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INTELLECTUAL PROPERTY IN DIGITAL INDIA

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ABSTRACT

The rapid digitalisation of contemporary society has transformed the creation, ownership, distribution, and commercialisation of intellectual property. In India, the growing use of digital platforms, artificial intelligence, blockchain, and online marketplaces has created new opportunities for innovation while complicating the enforcement of intellectual property rights. This article examines how digitalisation affects different forms of intellectual property, particularly copyright, trademarks, domain names, and patents, within the Indian legal framework. It analyses the challenges of digital piracy, uncertain authorship and ownership of AI-generated works, misuse of trademarks in cyberspace, and the patentability of computer-related inventions. The discussion draws upon relevant provisions of the Copyright Act, 1957, the Patents Act, 1970, and significant judicial decisions, including UTV Software Communication Ltd. v. 1337X.to and Satyam Infoway Ltd. v. Sifynet Solutions Pvt. Ltd. It also explores the potential of emerging technologies to facilitate rights management, infringement detection, and royalty payments, while recognising their limitations in determining legal ownership and liability. The article argues that digitalisation has not diminished the significance of intellectual property; rather, it has altered the conditions under which intellectual property rights operate. A balanced and adaptable legal approach is therefore essential to protecting creators and innovators while accommodating technological advancement and legitimate digital uses.

I. INTRODUCTION

Intellectual property has always dealt with things that are not physical—such as an invention, a book, a design, a brand or any other creation of the human mind. What has changed with digitalisation is not only

the type of intellectual property that is created but also the way that intellectual property is created, accessed, copied, commercialised and shared. A photograph, for example, can be reproduced thousands of times without anyone exchanging a physical copy. A brand can be misused by registering a domain name in another part of the world. Likewise, artificial intelligence can create content by analysing large amounts of existing material.

This makes the issue more complicated than asking whether intellectual property can be protected online. The important question is what happens to intellectual property rights when the environment in which those intellectual property rights operate becomes digital.

Intellectual property and intellectual property rights are closely related. They are not the same thing. Intellectual property refers to creations, inventions, signs and other forms of subject matter that can receive legal protection. Intellectual property rights, on the other hand, are the legal rights given to creators or owners over that subject matter. Digitalisation therefore affects not only the intellectual property itself but also the ability to identify the owner of that intellectual property, control its use, grant permission, receive payment and enforce those rights when they are violated.[1]

II. FROM INTELLECTUAL PROPERTY TO DIGITAL RIGHTS

The traditional understanding of intellectual property was based on a fairly simple relationship between a work, its creator and its user. Digital technology has changed each part of this relationship. A work can exist in digital form, move across multiple platforms and be modified by users within seconds.

At the same time, the distinction between a creator and a consumer has become increasingly blurred. Social media users, software developers, digital artists and online businesses are constantly creating, sharing and reusing content.This does not mean that traditional intellectual property rights have become irrelevant. Instead, enforcing those rights has become much harder to track.

[1]See M. Celestin, The Future of Intellectual Property Law in the Digital Age: How Companies Are Protecting Their Innovations in a Globalized Market, 8(2) Brainae J. Bus., Sci. & Tech. 1034 (2024); Qianlan Bai et al., The Dual-Effect of Emerging Technologies on Intellectual Property Rights in the Digital Age (2024).

Copyright is an example. Under the Copyright Act, 1957, copyright owners have rights over acts such as reproduction and communication to the public, subject to certain statutory limitations.[2] In the physical world, reproducing a book or film without permission usually involves a relatively identifiable act of copying. Online, however, the same thing can happen through a download, upload, repost, stream, screenshot or sharing link. Often, the copyright owner may not even know where the original copy came from or how far it has been distributed.

Digitalisation therefore has not necessarily created a new kind of right. Instead, it has changed the circumstances in which existing rights have to function.

III. COPYRIGHT IN THE AGE OF INSTANT REPRODUCTION

Copyright has probably been one of the areas of intellectual property most visibly affected by digitalisation. Music, films, photographs, books, software and other creative works can now be distributed across the world at almost no physical cost. The research material repeatedly highlights this problem. Digital piracy is made easier by the fact that infringing material can be reproduced quickly and new websites or platforms can appear after earlier sources have been removed.[3] The problem therefore is not simply determining whether infringement has taken place. The greater challenge is ensuring that a copyright owner's legal rights remain effective when an infringing copy can reappear immediately. These provisions show that Indian copyright law has already moved beyond an understanding of copying that is limited to physical objects.

The courts have also had to respond to changing technology. In UTV Software Communication Ltd. v. 1337X.to, the Delhi High Court dealt with websites that were making copyrighted films available

Indian law already contains provisions that address this problem. Section 51 of the Copyright Act sets out circumstances in which copyright is infringed, while Section 52 provides exceptions for acts that do not amount to infringement.[4] Sections 65A and 65B also deal with technological measures and

[2]Copyright Act, 1957, § 14 (India).

[3]Prof. O.V.C. Okene et al., Intellectual Property in the Digital Age, 19(1) J. Jurisprudence, Int'l L. & Contemp. Legal Issues (2025).

[4]Copyright Act, 1957, §§ 51–52 (India).

rights-management information.[5] These provisions show that Indian copyright law has already moved beyond an understanding of copying that is limited to physical objects.

The Court allowed blocking of infringing websites and recognised the need to deal with mirror and redirect websites as well.[6] The importance of the decision goes beyond blocking a particular website. It reflects a reality of online infringement: shutting down one website may have limited value if the same material immediately appears at another address.

At the same time, the law cannot be enforced by treating every online intermediary as an infringer. MySpace Inc. v. Super Cassettes Industries Ltd. shows how difficult it is to balance the interests of copyright owners with the need to establish rules that are practical for internet platforms.[7] The digital environment therefore needs an approach that protects copyright while still allowing platforms to host large amounts of lawful content.

IV. WHEN OWNERSHIP BECOMES UNCLEAR

Digitalisation creates a more difficult problem when the question is not whether a right has been infringed, but who actually owns the right. Artificial intelligence has brought this question into focus. AI systems can produce text, music, images and other kinds of content by using existing data and following prompts. The Dual-Effect study shows how difficult it can be to decide authorship and ownership when both technology and a human contribute to the output.[8]

The problem is therefore not simply whether AI is “good” or “bad” for intellectual property. AI can help spot infringement and manage large amounts of IP information, but it can also create doubt about who owns the work, who is liable and who is the author. An AI tool may spot images while questions arise about the data used to train it and the content it creates.

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[5] Id. §§ 65A–65B.

[6] UTV Software Communication Ltd. v. 1337X.to, 2019 SCC OnLine Del 8002.

[7] MySpace Inc. v. Super Cassettes Industries Ltd., 2016 SCC OnLine Del 6382.

[8] Bai et al., supra note 1.

This also shows a difference between making something or owning it and owning the intellectual property rights in it. NFTs are an example. Buying an NFT linked to a piece of art does not mean that the buyer gets the copyright in that art.[9] Owning a digital token or a copy is not the same as having the right to copy, change or sell the original work.

That difference may look technical, but it matters in practice. Someone can pay a lot for an asset and still have no legal power to reproduce the art for profit. Digital ownership therefore should not automatically mean intellectual property ownership.

V. TRADEMARKS, DOMAIN NAMES AND DIGITAL IDENTITY

The effect of digitalisation is not limited to copyright. Trademarks have also become more important because many businesses now operate through websites, apps, social media and online marketplaces.

For companies, a domain name can be almost as important as a physical sign. If someone else registers a domain name that contains a well-known trademark, the harm can include confusing customers, diverting them and hurting the company's goodwill.

The Supreme Court recognised the value of domain names in Satyam Infoway Ltd. v. Sifynet Solutions Pvt. Ltd., holding that domain names can possess characteristics of trademarks and deserve legal protection.[10] Earlier cases such as Tata Sons Ltd. v. Manu Kosuri also show how trademark law evolved when well-known marks were misused through domain names.[11]

The digital world has therefore widened the spaces where trademark rights must be defended. A trademark is no longer found only on product boxes or outside a shop. It can appear in a domain name,

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[9]Id.

[10]Satyam Infoway Ltd. v. Sifynet Solutions Pvt. Ltd., (2004) 6 SCC 145.

[11]Tata Sons Ltd. v. Manu Kosuri, 2001 SCC OnLine Del 263.

a social media handle, an online advertisement or an e-commerce listing. Protecting a trademark now also means protecting the identity and goodwill that come with it across these spaces.

VI. PATENTS AND THE QUESTION OF DIGITAL INNOVATION

Patents bring another issue. Digital India relies increasingly on software, algorithms, artificial intelligence and data-driven technology. Not every technological idea automatically receives patent protection.

Section 3(k) of the Patents Act, 1970, excludes mathematical methods, business methods, computer programmes per se and algorithms from patentability.12 Indian courts have nevertheless looked at the difference between a computer programme per se and an invention that offers a real technical contribution. Delhi High Court decisions concerning computer-related inventions show that the issue is not simply whether software is involved, but how the invention fits within the law.13

This issue becomes more important as AI grows. AI is increasingly used in healthcare, finance, manufacturing and research. Consequently, inventions may combine software, data and technical steps that are closely linked. Patent law must prevent monopolies over algorithms while still giving genuine technological innovators meaningful protection.

VII. TECHNOLOGY AS PART OF THE SOLUTION

Digitalisation has brought challenges for intellectual property, but technology can also offer some answers. Blockchain, for example, can create a record that is difficult to alter concerning a work. This record can help establish when the work was created, who claims ownership of it and how it can be used.

[12]Patents Act, 1970, § 3(k) (India).

[13]Microsoft Technology Licensing, LLC v. Assistant Controller of Patents & Designs, 2023 SCC OnLine Del 2077; Blackberry Ltd. v. Controller of Patents & Designs, 2024 SCC OnLine Del 5571.

Smart contracts can also facilitate royalty payments when specified conditions are satisfied. 14 Likewise, tools using artificial intelligence can examine large amounts of online content and identify uses of copyrighted works that may not be authorised.

These technologies are not a replacement for the law. A blockchain record alone cannot decide who legally owns copyright. Likewise, an automated detection system cannot conclusively determine whether a particular use falls within an exception under the law. Technology can provide evidence and help manage rights faster, but courts or other legal bodies must ultimately decide what rights exist and how they apply.

VIII. THE WAY FORWARD

India's challenge is not always to create a new set of digital IP rules whenever a new technology appears. Existing laws already contain principles that can deal with several digital uses of intellectual property. The pressing task is to keep those principles working effectively as technology continues to change how intellectual property is made and used. Three areas need particular focus. First, there is a need for clearer rules concerning who owns and who authored a work made with the help of AI. The law should distinguish between a human who contributes creative ideas, a machine that produces the work automatically and the use of material that is already protected.

Second, licensing and rights management in the digital world should be easier to understand and enforce. Creators and companies increasingly depend on platforms, subscriptions, digital markets and automated tools to share their work. Therefore, clear rules about who owns a work, who can license it and what uses are permitted are essential.

Third, enforcement mechanisms must match the realities of technology. Website blocking, noticeand-takedown mechanisms, cooperation from platforms and technological tools for detecting violations can all help. Enforcement must also recognise legitimate uses of protected material and avoid placing unfair pressure on users or intermediaries.

[14]Bai et al., supra note 1.

IX. CONCLUSION

Digital India has not made intellectual property less important. In fact, it has made the exercise of intellectual property rights more complex.

The main interests remain the same. Creators want to control their works. Inventors want protection for new ideas. Companies want to guard the identity and reputation tied to their brands. What has shifted is the setting in which these rights operate. A work can be copied without a physical copy changing hands. A brand can be misused without a brick-and-mortar shop. An invention can rely heavily on software and data. Ownership can become unclear when AI or digital assets form part of the process.

The future of intellectual property law in India should not be seen as choosing between technology and tighter protection. A wiser approach is to ask whether the law can guard rights without treating every new technology as a danger. Digitalisation has altered how intellectual property is made, shared and used. The task for law is to keep the rights tied to that property clear, enforceable and adaptable enough to grow with technology.