DRM PROVISIONS AND THEIR EFFECTS ON RESEARCH

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ABSTRACT

This article critically examines the scope and implications of Digital Rights Management (DRM) technologies, especially within the context of academic research and access to information. While DRM serves as a technological and legal tool to prevent unauthorized distribution of digital content, its implementation raises significant challenges for lawful users, particularly researchers, educators, and persons with disabilities. The article explores how DRM restricts fair use, impedes accessibility, and undermines the exercise of user rights, despite legal protections like those provided under India's Copyright Acts. Through case laws, the discussion highlights how judicial pronouncements attempt to balance content protection with academic freedom and copyright ownership. The paper concludes by emphasizing the need for a more harmonized approach to DRM governance one that upholds both intellectual property rights and the public interest in equitable knowledge dissemination.

Keywords: Digital Rights Management (DRM), copyright law, academic research, fair use, technological protection measures (TPMs), public domain.

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No definition of Digital Rights Management (DRM) is universally agreed upon. DRM solutions may be simple copy protection protocols, or they may be sophisticated management systems controlling and monitoring all access to digital material. Bechtold simply defines DRM as a set of related technologies intended to create a secure distribution system for digital materials. These systems are installed on different digital media and services, such as compact discs, DVDs and players, pay-TV decoders, online streaming websites¹, video games, media players, software programs, e-books, and cell phones.

A major characteristic of most DRM systems is encryption technology, which will keep content inaccessible without particular approval. This is done using digital "envelopes" or "containers" that protect stored information, decrypting only when conditions are met using an assigned decryption key. Certain breakthrough technologies, such as "Rights Locker Architectures," enable access to material on numerous devices, connecting authorization to distinct users instead of hardware. To better control content dissemination, DRM systems embed identifiers and metadata that allow machine-readable tracking of ownership, access rights, and usage conditions. Using Rights Expression Languages (REL) contained in metadata, content providers can restrict access based on duration, location, device compatibility, and user permissions. They can also control the quality and structure of digital content and, in most instances, make access contingent upon conformity with electronic payment systems.

Even with these controls, DRM systems are not impenetrable. No security system can ensure complete protection against all types of unauthorized access. DRM technologies are still susceptible to breaches by expert users, such as hackers who circumvent security systems and crackers who bypass encryption barriers altogether. There is always a balance to be made between the security provided by a DRM system and how much it will cost. Highly advanced DRM models also have issues with interoperability, making it hard to standardize them. Therefore, there is no DRM technology today that can provide an entirely secure digital environment.

However, the main role of DRM is to control user actions and restrict access to digital material for the mass public the main consumer segment responsible for driving demand for copyrighted

¹ Janet Finlay & Alan Dix, An Introduction to Artificial Intelligence 09 (Routledge, New York, 1st edn., 2002).

material. As long as this massive audience is abiding by the restrictions placed by DRM and willing to continue buying digital content, DRM will succeed in meeting its intended purposes. In particular sectors, including computer software, DRM has been and is likely to remain a standard part of video games, on-demand products, e-books, and mobile phones.²

Effect of DRM on Research

The emergence of digital technology increased piracy, which necessitated the use of technological controls to protect copyrighted works. Digital Rights Management (DRM) solutions, for example, encryption and Windows Media Rights Manager, were created to ensure that digital content is not distributed illegally through various security technologies. DRM is a system of rights management that limits access and copying of copyrighted work unless authorized.

To address the changing digital environment, India updated its copyright legislation by way of the Copyright Amendment Act, 2002, which amended the Copyright Act to keep pace with technological developments. The amendment added a formal definition of Rights Management Information (RMI), which encompasses:

- a. The title or other identifying information of the work or performance;
- b. The name of the author or performer;
- c. The name and address of the owner of the copyright;
- d. The conditions of use of the rights; and
- e. Any identification number or code associated with the above information, save for devices or procedures which are solely for the purpose of identifying the user.³

Protection of Technological Measures⁴

Protection of technological measures under copyright law means legal protections that secure copyrighted material against unauthorized use or access. They are important for protecting

² Janet Finlay & Alan Dix, An Introduction to Artificial Intelligence 09 (Routledge, New York, 1st edn., 2002).

³ Copyright Act, 1957, s. 2(xa)

⁴ Copyright Act, 1957, s 65 A.

intellectual property rights so that creators and rights holders can manage and profit from their work in the digital environment. Meanwhile, they also cause concern in the areas of access to information, fair use, and digital rights, and a harmonized legal solution is needed.

The Copyright Act of 1957, Section 65 A, gives legal protection to technological measures employed to avoid copyright infringement. The section states the following provisions:

Any person who circumvents an effective technological protection measure applied for the purpose of protecting rights conferred under this Act, with the intention to infringe such rights, shall be imprisoned for a term not exceeding two years and may also be fined.

The provision does not prohibit the following actions by an individual

- Bypassing technological measures for reasons not specifically banned by the Act, subject to the condition that any individual helping in such bypassing keeps detailed records of the person being facilitated, his/her name, address, and details.
- Carrying out research on encryption based on a lawfully obtained encrypted copy.
- Engaging in lawful investigations.
- Testing the security of a computer network or system with the owner's permission.
- Bypassing technological measures that are meant for user identification or monitoring.
- Taking the necessary steps to ensure national security.⁵

DRM and Legal Use of Copyrighted Materials

An important matter with respect to copyright restrictions and exceptions such as fair use or fair dealing is how Digital Rights Management (DRM) affects their enforcement. For example, pursuant to fair use or fair dealing, a teacher may legally photocopy a portion of a library book for classroom use. Yet, if the same book exists only in digital form, DRM limits might preclude the teacher from copying because embedded copy control measures are present. Consequently,

⁵ Sumeet Malik, Intellectual Property Rights Manual 14q7 (Eastern Book Company, Lucknow, 1st edn., 2013).

rightful access and use allowed under fair use or fair dealing become difficult in the digital environment.

Moreover, DRM not merely inhibits exercise of statutory fair use or fair dealing exceptions where an otherwise infringing action is legally permissible but also bars the legitimate buyer from freely exercising their own copy. For instance, DRM to an e-book or DVD may prohibit a buyer from making a backup copy for private use. In contrast to physical books, which can deteriorate over time, digital copies can become unusable at any given moment because of technological failures, and the lack of backup alternatives is a major disadvantage. DRM also limits space shifting and format shifting of copyrighted content. Space shifting permits the legal owner of a copyrighted digital work to enjoy it in alternate locations. But DRM implements region coding, refusing to allow users to play purchased software or DVDs if the legal owner goes overseas. Format shifting permits users to move copyrighted works from one device to another to make them available. DRM rules, though, restrict interoperability, dictating how and where legally acquired material can be employed. In the end, although DRM is intended to block unauthorized copying, it also places very real restrictions on legitimate use, which creates issues regarding access, consumer rights, and the future of digital ownership.⁶

Challenges of DRM in Accessing Copyrighted Works

Even in instances where evading Digital Rights Management (DRM) may be legal to facilitate fair use or other exceptions within copyright law, the majority of people do not have the technical expertise to do so. This is especially difficult for people with disabilities, who may rely on evading technology in order to access copyrighted materials in accessible modes. For instance, screen readers are computer programs that translate digital text into speech for visually impaired people. But most e-books contain Technical Protection Measures (TPMs) that prevent screen readers and braille versions, making it hard for blind readers to access.

Aside from issues of accessibility, DRM also restricts fair use of digital works by libraries. Some platforms for digital media restrict the number of times an e-book may be loaned, greatly impairing libraries' functions in the dissemination of knowledge. A prime example is the policy of HarperCollins, which limited lending of its e-books to 26 times before they had to be repurchased. Such restrictions go against the very essence of libraries offering extensive and

⁶ Nicolo Zingales, "Digital Copyright, Fair Access' and the Problem of DRM Misuse" Boston College Intellectual Property & Technology Forum 01, (2012).

ongoing access to information, especially for students and scholarly researchers who depend heavily on library collections.

Moreover, DRM technologies impact cloud-based and tethered digital media by enabling copyright owners to remotely manage or erase purchased media on consumers' devices. One example often cited is Amazon's deletion of George Orwell's books, "Animal Farm" and "1984," from Kindle devices without warning, which reflects the potential dangers of DRM in digital ownership. In addition, DRM prohibits the resale of digital copyrighted material since material protected under DRM is not copyable or transferable, which renders second-hand digital markets impossible. This ban essentially transforms conventional notions of ownership under which consumers of physical books, CDs, or DVDs were entitled to resell their copies a right that the DRM takes away in the digital world.⁷

Digital Rights Management (DRM) has come under heavy criticism for its part in limiting access to works in the public domain. The public domain is made up of works either not eligible for copyright protection or whose copyright has expired, thereby being accessible to everyone. Increasingly, DRM use has curtailed access to such works since limits might still apply after copyright protection has expired. The major issue is created when DRM is used to restrict access to works that ought to be free, like those of Shakespeare or Aristotle. When distributed in the DRM-protected form, users might not be able to copy, print, or access text-to-speech functionality, which are essential for accessibility, especially for blind people. For example, popular platforms like Adobe Reader usually have such limitations, even on content that is supposed to be freely available. Likewise, books under open licenses, e.g., Creative Commons, can still be limited when accessed via DRM-restricted platforms, as observed by digital rights activists. A recognition of these obstacles is critical to understanding the broader implications of DRM on public access to knowledge. DRM not only imposes technological and contractual barriers, but it also constrains fair use of copyrighted materials, ultimately undermining the primary intent of copyright law to further learning and creativity.

M/S Super Cassettes Industries Ltd. v. Mr. Chintamani Rao⁸

Super Cassettes Industries Ltd., a leading player in the music and entertainment industry, filed legal action against Mr. Chintamani Rao for purportedly indulging in unauthorized reproduction

⁷ Dr. Besty Vinolia Rajasingh, Digital Copyright Law 50 (Thomson Reuters, Legal Publication, 1st edn., 2020).

⁸ M/S Super Cassettes Industries Ltd. v. Mr. Chintamani Rao, AIR 2012 SC 477.

and distribution of copyrighted music and videos. The accused was alleged to have accessed and used DRM-protected content without seeking the necessary permissions, thus violating copyright laws.

Court Observations

The Delhi High Court ruled in favor of Super Cassettes Industries Ltd., placing significance on primary legal principles:

Importance of DRM Protection: The court acknowledged the position of Digital Rights Management (DRM) in protecting the commercial value of copyright holders. It reiterated that DRM tools are lawfully enforceable techniques to discourage unauthorized duplication and distribution of protected material.

Legal Compliance Requirement: The ruling emphasized the responsibility of users, such as researchers and teachers, to comply with DRM restrictions. It emphasized that any circumvention of DRM systems without authorization is a direct violation of copyright law, emphasizing the need to acquire appropriate licenses for the legitimate use of protected material.

Technological, contractual, and legal restraints in seeking copyright materials for academic purposes

The emergence of digital networks has brought opportunities and challenges to content creators. Although digital platforms have lowered publishing and dissemination costs of information dramatically compared to analog media, they have also facilitated the spread of copyrighted materials without permission. To counter this issue, different technological, contractual, and legal measures have been put in place to limit access and copying of copyrighted works. They are technological protection measures (TPMs) that protect content, end-user license agreements (EULAs) that govern its use, and anti-circumvention legislation that forbids bypassing these protections. Together, they are meant to protect copyrighted content, though they may also restrict legitimate uses, like fair use. Of these three types of control, technology has the most direct impact in controlling access via copy-control means, and contractual and legal restrictions

act to complement and enforce these limits.⁸

DRM technology exists to monitor and control almost all possible uses of copyrighted material. In the process, it tends to bar legal activity, such as fair use and access to works that must be accessible in the public domain because copyright protection has expired. DRM technology basically regulates digital conduct by limiting certain user activities on devices. For example, it may demand passwords for entry, bar alteration of read-only files, or limit simultaneous login attempts from multiple locations. These limitations are encoded into content owners' controlled technical standards, thus determining how consumers engage with digital content.¹⁰ Scholars of law Julie Cohen and Dant Burk contend that technological limitations embedded into technical standards transform them into another kind of regulation basically making these standards a form of law. When copyright holders have total control over technical standards, they are able to impose access and use restrictions that exceed what copyright law itself mandates. As Cohen puts it, "When technological barriers supplant legal ones, private actors have the authority to set access to information, and possibly undercut public interest policies like fair use." Such a capability enables rights holders to set their own form of intellectual property legislation using digital code.⁹

This means copyright owners have substantial control over the manner in which users access and use digital material. In addition to restricting access and use, DRM systems may also cause privacy, security, and consumer rights concerns. This problem became most clearly seen in the Sony BMG Rootkit controversy, where Sony music CDs included DRM technology that monitored users' listening behavior in secret and placed hidden files on their computers without permission. Such unauthorized changes put users' computers at risk for security attacks by malicious third parties.¹⁰

Legal implication

The Supreme Court decision in *University of Kerala v. V. Narendra Prasad*¹³ has profound implications for copyright law and academic practices in India. The seminal judgment explains

⁸ Dr. Besty Vinolia Rajasingh, Digital Copyright Law 51 (Thomson Reuters, Legal Publication, 1st edn., 2020). ¹⁰ Shubha Ghose, Richard S. Gruner, Jay P. Kesan, Intellectual Property Private Rights, The Public Interest, and

the Regulation of Creative Activity 943 (West Academic Publishing, USA, 3rd edn., 2007).

⁹ Paul Torremans, Copyright Law A Handbook of Contemporary Research, 28 (Edward Elgar Publishing Limited, 2007).

¹⁰ Dr. Besty Vinolia Rajasingh, Digital Copyright Law 52 (Thomson Reuters, Legal Publication, 1st edn., 2020).

¹³ University of Kerala v. V. Narendra Prasad, AIR 2003 SCC 162.

important principles of copyright ownership in academic texts:

1. Default Ownership of Copyright:

The Court confirmed that, absent a clear agreement to the contrary, the copyright in an academic thesis is owned by its author. This is in accordance with general copyright law, which deems the creator as the original owner of the copyright.

2. Significance of Clear Agreements:

The case highlights the need for students and institutions to have clear and precise contracts concerning the ownership of copyright. The universities need to make sure that these contracts exist if they want to own the work done by the students. Properly defined contracts reduce conflict and create certainty for both students and institutions.

3. Promotion of Academic Freedom:

By protecting students' copyright ownership, the decision enhances academic freedom and research integrity. Researchers are motivated to conduct original research, aware that they own their work.¹¹ This ruling promotes an academic environment that respects creativity, originality, and intellectual property rights.

Broader implications

This case goes beyond personal copyright issues, impacting policies in educational institutions and shaping wider academic and legal frameworks.

1. Guidance for Educational Institutions:

The ruling sheds light on how institutions should deal with copyright ownership in academic writing.

Universities need to have open policies and agreements on copyright ownership so that students

¹¹ Ron Edwards, Glenda Crosling, and Ngat-Chin Lim, "Organizational Structures for International Universities: Implications for Campus Autonomy Academic Freedom, Collegiality" Journal of Studies in International Education, 27 (2014).

can know what their rights and duties are.

2. Empowerment of Students:

By confirming the rights of students as the main copyright owners of their research, the ruling helps empower them to make decisions about the release of their work.

This empowerment inspires robust research and innovation, understanding that students still have control over their intellectual work.

3. Legal framework and policymaking:

The case shows the importance of having a solid legal framework balancing the rights of both the student and the education institution. The policymakers can have to introduce more explicit regulations in order to resolve copyright-related issues in the educational environment.

It also focuses on making students and teachers aware of copyright legislation so that they are properly informed of their rights and responsibilities.¹²

The Supreme Court's judgment in *University of Kerala v. V. Narendra Prasad*¹⁶ is an important decision that reaffirms the copyright ownership of students in educational work. It sets that, without any express agreement, the author has copyright, upholding research integrity and academic freedom.

Through giving legal certainty to academic copyrights, the ruling has far-reaching implications for students, institutions, and the academic community in general. It fosters original research, enables students, and provides a guideline for institutions to handle copyright matters efficiently. The ruling provides a crucial guide for navigating copyright issues within academia, which works to create a culture that supports creativity, innovation, and knowledge sharing.

¹² University of Kerala v. V. Narendra Prasad, AIR 2003 SCC 162. ¹⁶ AIR 2003 SCC 162.