT's encrypting the film data embedded with smart contracts shall determine the ownership and usage of films, negating the possibility of unauthorised copying/ distribution of films. Use of VR

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<sup>42</sup> Nabajeet Barman, G. C. Deepak and Maria Martini, "Blockchain for Video Streaming: Opportunities, challenges, and open issues" 53(7) *Computer* 1, 3 (2020).

<sup>43</sup> Nam-Yong Lee, Jinhong Yang and Chul-Soo Kim, "Blockchain-based Smart Propertization of Digital Content for Intellectual Rights Protection" 10(12) *Electronics* 5 (2021).

<sup>44</sup> Alex Tuck, "How blockchain can tackle piracy in entertainment", available at: <https://technologymagazine.com/articles/how-blockchain-can-tackle-piracy> (last visited on May 26, 2024).

<sup>45</sup> Chris Richardson, "Blockchain may be the Missing Link for Video Protection", available at: <https://www.forbes.com/sites/forbestechcouncil/2018/11/08/blockchain-may-be-the-missing-link-for-video-protection/?sh=22a2eb764c77> (last visited on May 26, 2024).

<sup>46</sup> Ernesto Van, "Disney Patents Blockchain-Based Movie Distribution System to Stop Pirates", available at: <https://torrentfreak.com/disney-patents-blockchain-based-movie-distribution-system-to-stop-pirates-210512/> (last visited on May 30, 2024).



headsets or AR glasses may facilitate interaction with characters, environments and perspective in the film by virtually visiting global meta-spaces.<sup>47</sup>

iii. *Web-Mining and Zero Watermarking Technology*

Web-mining, a technology preferred against software piracy, may also work for tracking down the nature of the web content and data browsed or viewed. Data mining tools extract information pertaining to piracy by applying processes like clustering, association rule mining and generalisation that generate web-data and information provided by piracy sites. Cyber Laws, Piracy Site Crawler and End User License Agreement may assist in verifying, investigating and identifying piracy site visits and downloads respectively.<sup>48</sup> An advanced form of watermark technology uses key-frames extraction algorithm of threshold clustering to manage and track data with colour zero-watermarking algorithm of Non-Subsampled Contourlet Transform (NSCT) infused with Singular Value Decomposition (SVD). These are bound within Smart Contracts effected by the parties at both ends, followed by verification of the copyright on the video format of the film and its exhibition. Those who have the key-frames extraction codes with them, shall be able to view the video content forming part of such algorithm-based video copies of the film.<sup>49</sup>

iv. *Strengthening Anti-Piracy Technological Measures*

DRM's may be susceptible to circumvention techniques like subscription mooching, however, feeding software's with technologies disabling recording or video making over phones may be the first step.<sup>50</sup> Apple launched its FairPlay DRM technology into its MP3 player providing limited device and browser compatibility. Similarly, Netflix does not enable screen recording or screenshots over streaming content. Code Obfuscation Technology, which makes reverse

<sup>47</sup> Josh Wilson, "The Film and TV Revolution Through NFTs and the Metaverse", available at: <https://www.forbes.com/sites/joshwilson/2022/03/21/the-film-and-tv-revolution-through-nfts-and-the-metaverse/> (last visited on May 31, 2024).

<sup>48</sup> B. Ramakrishna and B. Sushma, "Web Mining: Piracy Control Pyramid for Electronic Media" 3(2) *International Journal of Computer Engineering* 164-165 (2011).

<sup>49</sup> Xiangqi Wu, Peng Ma, et.al., "A Novel Zero-Watermarking Scheme based on NSCT-SVD and Blockchain for Video Copyright" 20 *EURASIP Journal of Wireless Communications and Networking* 20 (2022).

<sup>50</sup> Stephen Lovely, "Subscription Mooching and Streaming media: Examining who pays for Video Streaming Services in 2020", available at: <https://www.paymentsjournal.com/subscription-mooching-streaming-media/> (last visited on July 15, 2024).

engineering difficult, may be used to build codes surmounting the Coded Anti-Piracy software which form part of smartphone processing software.<sup>51</sup>

### **6.3. Strengthening Implications arising from Blocking Injunction Orders**

Civil remedies necessarily involve payment of fine and seeking injunctions against the wrongdoers. Generally, the court requires the grant of blocking injunctions to be issued in favour of the plaintiff as an anticipatory remedy to online piracy, which may become a threat to the box-office collection of the film after its release.<sup>52</sup> This method involves seeking to restrict operations and targeting identifiable websites which host the infringing content. However, so far, the same has been proved to cause no deterrence effect.<sup>53</sup> The CBFC may be empowered to track down rogue websites in tandem with the cyber-security cells already functioning. Linking infringement to criminal concepts of theft and frauds may not be suitable owing to difference between intangible goods like cinematograph works and tangible physical property. There is enough space for copying and reproducing the same work with zero investment and quantitative irreparable damage. Imputing criminal punishments for film piracy upon the intermediate or end users/viewers is unfathomable as they are the driving force behind the demand for goods and competition in the market.

### **6.4. Resolving Conflict of Laws across Jurisdictions by standardising International Public Law Policy against Online Film Piracy**

Resolving jurisdictional issues by pronouncing International Public Law principles at the international level that may be made applicable across all the other jurisdictions alike. Some notable examples of global adoption of Distributed Ledger Technology (DLT) include the International Organisation for Standardisation Technical Committee (ISO TC), European Committee for Electrotechnical Standardisation (CENELEC) Focus Group, World Wide Web Consortium (W3C), International Telecommunication Standardisation Sector Focus Group, IEEE Blockchain Initiative

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<sup>51</sup> Ramya Venkataramu, *Analysis and enhancement of Apple's FairPlay Digital Rights Management* (2007) (A Project Report Presented to The Faculty of the Department of Computer Science, San Jose State University).

<sup>52</sup> Altaf Marsoof, "The Blocking Injunction - A Critical Review of Its Implementation in the United Kingdom Within the Legal Framework of the European Union", 46 *International Review of Intellectual Property and Competition Law* 632 (2015).

<sup>53</sup> Nigel Cory, "How Website Blocking is Curbing Digital Piracy Without Breaking the Internet" *Information Technology and Innovation Foundation* 2 (2016).

(BLK) and JPEG Blockchain Workshops.<sup>54</sup> The Principle of Presumption of Copyright Infringement in favour of the persons legally authorised to distribute film copies across exhibition windows may be applied globally across all territories when a case is reported. The warnings and notices which precede the actual takedown of infringing content may be set aside.

### **6.5. Adopting Disintegrated Market Model and Intersection Matrix Model for affordable content dispensation**

Releasing content simultaneously with theatrical exhibitions across VoD or SoD platforms may be effected by the Disintegrated Market Theory for Revenue Distribution and annotating Internet Intermediaries as Aggregators. The revenues generated are to be distributed across several authorised licensees who further issue the right to film exhibition across platforms. The more stakeholders are involved to act as Aggregator, the more options of affordable and reasonable exhibition windows and platforms would be available at the disposal of the consumers. Film Aggregators serve to distribute several films over various platforms including Amazon, Netflix, iTunes, Google Play, etc. They help in the projection of the content over several exhibition windows which may be opted by consumers for the purpose of purchasing. There are a few examples of such aggregators including BitMax, FilmHub, Premier Digital and Quiver.<sup>55</sup> Further, the Intersectional Matrix Model is recommended in order to further lay emphasis on the importance of convergence between each of these measures such as a remedy across one Matrix Model would be incomplete and insufficient without effective the remedy under another Matrix Model. This model may prove an ideal model to resolve the issue of online digital film piracy in the near future. Consequently, slackening subscriptions rates would enable higher paid-subscription of multiple competing platforms simultaneously.

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<sup>54</sup> Brian D. Evans, “Blockchain Tech Company Sia (Siacoin) Could Disrupt Dropbox and Amazon”, *available at*: <https://www.inc.com/brian-d-evans/blockchain-tech-company-sia-siacoin-could-disrupt-dropbox-and-amazon.html> (last visited on July 18, 2024).

<sup>55</sup> Amy Johnson, “Best Film Aggregators for Indie Filmmakers in 2021”, *available at*: <https://blog.audiosocket.com/filmmaking/best-film-aggregators-for-indie-filmmakers-in-2021/> (last visited on May 26, 2024).

## 7. Conclusion

Reworking the connotations of ‘copyright - creation, protection and infringement’ for cinematographic works for the Indian Film and Entertainment businesses is key to combat threats of online digital film piracy in the long run. Though online film piracy may seem like a reasonable demand from the consumers, its continued impact is the result of the lack of requisite deterrence effect which the present legal regime lacks, thereby resulting in the tendency among consumers to unintentionally breach the ethical perceptions surrounding piracy. The recent attention to online digital film piracy and the continued threat it poses to the Film and Entertainment business in India attained much significance with the Government enacting the Cinematograph (Amendment) Act, 2023. Essentially defining the boundaries of infringement of Cinematograph works under Copyright, Information Technology & Cinematograph Act in addition to eliminating Safe Harbour excuse for hosting pirated cinematograph works may assist in infuse clarity upon entailing direct liability from engaging with film piracy. While the deterrent measures including website blocking and civil or criminal punishments have not yielded desired results so far, it is time that the law equips itself to adapt to technological developments.