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## **COPYRIGHT PROTECTION IN THE DIGITAL AGE: CHALLENGES AND OPPORTUNITIES**

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### **ABSTRACT**

Copyright is a form of intellectual property rights that protects the rights of the author of any creative and artistic work. The work that are protected under the copyright laws are artistic, literary, dramatic and musical work. The author or the owner of the work has the right to use, sell, distribute, display, perform or derivate the original work. The copyright laws in the past decade also covers computer programs and software in its scope of protection. The growing digitalization has also impacted the implementation of copyright protection. It has given people access to copyrighted work and a platform where it can be shared to millions of people, this has lead infringement and piracy of copyrighted works. The digital age has made the sharing and accessing information over the internet fast and easy and that has lead to challenges relating infringement of copyright protection of authors. This research paper will study the enforcement of such copyright protection in the era of digitalization and also deals with the opportunities that are presented due to use of digital platforms and also the challenges that are faced due to the development of digital platforms where any information can be shared in seconds through the use of internet.

## Introduction

Copyright refers to the branch of intellectual property that deals with the artistic and creative arena of intellectual property. Copyright deals with artistic, dramatic, literary and musical work along with computer programs. Copyright deals with the right to copy or rather the authorization given by the authors to copy their work<sup>1</sup>. The protection of copyright comes along with a bundle of rights that gives the copyright holder the right to sell, copy, distribute, display, perform and modify any work that is created or owned by the copyright holder. In simple words, it means, that the original creator of products and anyone they give authorization are the ones who enjoy the given exclusive rights<sup>2</sup>. A work to fall under the copyright laws needs to fulfill three necessary factors, i.e. expression of the idea, fixation in tangible and minimal degree of creativity. A mere idea cannot be protected by the copyright, a work to be copyrighted needs to be expressed in a tangible form. The expression of idea is protected under the copyright law instead of the idea itself. Moreover, the work should contain a minimum degree of creativity to be considered as 'original'. An original work can only be copyrighted. A work can be considered as original if it contains minimum degree of creativity along with capital, labour and skills. The copyright protection is rendered to the work for a limited period of time after which it enters the public domain where anybody can access the work. The duration of copyright protection in India is lifetime plus 60 years after the death of the copyright holder<sup>3</sup>, in America, the duration of copyright protection is lifetime plus 70 years from the death of the copyright holder<sup>4</sup> and in United Kingdom, the duration of copyright protection is lifetime of the author plus 70 years from the date of his death<sup>5</sup>. The public can access copyrighted work for 'fair use' in which case copyright won't be infringed.

The era of digitalization has influenced and affected the arena of copyright protection tremendously in the last decade. The use of peer-to-peer sharing of information coupled up with social media platform has facilitated the sharing of any material, data, information and

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<sup>1</sup> WILL KENTON, Copyright Definition, Types, and How It Works, investopedia (17<sup>th</sup> February 2024) <https://www.investopedia.com/terms/c/copyright.asp#:~:text=Investopedia%20/%20Joules%20Garcia-What%20Is%20Copyright?,copyrighted%20item%20becomes%20public%20domain>

<sup>2</sup> WILL KENTON, Copyright Definition, Types, and How It Works, investopedia (17<sup>th</sup> February 2024) <https://www.investopedia.com/terms/c/copyright.asp>

<sup>3</sup> Setindiabiz Team, Copyright Registration Validity Period in, Setindiabiz (25<sup>th</sup> April 2023) <https://www.setindiabiz.com/learning/copyright-registration-validity-period-in-india>

<sup>4</sup> Copyright Services: Copyright Term and the Public Domain, Cornell University Library <https://copyright.cornell.edu/publicdomain>

<sup>5</sup> Copyright Notice: Duration of copyright (term), gov.uk (15<sup>th</sup> January 2021) <https://www.gov.uk/government/publications/copyright-notice-duration-of-copyright-term/copyright-notice-duration-of-copyright-term>

work at a rapid rate. It has presented both difficulties and new opportunities to the authors and creators of works. In one hand, creators have new platform to share their creativity, it has lead to emergence of digital arts, content creation, new platforms for artists to produce and publish their work but on the other hand, it has become a huge concern for creators due to the ease with which works can be replicated, reproduced and distributed over the internet which consequently led to increase in piracy and copyright infringement. The exclusive right of reproduction and distribution has become more complex in the digital era. Identifying and tracking ownership in this digital era is both complex and costly<sup>6</sup>. Another factor that affect the implementation of copyright protection in case of infringement is the fact that the internet does not have any predetermined jurisdiction, the jurisdiction of the internet spans over the whole world, i.e. a person who reside in India can infringe upon the copyright protection for a creator who resides in America. This global outreach of internet complicates the enforcement of copyright as it entails the interconnection copyright laws as well as international laws<sup>7</sup>. There are few solution for the infringement of copyright right through the use of digital platform. The complication due to digital age are many but it comes hand in hand with opportunities as well.

### **Challenges in copyright enforcement in the digital age in relation to peer-to-peer sharing, streaming services and social media platforms.**

The onset of digitalization has changed the way we use to access information and data, with the introduction of various digital platform like google, yahoo, Bing and other such digital platform, the sharing of any bit if information has become easy and fast. The digital era has developed the way we used to share information among different part of the world. It has simplified the access to information over the internet. The sharing and access of information has presented both challenges and opportunities for the people using the internet. The digitalization has affected the arena of intellectual property tremendously, especially the laws related to copyright protection. The access of copyrighted work without licensing or consent of the author or the owner is rampant over the internet. The technology advancement has provided infringers of copyright with the option and the methods to infringe the copyright protection of the copyright holder. The monitoring of copyright infringement on the internet is

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<sup>6</sup> Nikhil Bharadwaj, Copyright Protection in the Digital Age: Challenges and Solutions, legal service India <https://www.legalserviceindia.com/legal/article-10639-copyright-protection-in-the-digital-age-challenges-and-solutions.html>

<sup>7</sup> Khushi Malviya, Copyright Issues in the Digital Era: Challenges and Solutions, CLATatalogue (19<sup>th</sup> march 2024) <https://lawctopus.com/clatalogue/clat-pg/copyright-issues-in-digital-era/>

a vast task in itself. The best example of this scenario is the chatting app called telegram which shares copyrighted material in their channels which can be accessed for free<sup>8</sup>.

The peer-to-peer network is used to share copyrighted material without the due authorization of the copyright holder. In peer-to-peer sharing users can easily share movies, music and files without the consent of the creators<sup>9</sup>. Thus, the peer-to-peer sharing has infringes the rights of the content creator as they are not gaining adequate financial gain by such distribution of their work. The peer-to-peer sharing enables users to upload, download and share copyrighted material between two people or more<sup>10</sup>. The most common factor responsible for sharing of content in peer-to-peer sharing is due to the fact that most people are unaware of the fact that their actions amount to copyright infringement or that their actions are detrimental to the enforcement of the exclusive rights of the copyright holders. Many users indulge in the downloading and sharing without understanding the fact that they committing an illegal activity<sup>11</sup>. The factor that affect the enforcement of copyright in peer-to-peer sharing platform is the fact that this platforms usually evolves constantly to circumvent the laws and makes it difficult to even tract and regulate the infringing activities<sup>12</sup>. The critical question that the users of peer-to-peer sharing platforms faces is whether their acts will fall under the principle of fair use or whether they are indeed infringing the rights of the copyright holder. The public peer-to-peer file sharing environment is of such nature that any user inevitably indulges in activities that can amount to infringing activities. The peer-to-peer sharing developers ought to focus on the copyright infringement that are taking place in their platform and try to prevent such actions. In case, the peer-to-peer sharing developers are encouraging such infringing activities, they should be held liable under the copyright laws.

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<sup>8</sup> Manish Jindal, Telegram Copyright Infringement: How to Protect Your Content from Violation, bytes care blogs (27<sup>th</sup> march 2024) <https://bytescare.com/blog/telegram-copyright-infringement>

<sup>9</sup> Simran Karamchandani, Protecting Music from Digital Exploitation: Challenges to Copyright Laws in Digital India, legal service india <https://www.legalserviceindia.com/legal/article-11107-protecting-music-from-digital-exploitation-challenges-to-copyright-laws-in-digital-india.html>

<sup>10</sup> WHAT YOU NEED TO KNOW ABOUT COPYRIGHTS AND FILE SHARING, western Washington university <https://atus.wvu.edu/kb/what-you-need-know-about-copyrights-and-file-sharing#:~:text=Because%20of%20its%20decentralized%20and,unwanted%20browser%20toolbars%20and%20adware>

<sup>11</sup> Simran Karamchandani, Protecting Music from Digital Exploitation: Challenges to Copyright Laws in Digital India, legal service India <https://www.legalserviceindia.com/legal/article-11107-protecting-music-from-digital-exploitation-challenges-to-copyright-laws-in-digital-india.html>

<sup>12</sup> Simran Karamchandani, Protecting Music from Digital Exploitation: Challenge to copyright law in digital India, legal service india <https://www.legalserviceindia.com/legal/article-11107-protecting-music-from-digital-exploitation-challenges-to-copyright-laws-in-digital-india.html>

In the contemporary world, the use of streaming services like Netflix, amazon prime or Disney, YouTube or etc. is a normal affair. Many people use streaming services to watch a variety of content that varies from movies to series and even sports and documentaries. The streaming services like Netflix and prime has revolutionized the way people consume different types of contents across the internet. With a monthly or yearly affordable subscription people can access thousand of content over the internet. But the streaming services with its multitude of advantages also poses challenges to the copyright protection of the creators. The artists or the creators are often paid inadequate royalties and piracy of original content are rampant in these platforms<sup>13</sup>. The licensing agreement made for streaming contents are very complex in nature and most often blindsides the creators to give them less than what they deserve. Monitoring thousand of content for infringement is also an intensive process and requires advanced technology and programs which may be expensive and time consuming. The copyright enforcement mechanism at the present stage lacks the technology to prevent such infringement, it needs to adapt to the digital era<sup>14</sup>. The streaming services face imbalance between copyright protection and competition laws. The most essential factor for the protection of the interest of copyright holder is that the streaming services shall obtain proper authorization from the copyright holder to distribute their content<sup>15</sup>. The best course of action for the protection of copyright content in streaming services is to obtain licenses and assignments in the proper procedure and also to provide affordable subscription that will not compromise with the royalty paid to the creators. Moreover, complying with the copyright laws and competition laws will ensure fair competition and protect creator's rights<sup>16</sup>.

Social media platforms like YouTube, Facebook and Instagram also allows users to upload content in these platforms. These content sometimes include copyrighted material which shall be protected and preserved. The most important need of these platforms entails the balance between freedom of creators and users with copyright protection which in itself is a delicate

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<sup>13</sup> Simran Karamchandani, Protecting Music from Digital Exploitation: Challenge to copyright law in digital India, legal service india <https://www.legalserviceindia.com/legal/article-11107-protecting-music-from-digital-exploitation-challenges-to-copyright-laws-in-digital-india.html>

<sup>14</sup> Trends in Copyright Infringement and Enforcement in India esya centre (9<sup>th</sup> December 2019) <https://www.esyacentre.org/documents/2020/7/29/trends-in-copyright-infringement-and-enforcement-in-india>

<sup>15</sup> S. Vishnu, Copyright and Competition: A Legal Tightrope for Streaming Services, Competition Commission of India Journal on Competition Law and Policy, Vol. 4, No. 1, June 2023, pp. 27-40 <https://ccijournal.in/index.php/ccijoclp/article/download/125/71/821>

<sup>16</sup> S. Vishnu, Copyright and Competition: A Legal Tightrope for Streaming Services, Competition Commission of India Journal on Competition Law and Policy, Vol. 4, No. 1, June 2023, pp. 27-40 <https://ccijournal.in/index.php/ccijoclp/article/view/125>

task<sup>17</sup>. The biggest challenges faced by these social media platforms is that a huge chunk of population is accessing it daily in large number. Thus, maintaining the sanctity of copyright laws and tracking infringement is a huge task in these platforms. Another factor that affects the streaming services is that due to plethora of users and a huge responsibility of management, the takedown of infringing material takes weeks<sup>18</sup>. The lack of awareness also plays a part in these as many users are of the opinion that sharing content is harmless and they genuinely fails to understand the effect of their infringing activities on the creators<sup>19</sup>.

Therefore, it is safe to say that with technological advancements and development of public network and streaming or sharing platforms, the gaps between the laws and the reality will widen which will be detrimental to the enforcement of copyright protection in India. In this dynamic landscape, striking a balance between creative expression, fair use and creators' right has become the crucial and important aspect<sup>20</sup> which need considerable amount of resources and protective measures.

### **Impact of artificial intelligence on copyrighted work**

Another technological advancement that intersect and influence the intellectual property right is the development of artificial intelligence. The question relating to the copyright protection to creative work created by artificial intelligence is a topic that is heavily debated by people all over the world. The topic of whether artificial intelligence has the capacity to make original work and whether those original work can be covered under the scope of copyright protection has met with hesitation and outright criticism. Government all over the world are leaning toward protection of creative work from artificial intelligence rather than rendering creative work made by artificial intelligence the intellectual property rights.

The AI system like that of chatgpt and copilot go through a huge number of resources to create any work or provide any solution. The data and information they go through most often include

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<sup>17</sup>Simran Karamchandani, Protecting Music from Digital Exploitation: Challenge to copyright law in digital India, legal service india <https://www.legalserviceindia.com/legal/article-11107-protecting-music-from-digital-exploitation-challenges-to-copyright-laws-in-digital-india.html>

<sup>18</sup> Arpan Banerjee and Neil Gane, Copyright piracy and cybercrime: enforcement challenges in India, WIPO magazine (December 2022) [https://www.wipo.int/wipo\\_magazine/en/2022/04/article\\_0008.html](https://www.wipo.int/wipo_magazine/en/2022/04/article_0008.html)

<sup>19</sup> Simran Karamchandani, Protecting Music from Digital Exploitation: Challenge to copyright law in digital India, legal service india <https://www.legalserviceindia.com/legal/article-11107-protecting-music-from-digital-exploitation-challenges-to-copyright-laws-in-digital-india.html>

<sup>20</sup> Khushi Malviya, Copyright Issues in the Digital Era: Challenges and Solutions, CLATatalogue (19<sup>th</sup> march 2024) <https://lawctopus.com/clatalogue/clat-pg/copyright-issues-in-digital-era/>

copyrighted materials. This in turn raises concerns related to the copyright infringement that are done by the AI system. The AI system might inadvertently replicate or mimic some existing copyrighted material that existed in its database. This in itself presents the biggest challenge, i.e. the determination of ownership and accountability of the AI generated content.

The most debated question in the world right now is that whether AI generated arts and works can be protected under the copyright laws. The US copyright office in this regard holds the opinion that any creation that is created by any non human entity cannot be eligible for copyright protection. However India, through the copyright act of 1957 states that copyright of any computer generated work vests on the person who contributed to the input of such creation. In United Kingdom, similar to India, the copyright design and patent act specified that for computer generated work, the author is the person who made the arrangement for the creation of such work. In America, therefore, AI does not enjoy any copyright protection though in India and UK copyright protection is given to the person who was responsible for the creation of the work rather than the artificial intelligence who created the work by itself. The federal court of the United States held that an AI artwork cannot meet the criteria set forth under its copyright law as the copyright law is 'limited to the original intellectual conception of the author'. The main reason for not covering AI under the scope of copyright is that, it is quite difficult and challenging to hold AI accountable for any infringement of copyright.

To summarize it perfectly, while the artistic or creative work made by AI can indeed be copyrighted but the copyright protection is not vested to the artificial intelligence rather it is vested on the human whose involvement resulted in the creation of the copyrighted work. Balancing of innovation, creativity and intellectual property in an increasingly AI driven world remains a critical concern. It is about time that we rethink the traditional notion of authorship and ownership and evolves with the evolving AI and copyright landscape.

### **Case laws related to infringement of copyright protection by digital platforms**

The infringement of copyrighted materials in the digital platform is a serious concern that reflects the gap in the present legal scenario and the lack of appropriate legal tools to combat the same in the society. The judiciary tries and sometimes successfully fills the gap left by the lack of legislation through the interpretation and implementation of the existing legislation that exist today. The judiciary through its decision making process has set in place various

parameters and tools that are used to combat and prevent the exploitation of copyright material in Digital arena.

## **Indian case laws**

### **Eastern book company and ors. Vs D.B Modak and ors<sup>21</sup>**

The petitioner who was a partnership firm publishes a 'Supreme Court Cases' (SSC) which contained reportable and non-reportable judgements, orders and directions that are given by the Supreme Court of India. The defendant in 2004 released a software on CD-ROMS called 'grand jurix' and 'the laws'. The defendant allegedly copied the version of SSC with any prior authorization. The EBC claimed copyright over their work on SSC and alleged that the defendant copied the EBC's work which constitute infringement. The defendant on the other hand argued that the judgements of the supreme court are available in the public domain and EBC's work does not fall under the scope of copyright protection. The court held that the EBC's work does entails copyright protection and that the defendant has infringed on the right of the petitioner by making unauthorized copies of SSC and selling them in the market. This instant case was important as it established the 'skill and judgement' principle which emphasized that derivative works should contain author's independent skills, labor and capital to make a work original and thus subject matter of copyright protection.

### **Neetu singh & anr vs telegram FZ Llc & ors <sup>22</sup>**

The plaintiff in this lawsuit filed a petition in front of the Delhi high court seeking permanent injunction to prevent the unauthorized use and dissemination of their copyrighted materials, i.e. study materials. The plaintiff also claimed damages and reliefs. In this suit, the plaintiff alleged that the defendant is an operator of the messaging group telegram which is distributing their books in pdf form at a discounted price. The plaintiff has already taken measure to shut down the main channel but almost instantly another channels were made for the same purposes. The plaintiff further alleged that this act of telegram was infringing their copyright. The Delhi high court directed telegram to disclose the specific user data related to this specific copyright infringement and asked telegram to provide details such as mobile number, IP address and

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<sup>21</sup> Anushka Bharwani, Eastern Book Company and Ors. Vs D.B. Modak and Ors., law times journal (8<sup>th</sup> october 2020) <https://lawtimesjournal.in/eastern-book-company-and-ors-vs-d-b-modak-and-ors/>

<sup>22</sup> Ankit Rastogi, Neetu Singh & Anr. V. Telegram FZ LLC & Ors. Indian case laws (16<sup>th</sup> December 2022) <https://indiancaselaw.in/neetu-singh-anr-v-telegram-fz-llc-ors/>



Email IDs that are used to upload the infringing content. This case is important because this is the first time any Indian court has directed any app to disclose data especially when they are related to copyright infringement. The defendant in their reply stressed that telegram is not an Indian company and thus, does not have the jurisdiction to deal with the lawsuit. Telegram argued that it is a Singaporean company where its servers are located and disclosing any detail will amount to privacy policy. The Delhi high court reiterated that the IP address used and the channels created are most probably located in India and that the personal data protection act of 2012 has provided that data can be disclosed for the purpose of any proceeding that is related to enforcement of copyright protection and prevention of copyright infringement. The Delhi high court further held that the court has found a prima facie case of infringement which enable the plaintiff to obtain remedies under the Indian copyright act. Thus, the application made by the plaintiff was allowed and the plaintiff was awarded damages and relief.

### **American case laws**

#### **Google llc vs oracle america inc<sup>23</sup>**

In this proceeding the dispute mainly centered upon the use of java programming language application programming interface (APIs and about 11,000 lines of source code within the earlier version of android operating system by google. Oracle in turn claimed that Google's use of their API amounts to infringement of copyright. The oracle claimed that the use of API by google is infringing their copyright and thus they seek injunction, damages and other reliefs. Google in its reply argued that the use of API programming by them amounts to fair use and they are well within their right to use the API programming system for their android operating system. The two district court level jury held that use of API indeed falls under the fair use provision but the federal circuit court reversed the order as it held that APIs are copyrightable and thus does not falls under the provision of fair use. Google challenged and appealed the order of the federal circuits in the supreme court, which restored the verdict of the district court level jury in the year 2019. The case is of significant interest to the tech and software industries as many computer programs and software libraries, especially the one with open source, ised API for developing interoperability better different platform and system.

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<sup>23</sup> Google LLC v. Oracle America Inc. 593 US \_ (2021), oyez <https://www.oyez.org/cases/2020/18-956>

**Lang van inc vs VNG corporation<sup>24</sup>**

In this proceeding the lang van inc filed a petition for copyright infringement against VNG corporation. The petition alleged that thousands of lan vang's copyrighted work are being disseminated by VNG's app globally including the united states. Lang van further claimed that it was a deliberate move made by the VNG to release the copyrighted work in the united state especially in the California jurisdiction which allowed access, to thousands of iOS owners and app based users on google platform, to his copyrighted work. Initially, the district court dismissed the lawsuit stating the ground of lack of personal jurisdiction over VNG due to its being a Vietnamese corporation. Later in 2016, the ninth circuit court reversed the order by allowing lang van to conduct discovery related to jurisdictional issues. The district court again dismissed the case finding no personal jurisdiction over VNG. The ninth circuit court disagreed with the district court by stating rule 4 (k) (2) under the federal rule of civil procedure which provides jurisdiction for foreign defendant with ample contacts across united state even if no single state have jurisdiction This ruling allowed the proceeding related to copyright infringement proceed emphasizing VNG's connection to united stated even if it is a Vietnamese corporation.

**United Kingdom Case laws****Capitol records & ors vs British telecommunication plc & ors<sup>25</sup>**

In this proceedings, the claimants are record companies which are suing for themselves and on behalf of others, the claimants are suing a website called the nitroflare.com which the claimants alleges that nitro flare is being used to infringe copyright at a large scale. The claimant seek to obtain an order under section 97A of the copyright, design and patent act of 1988.

The website nitro flare was a cyberlocker site which allowed users to upload, access and download unlicensed commercial content including music files. The court held that the site indeed infringes copyright and made the blocking order because the defendant are service providers and they infringed the copyright with full knowledge of such infringement. This case

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<sup>24</sup> Lang Van, Inc. v. VNG Corp., 40 F.4<sup>th</sup> 1034 (9<sup>th</sup> Cir. 2022) <https://casetext.com/case/lang-van-inc-v-vng-corp-1>

<sup>25</sup> Capitol records & ors vs British telecommunication plc & ors, casemine <https://www.casemine.com/judgement/uk/603c9f912c94e050ead8df12>

was monumental in highlighting the conflict between online copyright infringement and the role of internet service providers in blocking such infringing content.

### **Tunein inc vs music uk ltd. & ans<sup>26</sup>**

In this proceeding, the tunein inc operated an online platform that gave access to users to various radio stations worldwide, it also enabled the users to access internet radio station, play music through the app and even record and play back of the individual's work. The claimant which included warner music Uk they alleged that tunein infringed their copyright by enabling users to listen to foreign radio stations. The court also found tunein to be liable for such infringements and also stated that tunein was aware of the fact that it does not have the license to use such copyrighted work in their platform. This ruling set out a precedent for online platform liability.

### **Legislation Related To Protection Of Copyright From Infringement In The Digital Era: American And Indian Perspective**

The introduction of internet brought massive changes. Organizations and corporations began optimizing their software and networking processes, connectivity expanded and businesses started using internet for communication and commercial purposes. The rise of mobile phone coupled up with the internet connection enabled people to access information and data over the internet in a efficient and fast manner. From the introduction of internet till its current status, internet is used both in positive and negative manner. Internet has shortened the distance between people and countries but it has also led to cybercrimes or white collar crimes. The digitalization and invention of internet has greatly affected the arena of intellectual property rights. The public domain has widened and it has become more accessible for people all around the world. This impact of internet and digitalization has facilitated research and experimentation work by using the existing intellectual property, but it has also increased the number of infringement cases. The infringement in the digital realm is difficult to track and remedy, as anything that once goes in the internet, stays there. The countries all over the world are evolving their intellectual property laws to cope up with the rapid digitalization to reap the

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<sup>26</sup> TuneIn Inc v Warner Music UK Ltd and Sony Music Entertainment UK Ltd, 8 new square (26<sup>th</sup> march 2021) <https://8newsquare.co.uk/case/tunein-inc-v-warner-music-uk-ltd-and-sony-music-entertainment-uk-ltd/>

highest benefits by preventing infringement and malicious activities toward intellectual property rights and their holders.

America has always been one of the most active country to protect their intellectual property rights and also to prevent infringement. America has always strive to evolve the laws to better protect the interest of the intellectual property rights holder. The united state to protect its copyright holders from infringement, in the era if digitalization, have enacted, the digital millennium copyright act in the year 1988 as federal copyright law. The primary purpose of this act is to protect the interest of copyright holders from the misuse and illegal distribution of their intellectual property rights in the internet<sup>27</sup>. The DMCA has affected mostly the digital realm by empowering the copyright owners from maintaining control over who has access to their work and how such access will be implemented and established. The DMCA mainly deals with three main provision which are the most important provision for preventing infringement in the digital platform. The three provisions are<sup>28</sup>-

➤ **Anti-circumvention provision**

The DMCA provides provision for the prevention of circumvention of the digital rights management technologies. The anti-circumvention provision prevent the unauthorized replication and distribution of any copyrighted work. The anti-circumvention provision prohibits the circumvention of any encryption or access control that is portecting anu copyrighted content. If any person circumvent the same with the sole purpose of infringing the copyright material, then he will be held liable and the mere act of circumvention will amount to illegal activity.

➤ **Safe harbor provision**

The online service providers are mostly made liable in case of copyright infringement. The provision of safe harbor provides protection and immunity to the online service providers from any potential copyright infringement. The OSP to enjoy the protection of this provision must adopt and implement a policy of terminating the accounts or the subscription of the repeat infringer, the OSP must actively respond to the valid takedown request and must comply with

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<sup>27</sup> Aleksandar Kochovski, What Is DMCA? A 2024 Guide to Copyright Law, Cloudwards (21st February 2024) <https://www.cloudwards.net/what-is-dmca/>

<sup>28</sup> The Digital Millennium Copyright Act, Copyright.gov <https://www.copyright.gov/dmca/>

valid takedown notice. If they takedown the infringing material they are shielded from any liability, the OSP shall be aware of the infringement and shall comply with takedown notice accordingly and lastly, OSPs shall appoint agents to receive takedown notice and register the same with the US copyright office.

### ➤ Notice and takedown provision

The DMCA has established the procedure of notice and takedown. In this procedure, the copyright owners can notify OSPs about any infringing materials that are published on their platforms. Upon receiving and examining the validity of the notice, OSP must promptly remove or disable access to any infringing content in their platform. OSPs also provide a counter-notice period to the user, allowing the user to reply to the takedown of their material if they are of the belief that the content was taken down wrongfully.

The Indian copyright act of 1957 protects the digital content that relates to any artistic, dramatic, literary and musical work, the section 14(1) (a) of the copyright act specifically addresses and deals with digital reproduction of original copyrighted work<sup>29</sup>. In 1994, the Indian copyright act was amended to recognize digital content as abstract work that included computer programs, tables, collection and other digital information<sup>30</sup>. This amendment was brought in the Indian copyright laws to protect the work of the author irrespective of by which medium the work was created. Another amendment was brought along in the year 1999 due to the influence of TRIPS agreement<sup>31</sup> which also provided for incorporation of further digital platforms into the fold of copyright laws. In the year 2012 another amendment to the existing law was made to penalize offenders of technological copyright infringement and reinforcing the rights of the copyright owner in the digital arena<sup>32</sup>, this amendment highlighted the need for stronger laws to protect copyright owners from digital infringement and also the importance of digital media.

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<sup>29</sup> Protection of Digital Content in relation to Copyright Law in India, IIPR (10<sup>th</sup> October 2022)

<https://www.iiprd.com/protection-of-digital-content-in-relation-to-copyright-law-in-india/>

<sup>30</sup> Legal Protection Of Digital Contents Under Indian Copyright Law In The Light Of International Conventions, legal service India <https://www.legalserviceindia.com/legal/article-8880-legal-protection-of-digital-contents-under-indian-copyright-law-in-the-lights-of-international-conventions.html>

<sup>31</sup> <https://nopr.niscpr.res.in/bitstream/123456789/14460/1/JIPR%2017%284%29%20324-334.pdf>

<sup>32</sup> Protection of Digital Content in relation to Copyright Law in India, IIPR (10<sup>th</sup> October 2022)  
<https://www.iiprd.com/protection-of-digital-content-in-relation-to-copyright-law-in-india/>

The amendment of the existing copyright act coupled up with the information technology act of 2000 can effectively deal with any it related intellectual technology infringement, the it act of 2000 has indirect impact on the intellectual property laws, it deals with issues that are related to the electronic goods, digital signatures and cybercrimes<sup>33</sup>. All the intellectual property laws intersect and collectively contribute to the protection and regulation of digital intellectual property rights<sup>34</sup>.

The digitalization of copyright arena and the legislation that regulate it has the potential to unlock the benefits that the digital realm can bring to the protection of the copyrighted work. The subject matter of copyright protection covers a variety of rights that ranges from artistic and creative work to computer software's. The necessity to protect the copyright laws in the digital platform is felt by both our country and the international countries as well. By protecting copyright in the digital platform we are encouraging creativity and originality.

### **The opportunities presented by digitalization in the arena of copyright laws**

The onset of digitalization has changed the landscape of intellectual property, especially, the intellectual property that deals with artistic and creative work, also known as copyright. The use of digital platforms has unlocked the true potential of copyright. The digital platform has widened the scope of copyright by introducing broadcasting and cinematography. The new trend of content creation for platforms like YouTube, tiktoks, Instagram's and have also brought about changes in the way we used to perceive copyright. Digital technology and the Internet have created a powerful tool for fast and affordable distribution of creative content reaching billions of people in every corner of the world<sup>35</sup>. The rise of digital platforms and streaming services has given the authors and artists another canvas to create something original and creative work. The digitalization came along with various challenges as well as opportunities.

The opportunities of the digitalization of copyright protection entails:-

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<sup>33</sup> Divjot Arora, Analysis of laws/regulations pertaining to digital Intellectual Property Rights, ipleader (27<sup>th</sup> march 2021) <https://blog.ipleaders.in/analysis-laws-regulations-pertaining-digital-intellectual-property-rights/>

<sup>34</sup> Divjot Arora, Analysis of laws/regulations pertaining to digital Intellectual Property Rights, ipleader <https://blog.ipleaders.in/analysis-laws-regulations-pertaining-digital-intellectual-property-rights/>

<sup>35</sup> Copyright in the Digital Environment, WIPO

<https://www.wipo.int/copyright/en/activities/digital.html#:~:text=Digital%20technology%20and%20the%20Internet%20have%20created,challenges%20to%20rightsholders%20and%20the%20general%20public;>

➤ **Fast and affordable distribution<sup>36</sup>**

The digital platforms provide a fast and more accessible platform to keep the copyrighted work. The maintenance of digital files are way more effective, cost saving and faster to access than the maintaining of physical copies of the creative work. The labor of keeping the same also decreases where all the file can be accessed in the click of some buttons.

➤ **Digital watermark<sup>37</sup>**

The works, especially the digital works in the digital platforms are usually marked with unique sings, symbols and signature of the creator which helps in identifying the work of any one specific artist. The watermark also protect the said piece of creative work from. Being distributed without the authorisation of the author or the creator. This helps the author to build their unique identity and brand.

➤ **Access control and copy control<sup>38</sup>**

The author has the control to consider the amount of access that he will authorize others for, the author also has the option to encrypt his work in the digital realm and only allow access through passwords that only he can provide access to. The author also has the control over the copying of his work. Only people he license to can use his work. The digital platform will help in preventing copies by assigning unique symbols and IDs to the artistic work.

➤ **Global recognition**

The digital platform will facilitate the spread of the artistic and creative work not only in the territory if the author's country but also internationally through the use of internet and digital platform which transcend the national boundaries and territories and are accessible to millions of people all over the world.

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<sup>36</sup> Nehal Wagle, Copyright in Digital Era, ipleader (12<sup>th</sup> may 2019) <https://blog.ipleaders.in/copyright-digital-era/>

<sup>37</sup> Digital Copyright law, the law tree <https://thelawtree.akmlp.com/insights/digital-copyright-law/>

<sup>38</sup> Digital Copyright law, the law tree <https://thelawtree.akmlp.com/insights/digital-copyright-law/#:~:text=Digital%20watermarks:%20The%20owner%20can%20track%20his,the%20author's%20original%20work%2C%20watermarking%20is%20used>

➤ **Blockchain technology and smart contract<sup>39</sup>**

The blockchain technology and smart contract can be used to record ownership and the licensing and assignment of copyright. Blockchain is a technology that is primarily used in cryptocurrency transaction. A record made in blockchain cannot be changed or modified. It is near impossible to tamper with. The advent of digitalization has made it possible to use blockchain and smart contract in the record keeping of copyright registration.

➤ **Fair use and impact on education**

The advent of internet and digitalization has made accessing of information and data over the internet easy and fast. The fair use doctrine of copyright allows the use of limited portion of copyrighted material in research or experimental purposes. The digitalization of copyrighted material has made it easy to access this materials to conduct research and experiments. Long gone are the days when researchers has to spend long hours to access material and data's through libraries and other such traditional methods. The introduction of internet has simplified the researchers pursuit for materials related to their research field. The researcher can now access hundreds and thousands of articles, journals and websites online to conduct their researches in the comfort of their places.

➤ **Storage<sup>40</sup>**

The digital platforms can also be used to store data and information related to the copyrighted material. In the past few years the use of digilockers have increased tremendously. These lockers works as virtual storage unit which can be accessed from anywhere through the use of electronic devices and internet. The digilockers can be used to access documents and application relating to the use and licensing of copyright material. This will simplify the process of keeping records of copyright.

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<sup>39</sup> Digital Copyright Law, the law tree <https://thelawtree.akmlp.com/insights/digital-copyright-law/#:~:text=Digital%20watermarks:%20The%20owner%20can%20track%20his,the%20author's%20original%20work%2C%20watermarking%20is%20used.>

<sup>40</sup> Alankrita Mathur, A Reflection upon the Digital Copyright Laws in India, Journal of Intellectual Property Rights

Vol 25, January-March 2020, pp 5-14 <http://op.niscpr.res.in/index.php/JIPR/article/download/65193/465481076>



➤ **Reproduction and dissemination<sup>41</sup>**

The reproduction and distribution or dissemination of copyrighted materials in the digital platform is tremendously easy and fast. The intellectual property can be reproduced and distributed through the digital platform in mere minutes, if not seconds. The reproduction and dissemination of copyrighted material over the internet also saves money and is environmental friendly in nature. Many OSPs provide free websites to publish the creative work of authors. This saves the cost of publication for the author. Accessing any material in the internet is easy as well. All the information in the internet are only one click away which makes it the best option for dissemination of copyright work.

➤ **Recording and transmission<sup>42</sup>**

The recording and transmission of audio-visual copyright work is also easier in the digital form. The storage of such audio-visual in the digital platform or sharing of such audio-visual in the streaming platforms are done easily through the use of digital mediums.

The digitalization of copyright has brought with many opportunities, the usage of those opportunities lies in the hand of the copyright holders. The digital remedies can be used to block infringement of copyrights and the technologies like block chain and smart contract can be used to identify, track and remedy any copyright infringement that take place. It can also be used to keep record of ownership and licensing of copyright works. The digitalization of copyright management is an evolving concept, slowly but surely, digitalization is intersecting with the copyright.

## **Conclusion**

In conclusion, it is safe to say that digitalization have presented both challenges and opportunities for the growth and development of copyright. The challenges ranging from unauthorized dissemination of copyrighted work to complexity in identifying the gaps in the scope of copyright in the digital platform and the lack of legislation and regulation to address

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<sup>41</sup> Varsha Yadav, Copyright Laws: Challenges In The Digital Era, Indian Journal of Law and Legal Research ISSN: 2582-8878 | PIF: 6.605 <https://www.ijlrr.com/post/copyright-laws-challenges-in-the-digital-era#:~:text=With%20increasing%20use%20of%20technological%20advancement%2C%20rapid,a%20click%20with%20the%20help%20of%20internet>

<sup>42</sup> Eric Fleischmann, The Impact of Digital Technology on Copyright Law, 8 Computer L.J. 1 (1987) <https://repository.law.uic.edu/cgi/viewcontent.cgi?article=1452&context=jitpl>

them. Governments all over the world are concerned about the transaction of private information in the digital realm, sometimes without the consent of the owner of the information. Identifying infringement in over the internet is also a complex process and needs intense resources to be dealt with. On the other side, digitalization has also provided the copyright holders with various opportunities that ranges from digital storages to new platform to exploit for publication of their work. The digitalization has evolved the way copyright principle intersect with the digital platform.