

**Technological protection
measures and exceptions in
the area of education under
the copyright act of Thailand**

**A Thesis Submitted for the
Degree of Doctor of
Philosophy**

By

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Abstract

Thailand has promulgated the revised anti-circumvention provisions in 2022. This amendment strengthens the protection of technological measures by prohibiting both the direct act of circumvention and the trafficking of circumvention devices. However, there are problems concerning the vagueness of legal wording, which might affect the scope of protection, interpretation, and enforcement. There are limited lists of exceptions to anti-circumvention rules that adversely affect educational uses. Moreover, the administrative procedure for determining exceptions has not been well established in Thailand to monitor the impacts of these laws. There is a lack of agency to facilitate user engagement with digital knowledge. These render the exceptions unenforceable, potentially preventing access to digital knowledge for libraries, students, researchers, and other educational uses. Therefore, the purposes of this research are to demonstrate existing challenges and difficulties in the technological protection measures of Thailand. Then, new models of regulations, exceptions, and other appropriate measures will be proposed. This thesis employs doctrinal legal research and comparative methodology to critically compare and evaluate the scope of anti-circumvention rules, exceptions, and other appropriate measures in selected jurisdictions. The common effects of access to digital knowledge will be investigated to provide practical solutions for Thailand and other developing countries. It is arguable that anti-circumvention regulations could prevent copyright infringement in the digital environment and enable the works to be available on the most convenient platforms. However, in the absence of limitation, the restrictive laws allow copyright holders to set prices for passwords or any electronic keys that are unaffordable for developing countries, which results in a pay-per-access society and the exclusion of users from online databases.

This thesis suggests the model of legal definitions and prohibitions on circumvention to ensure that the laws effectively protect copyright works. It is important to insert the requirement on the intention of circumventors to reduce the severity of laws and identify the scope of prohibition. The legislative revision for anti-trafficking of circumvention devices is also suggested to prohibit commercial distribution of circumvention means and allow necessary devices to remain available for non-infringing uses. The thesis proposes to introduce exceptions for private study; exceptions concerning libraries and education should be modified and expanded to cover either prohibition of circumvention or trafficking devices to enable these communities to properly access knowledge. Moreover, the thesis recommends legislative reform to the ministerial procedure to determine additional exceptions and assess the impact of anti-circumvention rules. The establishment of a complaint process is proposed to implement the exceptions. Finally, the thesis contends that collective management organisations and the non-printed deposit system should be introduced to Thailand to make the knowledge available for educational communities without endangering the interests of copyright holders. These changes would maintain the balance of interests between all parties.

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List of Abbreviations

AAC	The Advanced Audio Coding
AACS	Advance Access Content System
CCS	Copyright Collecting Societies
CDPA	Copyright, Designs and Patents Act 1988
CLA	Copyright Licensing Agency
CMOs	Collective Management Organisations
CSS	Content Scrambling System
CJEU	The Court of Justice of the European Court of Justice
DRM	Digital Right Management
DMCA	The Digital Millennium Copyright Act of 1998
ERA	The Educational Recording Agency
EU Directive or EUCD	Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society
FOSS	Open Source Software
IPO	The Intellectual Property Office
ISPs	Internet Service Providers
JCLD	The Joint Committee on Legal Deposit
NPLD	The Legal Deposit Libraries (Non-Print Works) Regulations 2013
NTIA	National Telecommunications and Information Administration
OECD	Organisation for Economic Co-operation and Development
PDF	The Portable Document Format
PPL	Phonographic Performance Ltd
PRS	The Performing Right Society
RCEP	The Regional Comprehensive Economic Partnership
RMI	Right Management Information
RROs	Reproduction Rights Organisations
UK	United Kingdom

US	United States
TPMs	Technological Protection Measures
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
TTS	Text-To-Speech synthesiser
VCR	Video Cassette Recorder
WCT	The WIPO Copyright Treaty
WIPO	World Intellectual Property Organisation
WPPT	WIPO Performances and Phonograms Treat

Introduction

In the modern world, most countries from every corner of the world have the intention of developing their academic systems to have advanced technologies and enhance the living standards of their population. The educational system and research, which include online learning platforms and digital resources, are crucial components for educational improvement in most countries, especially in developing nations such as Thailand. In order to conduct innovative research and acquire new valuable knowledge, it is necessary to base it on existing knowledge. Therefore, access to a systematic collection of information is essential for expanding on present knowledge and enhancing innovation in the creative and educational fields. At the same time, creators must invest their property, labour, and time in the production process. It is important to protect the economic interests and moral rights of copyright owners. Copyright laws have the underlying principle of balancing the interests of the copyright owner and the public by providing exclusive rights for the copyright holder to reproduce, adapt, and communicate the work to the public to recoup their investments and generate incentives for individuals to create further valuable works for society. At the same time, the copyright laws also provide the public with the opportunity to seek knowledge of protected works by providing the public with legal use under fair use provisions. In addition, copyright protection is provided to the copyright holders for a limited period of time. After the end of the protection period, the works will be in the public domain.¹

However, with the rapid development of information technology and the internet, new forms of copyright infringement are emerging around the world. Peer-to-peer sharing and unauthorised streaming, for example, have become common infringements that pose a challenge for traditional copyright protection strategies. People can access and reproduce copyrighted work easily and quickly without any charges. Infringing copies have the same quality as the original works. These new and developing problems have negative impacts on the copyright holders.² Thus, they attempt to adopt technologies that control access and prevent reproduction, called technological measures, such as passwords and encryption. These technologies, nonetheless, are often decoded or violated by those who intend to access or exploit the work by infringing copyright. One noteworthy instance is when a film's encryption was violated, resulting in widespread illegal distribution. The traditional copyright protection system is no longer sufficient to protect

¹ Christophe Geiger, 'The Future of Copyright in Europe: Striking a Fair Balance between Protection and Access to Information' (2010) 1 Intellectual Property Quarterly 1-7.

² Jane C Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (2005) 29 Colum JL & Arts 11-14.

the economic interests of copyright holders; the reformation of the copyright system by reinforcing the legal prohibition on circumvention of technological measures receives more attention across the globe.³ The WIPO Copyright Treaty (WCT) was initially an international treaty that dealt with Technological Protection Measures (TPMs) or anti-circumvention rules. The WCT obliges contracting states to offer sufficient legal protection and remedies against the by-passing of effective technological measures employed by authors.⁴ The WCT additionally recognises the need to balance interests between authors and the larger public by allowing the members to extend exceptions of these regulations that are appropriate to the digital environment.⁵

Thailand is a WIPO member country, and a signatory to WCT. So, Thailand has to establish TPMs to comply with the minimum standards set forth by the International Agreement and to be in line with other countries by providing sufficient legal protection to technological measures applied by authors in relation to their rights under copyright law. However, the anti-circumvention rules and exceptions are in a very early stage of development. The Thai government has enacted the Copyright Act (No. 2) B.E. 2558 (2015), which was Thailand's initial legislation incorporating anti-circumvention rules. This version has proven difficult to apply effectively. Its shortcomings include inadequate protections in digital environments and ambiguous definitions and scopes of protection. Due to a number of issues concerning the interpretation and implementation of the Copyright Act (No. 2) B.E. 2558 (2015), the Thai Government decided to enact a new version of the TPMs. The Thai parliament approved this amendment in September 2020, and it was officially promulgated in February 2022. The Thai copyright act modifies the scope of TPMs to prohibit either the act of circumvention and preparatory activities or the anti-trafficking of devices or tools used for circumvention of technological measures. The provision of anti-trafficking circumvention devices is new and has not existed in previous versions of Thai copyright law. Moreover, the new list of exceptions to anti-circumvention became very narrow and uncertain. These pragmatically limit educational institutions' and libraries' access to essential digital content. The restricted exceptions do not benefit educational institutions, libraries, students, and researchers, who do not have the technological skills to circumvent technological measures by themselves for educational purposes; it creates an obstacle for users to access electronic knowledge. This limitation not only hampers the advancement of education but also causes a problem for academic research, which is becoming more dependent on digital resources. Therefore, after

³ *ibid* 11-14.

⁴ Urs Gasser, 'Legal Frameworks and Technological Protection of Digital Content: Moving Forward towards a Best Practice Model' (2006) 17 *Fordham Intell Prop Media & Ent LJ* 43-44.

⁵ Ruth Okediji, 'The International Copyright System' [2006] *ICTSD Issue Paper* 25.

a series of amendments to the Thai copyright system in the last few years, it is arguable that the provisions on TPMs and exceptions for education and libraries are not fully operationalised in practice and could not reflect the needs in access to education.

To address these issues, a doctrinal legal method is adopted to systematically interpret and analyse the laws and cases relating to TPMs in jurisdictions. This study uses the comparative method to evaluatively investigate TPMs, exceptions, and mechanisms implementing the law in Thailand and other jurisdictions. WCT serves as an international standard. The EU directive outlines detailed provisions for TPMs, optional exceptions, and voluntary measures that implement these exceptions across member countries. The US is a model of stringent TPMs and exceptions to deter copyright infringement in digital environments. The UK offers a clear scope of anti-circumvention rules, anti-trafficking circumvention device provisions, and a range of exceptions enforced through the complaint process. India reflects a minimal model of TPMs with the application of fair use to preserve the access and use of the works in developing countries. The analysis focuses on the legal definitions, the scope of protection provided to technological measures, the boundary of unlawful circumvention, and exceptions to identify the limitations of these laws. Additionally, it also studies administrative mechanisms for determining and implementing exceptions, which include the rulemaking procedure in the US, the complaint procedure of the UK, and the Indian third-party provision enabling the user to access the work. The thesis compares how these countries design their laws to draw a balance between control over digital content by copyright holders and users' lawful access to knowledge, especially how Thai law can learn from global best practices.

In sum, technological measures and anti-circumvention rules can effectively protect the profits of copyright holders and prevent copyright infringement in the digital era. However, the strict laws without proper exceptions may hinder educators and researchers from accessing knowledge, and educational development may be adversely affected, especially in developing countries. Thus, this thesis will reflect the benefits and weaknesses of these provisions experienced by compared jurisdictions. The thesis will also critically analyse the challenges and complexities arising in the digital environment in Thailand and offer potential suggestions for law reform in the future.

The Extent of Research

This research will determine the challenges and opportunities in creating a balance between TPMs and exceptions concerning libraries and educational purposes. It would also focus mainly on TPMs

in connection with copyright law. Therefore, the technological measure applied to other legislations such as the law of privacy, would not fall within the scope of this project.

The Objectives of Research

To identify the challenges of the TPMs and exceptions under Thai copyright legislation and demonstrate that these provisions need to be revised to create a balance between the TPMs and the educational uses.

To review the legal models and practices of these provisions in either international or domestic laws and examine the influence of these jurisdictions on TPMs and exceptions in Thailand.

To provide potential recommendations for legislative reformation based on legal models learnt from comparative analysis of global practices.

Research Question

With the rapid technological development, the existing system of copyright protection and anti-circumvention rules in Thailand remains problematic in terms of preventing copyright infringement and inefficient on educational access to the digital materials. Therefore, this research will mainly address the question of “How can global influences and revisions to Thailand's technological protection measures address global trends in digital copyright frameworks while specifically drawing a balance between protecting copyright holders and promoting access to knowledge in the digital era?”

By dealing with this issue, the new models of anti-circumvention rules will be suggested to the copyright act of Thailand to provide effective copyright protection in the digital environment. The listed exceptions concerning education and libraries will be found out to accommodate educational development and comply with international protective standards. The appropriate measures should be established to preserve the interests of the copyright holder and prevent the adverse impact on learning and creativity.

Existing Literature and Knowledge Gaps

It is well-analysed by existing study that the principle of copyright law is balancing interests between copyright holders and the public. The law provides exclusive rights to authors to make copies, modify and disseminate the works to gain economic profit. These rights motivate copyright holders to create new works. The fair use doctrine aims to foster the exchange of knowledge. It allows the users to access existing

work to inspire them to build up future creativity. For copyright protection and exceptions in the digital age, scholars have widely examined the TPMs, especially those in the US and WIPO copyright treaty. Ginsburg reviewed the scope of protection and exceptions of the DMCA and sometimes compared it to the WIPO Copyright Treaty.⁶ Besek argued that strict protection and narrow exceptions under DMCA would encourage new business models, enabling the user to access digital data at various prices and on the most convenient platforms.⁷ While the amendment of Thai TPMs made substantial progression to align with global standards, the amendment newly expanded TPMs to cover the anti-trafficking devices to strengthen copyright protection in the digital age. There is limited research examining the new version of TPMs under the Copyright Act 2022. Parinya Srikate analysed the problem concerning inappropriate scope of prohibition and lack of precise legal definitions of Thai TPMs.⁸ Ladda Boonruangsri also made a similar point that TPMs in Thailand remain ineffective and impractical.⁹ However, their research was based on an older version of TPMs that had different protections and did not include the anti-devices rule that is now in place in Thailand. Few studies have examined whether current Thai TPMs align with WIPO, US, and UK law and global trends in terms of legal definition, scope of protection and prohibition, and how the law can be improved to address the standards and effectiveness across these jurisdictions. Lack of clarity on the scope of legal prohibition leads to uncertainty on interpretation and adverse effects on lawful uses. This thesis would fill the gap by identifying the legal issues embodied in current TPMs, which are underexplored in existing literature. It will reveal the impact of the uncertainty of the prohibition of individual circumvention and expansion of anti-trafficking device provision in the context of Thailand and other developing countries. The legal comparison across jurisdictions would provide a critical perspective on how the US, the UK, and India shape their legal frameworks to effectively address online copyright infringement without endangering education. Beyond legislative comparison, this thesis provides original recommendations on the effective model of TPMs for Thailand to reinforce copyright protection in a digital context while still enabling access to knowledge and preservation. This recommendation would clarify the scope of legal protection and strengthen copyright protection in the digital era while utilising WCT flexibilities in a manner

⁶ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 11-38.

⁷ June M Besek, 'Anti-Circumvention Laws and Copyright: A Report from the Kernochan Center for Law, Media and the Arts' (2003) 27 Colum JL & Arts 389-390.

⁸ Parinya Srikate, 'Legal Measures for the Protection of Technological Measures against Piracy in Digital Technology' (2020) PTU Journal of Science and technology 396-410.

⁹ Ladda Boonruangsri, 'Legal Issues on Technological Protection Measures According to Copyright Act, B.E.2537 (1994)' (Masters Dissertation, Dhurakij Pundit University 2020) 111-124.

that aligns with global standards, ensuring sustainable access to copyright work for education and preservation.

In terms of exceptions to TPMs and its linkage to access to knowledge and preservation, there are several studies that have demonstrated that the level of exception affects the ability to access knowledge. Okediji shed light on the flexibility of WCT to allow the members to design the exception to TPMs based on technical innovation in their national context. She also highlighted the needs of developing countries to devise the exceptions to address accessibility of copyright works.¹⁰ Gasaway investigated the adverse impact of the narrow exception under the DMCA on the librarian to preserve the work in the library.¹¹ Akester examined anti-circumvention rules and contractual licences restricting the British library from supplying the work and interlibrary loan.¹² Noppanun Supasiripongchai researched the problem of uncertainty embodied in the educational exceptions in traditional copyright law; he also contends that effective TPMs should be promulgated in Thailand, and he also suggests that copyright exceptions should be applied to TPMs to prevent the adverse impacts of this regulations. However, he conducted his research prior to the establishment of TPMs in Thailand.¹³ It is important to note that the 2022 revision of Thailand's Copyright Act excludes the application of fair use for TPMs and is replaced by the narrower exception. The level of impact on access to copyright works has significantly changed. IDP reports and documents from the Office of State provide the guidelines for interpretation. There are academic debates and hearings on the impact of TPMs on disabled people and librarians during the ministerial process of drafting the exceptions. The hearing report reveals that the participants raised concerns about restrictive exceptions that cover only specific activities and users, which may impede the use of copyright works.¹⁴ Such discussion does not cover the other areas of non-infringing use, and it appears to be insufficient to prove the impacts in reality. Even though there is literature investigating the impacts of exceptions in other countries, there is limited research investigating the link of the rigid list of exceptions of current TPMs and the problems of

¹⁰ Okediji, 'The International Copyright System' (n 5) 25.

¹¹ Laura N Gasaway, 'The New Access Right and Its Impact on Libraries and Library Users' (2002) 10 J Intell Prop L 283-286.

¹² Patricia Akester, 'Technological Accommodation of Conflicts between Freedom of Expression and DRM: The First Empirical Assessment' [2009] Available at SSRN 1469412 35-39.

¹³ Noppanun Supasiripongchai, 'Copyright and Educational Exceptions in Thailand: A Comparative Study' (PhD thesis, University of Edinburgh 2010) 161-221.

¹⁴ Department of Intellectual Property, 'Results of the hearing on the draft announcement of the Ministry of Commerce on actions that should not be considered violations of technological measures according to Section 53/5 (1) via the website of the Department of Intellectual Property (www.ipthailand.go.th) between June 20 and July 4, 2022'.

access to knowledge in the context of Thailand to suggest the proper exceptions based on comparative analysis. As mentioned earlier, the restrictive exceptions of Thai TPMs are similar to the DMCA; there is a lack of in-depth comparison between the narrower approach and the more flexible models that exist in other countries. There is a limited study specifically analysing Thailand's newly introduced TPMs exceptions, scope of applications, and enforcement mechanisms, especially in comparison with other jurisdictions. This gap in the existing work suggests a need for a comparative study with WCT, EU directives, the US, the UK and India. This inquiry would shed light on how different jurisdictions design exceptions and enforcement mechanisms to deal with the problem of access to knowledge and promote educational development. This thesis addresses this gap by systematically investigating the global trends of exception, especially in response to digital complexities. Bridging this gap will lead to better understanding in a global legal framework concerning exceptions to address digital innovation and the need for access to knowledge. Beyond legal comparison, this thesis will provide proper exceptions for Thai TPMs to maintain the goal of fair use, foster the exchange of knowledge, and be tailored to Thailand's unique challenges. The problem of narrow exceptions in Thailand, along with strategies to address this issue, will serve as a case study for other developing countries.

Moreover, it is arguable that several research studies focus on the impact of TPMs on fair use. This thesis takes a further step from this existing literature by exploring the practical mechanism to preserve the principle of fair use in a digital environment. As the Copyright Act amendment of 2022 allows the minister of commerce to establish additional exceptions to TPMs in the form of secondary law, these mechanisms are not well established and underexplored. Thai people are unfamiliar with these provisions. It is important to study more in-depth the interpretation and implementation of this ministerial procedure to contribute a better understanding to all stakeholders. The thesis found that these ministerial procedures are highly similar to the rulemaking proceedings, which have been long established and investigated by a number of scholars. There are researchers extensively studying US mechanisms. The document from the United States Copyright Office explained the legal background and practical process of rulemaking procedures in detail. Koberidze evaluated the problems and benefits of rulemaking proceedings in terms of the practical process and the solution to encourage the public to engage with rulemaking proceedings to jointly design exceptions. The procedural improvement of rulemaking proceedings in various stages is reflected in this literature. This improvement could increase the participation of the public to enhance the exception.¹⁵

¹⁵ Maryna Koberidze, 'The DMCA Rulemaking Mechanism: Fail or Safe' (2015) 11 Wash JL Tech & Arts 211.

Singh criticised the roles of US rulemaking processes as fail-safe mechanisms to introduce flexibility to TPMs and preserve fair use.¹⁶ In contrast, the similar governmental proceeding in Thailand to enact the exception was newly established in 2022; this approach is limited and less defined. While most of the previous literature studies exceptions of TPMs under either international treaties or national laws such as the US, a significant gap remains unsolved in official measures to effectively enforce the exception. The hearing report from DIP indicated that a few group of stakeholders have engaged with this process. There is a lack of understanding among relevant organisations and all stakeholders on how to structure governmental procedures to actively design or even enforce these exceptions, particularly in the new establishment of ministerial procedures under the Copyright Act No. 5 2022 of Thailand. There is a document from DIP and other governmental institutes explaining the process allowing the minister of commerce to announce the additional exception in the form of secondary law, with limited analysis on practical issues making this process ineffective, or investigating the potential ways to improve this governmental mechanism in order to design exceptions balancing rights-holder protections with access to knowledge. Nonetheless, the US has developed rulemaking proceedings to determine new exceptions to TPMs, which seem to have similar authority to Thailand. This proceeding has been adjusted and improved to enhance the participation for the stakeholder and design more effective exceptions. With this aspect, the potential for Thailand to adapt and apply such procedural models remains underexplored in legal comparison. There is the absence of detailed analysis on how rulemaking proceeding under the US models can inform the design of new administrative mechanisms within Thailand's legal and institutional context. This thesis addresses this gap by critically investigating the US's rulemaking procedures for determining additional exceptions of TPMs. These lessons could be used as a legal model for improving the Thai ministerial process. It also examines the legal and structural differences which affect a transplant and legislative guidelines for legal reform in Thailand.

Originality and Significant of the Research

This thesis contributes information about the global trends of TPM, exceptions, and mechanisms to implement the laws. It studies the impacts of TPMs on access to digital works and fair use challenges by the other countries and examines the potential solutions to deal with these issues. Moreover, the study highlights issues with the latest version of TPMs in Thailand, such as the unclear scope of protection, inappropriate exceptions, and a lack of mechanisms to effectively implement the law. The study discusses

¹⁶ Arielle Singh, 'Agency Regulation in Copyright Law: Rulemaking under the DMCA and Its Broader Implications' (2011) 26 Berkeley Technology Law Journal 527.

legislative ineffectiveness and its adverse impact on education, private study, and library preservation. The thesis systematically evaluates TPMs in Thailand and other jurisdictions to find new legal models for future law reform to resolve or at least reduce these problems. Therefore, it will focus on the TPMs in Thailand and examine international treaties, domestic legislation, and cases from other selected jurisdictions. The valuable lessons and experiences learned from this research will be used as guidelines to revise Thai legislation in accordance with legal developments and the national conditions of Thailand. The thesis will provide original suggestions to deal with the issue of how to improve the provision of TPMs to effectively protect copyright holders and increase the opportunities to access educational knowledge in the digital era in Thailand. Furthermore, Thailand's legislative experiences could be a sample for other developing nations to consider when constructing their digital copyright laws to align with global trends and promote access to knowledge.

Research Structure

This research is divided into six chapters. After providing background information, research question, structure of research, and research methodologies, Chapter 1 will present critical discussions on the research topic's underlying principles and theoretical foundation. Copyright philosophies will be systematically investigated, and key concepts and legal doctrines in connection with copyright will be examined. This chapter will begin by discussing copyright protection's role in maintaining a balance between copyright holders' economic profits and the public interest. The thesis will examine several relevant philosophies to thoroughly discuss how these theories apply in practice. Then, it will move on to the challenges to the copyright system in the digital age by examining two extremely different approaches to the protection of technological measures and the public right to access knowledge. It is undeniable that with the advent of the internet system, the TPMs play significant roles in securing the economic interests of the copyright holders by preventing unauthorised reproduction, adapting, and disseminating the copyrighted works to the public. The copyright holders have exclusive rights to gain benefits from the works that they have created and invested in; they, therefore, have the right to receive compensation for the exploitation of their work in order to have inspiration to build further valuable works. So, it is necessary to strengthen copyright holders' rights in the digital world by providing legal protection for technological measures. However, it is important to note that the strict protection might result in digital lockup, and non-infringing activities might be excluded from the digital environment. The level of fair use has an impact on knowledge dissemination; it is also important to guarantee the right to access the knowledge and the

adaptability of educational exceptions to the new technological environment.¹⁷ Then, this chapter will investigate the new access right, which is a result of TPMs. This right is one of the most effective protections for copyright holders, and access-control technologies have become popular measures in the digital environment. Generally, the anti-circumvention regulations provide additional rights to copyright holders by enabling them to use access-control measures to protect their digital works. These provisions also prohibit the distribution of devices employed to circumvent access control technologies. With this aspect, the copyright holder could restrict the manner in which the users could apprehend information, even if for non-infringing purposes. This chapter will identify several impacts of TPMs. The ongoing arguments on the anti-circumvention rules and availability of knowledge will be presented.

Chapter 2 will focus on problems related to TPMs. This research will identify the characteristics and developments in Thai copyright protection in the digital era, demonstrating that the scope of Thai anti-circumvention regulations were highly influenced by US laws.¹⁸ Additionally, the chapter also demonstrates that the legal model of the Digital Millennium Copyright Act of the US (DMCA) is not suited to the Thai context. Thailand still faces challenges and complexities due to the uncertainty of what technological measures the Thai Copyright Act protects as well as the ambiguity of what conduct the Thai Copyright Act prohibits. Therefore, this research will analyse the adverse impacts on society due to the fact that these provisions under the Thai Copyright Act remain unclear on the scope of protection and boundaries of prohibitions. These affect the protection provided to economic profits and moral rights of copyright holder. In addition, it causes uncertainty for the public about whether their acts can be deemed offences or not. After critical analysis and debate of the mentioned issues, most of the major difficulties of anti-circumvention rules in Thailand will have been fairly presented. This chapter will critically evaluate anti-circumvention regulations under international conventions, including the WCT and EU Directive, to consider the minimum standard and the basic principle of balancing the protection provided to technological measures and accessing knowledge. This chapter will reference relevant laws and cases from selected nations to examine how other jurisdictions have dealt with the problems of technological measures by comparing laws and court cases in connection to anti-circumvention rules from a number of different countries. It will also talk about how Thailand can improve its regulations by learning from these examples. It is expected that this research will be useful in identifying the problems embodied in the current anti-circumvention rules of Thailand. By critically comparing and examining relevant legislations and cases

¹⁷ Geiger (n 1) 1-7.

¹⁸ Supasiripongchai (n 13) 26-37.

from different countries, some guidelines and solutions could be provided to create a balance between TPMs, copyright holders, content providers, and non-infringing users under the Thai copyright legislation in the future.

Chapter 3 will pay attention to the fundamental role of limitations in anti-circumvention rules in terms of preserving the public interest. The exceptions could reduce the cost of research and educational activities to foster the exchange of knowledge and creativity.¹⁹ Thus, the chapter will determine that the proper exceptions are required to enable students, researchers, libraries, and educational institutions to access copyrighted works. Hence, this chapter will investigate the challenges of exceptions and limitations under Thai TPM provisions. The new draft of Thai copyright legislation narrows down the scope of exceptions by allowing only acts involving copyrighted work that have been exempted from copyright infringement and that must be published in the Royal Gazette by the minister. The list of exceptions to anti-circumvention rules is detailed and rigid; the circumvention of technological measures is permitted for specific groups of users and narrow purposes. Moreover, these are beneficial to the minority who have sufficient technological ability to circumvent technological measures by themselves. It does not benefit the users without knowledge of technology because the services and devices used for circumvention are banned. The narrow scope of exceptions under Thai anti-circumvention rules seems to undermine non-infringement uses under copyright exceptions by excluding the application of the fair use provision. Moreover, this research will demonstrate the adverse impact of uncertain and restrictive exceptions. If these narrow exceptions continue, non-infringing users may be overridden by the anti-circumvention regulation and precluded from digital works. In this situation, there is a high possibility that researchers, librarians, educators, and academic institutions could be eliminated from accessing knowledge. It is necessary to reinforce the legal provisions that can protect the right to access digital materials for libraries and educational institutions. Therefore, this chapter will examine how to balance interests between copyright holders and users in the digital era through critical exploration and comparison of exceptions from various international approaches. The legislative experiences of the US, UK, and India will be critically evaluated in terms of how they deal with exemptions to have greater flexibility and follow international protection standards. After the comprehensive comparison, this chapter will suggest the appropriate model for exceptions by learning from selected legal systems while addressing their limitations for TPMs. This thesis contends that it is important to introduce wider exceptions for education and libraries in Thai legislation.

¹⁹ Jia Wang, 'Copyright: Rebalancing the Public and Private Interests in the Areas of Education and Research' (Stellenbosch: Stellenbosch University 2013) 2.

The new limitations should be designed to create flexibility for anti-circumvention rules. These legislative frameworks in Thailand should be revised to provide more certainty and enforceability.

In chapter 4, as discussed in the previous chapter, TPMs are a significant obstacle to accessing digital materials for libraries and educational purposes. Reforming the exceptions alone might not effectively address problems; instead, developing exceptions and limitations alongside other appropriate measures is necessary. It is important to note that the Thai Copyright Act (No. 5) 2022 authorises the ministry to establish exceptions to anti-circumvention rules. However, this approach is really new for the Thai copyright system; it remains unclear on the official process and timeframe. The new laws lack further details regarding this provision. Therefore, this research will demonstrate that the main challenge of the Thai copyright system is the lack of voluntary measures or other alternative measures to facilitate non-infringing users or make means available for educational purposes. These enable copyright owners to use technological measures to lock up their works and prevent users from accessing knowledge. With these challenges, this chapter will seek to critically assess various measures that exist in international and domestic jurisdictions, including the EU directive, which obliges the member countries to provide appropriate measures to ensure that copyright holders make works accessible for the beneficiaries under exceptions existing in their domestic law if there are no voluntary measures or other agreements taken by copyright holders.²⁰ Additionally, the rule-making proceeding under DMCA will be critically examined; this approach allows the Librarian of Congress to have authority to provide new and temporary exceptions for a specific class of work.²¹ These will increase the opportunities for the public to access additional classes of copyright works. Then, it would be very useful to explore the voluntary measures and remedies where effective technological measures hinder the permitted uses of copyrighted works under the Copyright, Designs and Patents Act 1988 of the UK (CDPA).²² Examining the benefits and functions of the complaint process will enable making works available for non-infringement uses in Thailand. The legal model of supplier under Indian anti-circumvention rules will be assessed, which allows third parties to facilitate fair user access to engage with electronic works. After a critical comparison and examination of a number of appropriate measures in this chapter, the analysis will determine the benefits and drawbacks of various mechanisms. The study will provide recommendations for establishing appropriate measures or relevant

²⁰ Article 6.4 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

²¹ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 33-34.

²² Section 296ZE of Copyright, Designs and Patents Act 1988.

institutions to reward copyright holders, enforce the exceptions, and accommodate the user's reasonable access to electronic materials.

In Chapter 5, the CMOs will be critically evaluated; they seem to be effective mechanisms to implement the rights of the copyright holder and facilitate the users to access to the works in reasonable terms. These bodies issue affordable licences and secure economic profits for copyright holders. This chapter will discuss the operations and functions of these bodies. The roles of CMOs in the digital era in respect of issuing licenses, monitoring the use of works, and preventing online copyright infringement demonstrate that Thailand should employ CMOs to govern the license and facilitate the users to engage with works on the most convenient platform and at affordable prices. Moreover, to effectively enforce the exception for libraries, it is important to establish the law to require the publishers to deliver their digital works to deposit libraries. The investigation of the Legal Deposit Libraries (Non-Print Works) Regulations 2013 of the UK (NPLD) will provide guidance on the nature of the works required to be deposited, delivery methods, permitted activities, and security requirements. These would ensure that libraries in the digital world obtain non-printed materials for preservation without endangering the interests of the copyright holders or publishers. The experiences gained from this chapter will be useful to effectively introduce CMOs and deposit requirement regulations in Thailand.

Finally, chapter 6 will be the last chapter of this research. All the previously discussed issues will be clearly summarised and concluded in this chapter. Furthermore, the study will discuss some valuable experiences regarding implementing the TPMs and exceptions. This chapter will address the other appropriate measures for beneficial non-infringe use. Finally, this research concludes that TPMs and exceptions should be amended to promote the protection of copyright holders and broaden access to education. Furthermore, the recommendations and new legal models will serve as guidelines for other developing countries to establish their anti-circumvention laws based on Thai legislative developments.

Research Methodologies

This research studies the challenges and opportunities in creating a balance between TPMs and exceptions concerning education and libraries in Thai copyright legislation to address global protective standard. It will be conducted using doctrinal legal research, comparative methodologies for the interpretation of existing data. Thus, relevant international legislations, selected national laws, and case law across different

jurisdictions will be critically analysed and compared in order to gain valuable ideas and experiences for future improvements to the Thai copyright system.

The doctrinal legal research is useful to systematically investigate the problems concerning existing legislations, such as relevant codes and acts.²³ The legal framework, legislation, statutes, and case law in connection to anti-circumvention rules and exceptions would be critically conceptually analysed.²⁴ A number of legal precedents and statutory interpretations would be examined for an in-depth understanding of the rules behind the precedents of the court jurisdictions, legal principles, and concepts.²⁵ As a result, new trends in legal development will be found, and the appropriate solutions to legal problems will be recommended for future legislative reforms.²⁶ This method is used to examine the development of TPMs and exceptions in Thailand, the legal gap, and issues inherent in the legislation. Moreover, the thesis aims to investigate the global trend of TPMs and exceptions, as well as the linkage between their level and the accessibility of work for education and preservation. Due to technological change and legal amendment in 2022, Thailand has progressively relied on administrative procedures to determine new exceptions. With the help of this doctrinal legal research, an in-depth study of the interaction between administrative process, public participation, and exceptions is conducted to investigate how ministerial instruments shape the dynamic development of TPMs' exceptions and the effectiveness of these measures in assessing the impact of TPMs and updating exceptions to comply with the actual needs of Thailand and global standards. The implications of exceptions and administrative action for users' rights and access to knowledge will be clearly discussed throughout this doctrinal research. This research will mainly be based on both primary and secondary sources. The primary sources seem to be reliable and essential to be adopted as guidelines for legal reform because they are the original materials, which include the actual legislation and all relevant case laws decided by high courts and Supreme Courts.²⁷ For this reason, the primary sources would be the centre for studying TPMs, exceptions, voluntary measures, and other appropriate measures from international laws to effectively implement Thai legislation; these include the WCT and the EU Directive. The national legislations and juridical judgments would be critically investigated, such as the Copyright Act of Thailand, ministerial regulations, and other relevant laws from selective jurisdictions. Additionally, this

²³ Mike McConville, *Research Methods for Law* (Edinburgh University Press 2017) 3-4.

²⁴ Terry Hutchinson, 'The Doctrinal Method: Incorporating Interdisciplinary Methods in Reforming the Law' (2015) 8 *Erasmus L Rev* 131-133.

²⁵ Amrit Kharel, 'Doctrinal Legal Research' [2018] Available at SSRN 3130525, 4.

²⁶ Vijay M Gawas, 'Doctrinal Legal Research Method a Guiding Principle in Reforming the Law and Legal System towards the Research Development' 1.

²⁷ Kharel (n 25) 10-11.

research also uses secondary sources. It is important to note that this type of material is not original, but it is useful in terms of providing the synthesis explanation and commendation in a particular area of law. It also affords critical review information and guidelines for legal interpretation.²⁸ Thus, various textbooks, academic journal articles, master's and doctoral theses, official reports, national and international conference papers, scripts of academic debates and seminars, websites, and relevant literature would be employed. However, all of these sources will be carefully collected and evaluated in order to have confidence that the information and references obtained from these sources are accurate.

To provide effective solutions for legal reform, doctrinal legal research is used alongside comparative methodologies to learn new knowledge and interpretation, finding solutions, law reforming, and harmonising of legislations.²⁹ These in-depth learnings would lead to the discovery of new legal materials, a new school of thought, new systematic principles and concepts of law, as well as new standards of legal analysis and criticism.³⁰ Other legal systems will provide valuable knowledge to help reach conclusions about the appropriate reform of anti-circumvention laws in Thailand. The proper legal revision cannot be done without any aid from legal comparison. A systematic examination of relevant regulations in other legal systems would demonstrate how foreign jurisdictions resolve common issues.³¹ In addition, comparative law introduces a better understanding of both our own legislation and different legal systems. It is also useful for creating a better solution according to our domestic conditions.³² The additional aim of comparative research is harmonisation of law due to the fact that many countries in the world have more international trade and relations, and domestic laws are inevitably influenced by international agreements and foreign legislation.³³ Thus, it is necessary to apply the common-core method in this research in order to find the common legal rules and concepts of protecting technological measure and exceptions existing in all societies to promote harmonisation and reduce the differences in a certain part of the legislation.³⁴ To unify the copyright system among the countries, WCT will also be examined because it is the primary international treaty that obliges contracting states to offer sufficient legal protection and remedies against the deactivation of effective technological measures applied by authors.³⁵ Even though Thailand is not a

²⁸ *ibid* 10-11.

²⁹ Mark Van Hoecke, 'Methodology of Comparative Legal Research' [2015] *Law and method* 2-3.

³⁰ Jonathan Hill, 'Comparative Law, Law Reform and Legal Theory' (1989) 9 *Oxford J Legal Stud* 101-106.

³¹ *ibid* 101-106.

³² *ibid* 101-106.

³³ Otto Kahn-Freund, 'On Uses and Misuses of Comparative Law' (1974) 37 *Modern Law Review* 1, 9-12.

³⁴ Van Hoecke (n 29) 19-21.

³⁵ WIPO, 'Summary of the WIPO Copyright Treaty (WCT) (1996)' (WIPO)

<https://www.wipo.int/treaties/en/ip/wct/summary_wct.html> accessed 15 May 2022.

member of the European Union, the conceptual investigation of the EU directives would provide in-depth details on the type of technological measure protected by the law, the intention of the circumventor, exceptions, and the provision of appropriate measures to make the works available to the permitted users.³⁶ It is very useful if these provisions are critically examined and compared to the rules in relation to appropriate measures as a guideline for Thai copyright legislation to establish the new body or system to favour either copyright holders or educational communities.

Furthermore, the functional method is basically used for understanding law, comparing different legislations, identifying similarities, building legal families, unifying rules, critical evaluation of the legal orders, and suggesting better laws. The underlying principle of functionalism is the practical way of solving problems and conflicts of interest, so it is arguable that different societies have different legal systems, but all societies have some pattern of legislation that is applied to solve problems.³⁷ With this approach, it helps to seek legal models across jurisdictions that effectively resolve online copyright infringement; it will investigate the prohibition on direct circumvention and preparatory activities or anti-trafficking devices or tools used for circumvention. The law models learned from this approach are useful to adequately protect the economic interests of copyright holders. Secondly, this thesis systematically compares legal definitions, scope of application, and requirements on intention from other jurisdictions to address the overbroad and unclear scope of protection and prohibition of Thai TPMs. Additionally, rulemaking proceeding of US, voluntary measures and complaints processes of UK help to resolve the ineffectiveness of the ministerial procedure of Thailand and facilitate lawful users access to works. In this regard, these legislative frameworks would be evaluated in great detail to gain solutions and lessons to support the law of Thailand in the future. It will contribute best practices to provide effective copyright protection and the opportunity for people to access valuable works.

Nonetheless, different social and legal structures may struggle with different problems, and the complexities and details of legal difficulties might vary. The same solutions might not fit all legal systems. Thailand, in particular, remains a developing country and has specific economic and social needs. The vast majority of the population is unable to pay for accessing and utilising copyrighted works at unaffordable prices. Most Thai people lack the technical skills to hack or bypass technological measures used by copyright

³⁶ Section 6 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society

³⁷ Van Hoecke (n 29) 9-11.

holders, even though such acts are permitted by law.³⁸ However, learning materials would encourage quality education and research; these educational activities could enhance improvement in developing countries. Policymakers' attempt to unify exceptions to anti-circumvention rules by borrowing the template of the DMCA may hinder Thailand's educational development. The restrictive exceptions that transplant from the DMCA would exclude the access and use of copyright materials and deter educational development rather than enable the knowledge available to the public at a reasonable cost. Hence, the law-in-context approach would employ searching for critical explanations of the factors influencing the law and shaping the rule as it is. It focuses on how the legislation works out in social reality. Thus, this method encourages lawmakers to reform the regulatory system in connection with other contexts, such as the education, digitalisation, economy, politics, and social needs. These would reveal the proper way to reform, interpret, and apply of TPMs and exceptions according to specific cultural and social needs.³⁹

Finally, historical research would be used to identify the origins and legal reasons for the regulation.⁴⁰ To trace the development of TPMs and exceptions in Thailand throughout time, a limited historical method is used. A major focus is an examination of the evolution of TPMs under the Copyright Act from previous legislative frameworks to the current version in Thailand. This historical analysis will identify the key legal revisions pertaining to TPMs, exceptions, and the application of fair use. The reasons behind legislative amendments to strengthen TPMs and restrict exceptions, such as attempts to enter into international treaties and responding to digitalisation, are discussed. In this regard, a critical understanding of the background of the Thai copyright system through the use of the historical approach will address some issues of TPMs, such as the subject that the law aims to protect and the scope of exceptions under the Thai copyright system.

Scope of Comparative Study

In this thesis, the comparative study is confined to:

- The analysis of TPMs in terms of legal definition, scope of protection and prohibition, the requirement of mens rea, the legal model of anti-individual act of circumvention, and anti-trafficking circumvention devices under copyright law.
- The examination of exceptions in connection to education, research, and libraries.

³⁸ Jakkrit Khuanpoj, 'Copyright in Digital Era'

<http://www.ftawatch.org/sites/default/files/documents/2007_jakkrit_licences.pdf> accessed 12 April 2021.

³⁹ Van Hoecke (n 29) 16-30.

⁴⁰ Gunter Frankenberg, 'Critical Comparisons: Re-Thinking Comparative Law' (1985) 26 Harv Int'l LJ 427.

- The investigation of administrative mechanisms and their function or performance in determining and enforcing the exceptions, which include the ministerial procedure of Thailand, the rulemaking proceeding of the US, and the complaint process of the UK.

Four jurisdictions are compared. The study will analyse newly updated Thai TPM-related laws, focusing specifically on the 2022 amendment to the copyright legislation. Due to the early stage of developments, this jurisdiction necessitates a thorough examination of both the legal language and interpretation.

The DMCA of the U.S. would be closely examined because it is the first domestic law that establishes effective rules of anti-circumvention to prevent online piracy.

The UK represents detailed language of TPMs along with precise legal definitions and scopes of prohibition for either direct circumvention or anti-trafficking device provision. The application of exceptions through administrative procedure is a good model to support the users to exercise their right to access the works.

To place the thesis in a broader context, India has been chosen as a representative of a developing nation for a comparative discussion because Thailand and India might have similar educational and social needs. Indian TPMs allow the application of fair dealing alongside the provision of third parties facilitating non-infringing users access to digital materials. These may provide the key perspectives on how Thailand could broaden access to work and promote education in the digital era

Chapter 1

Digital Copyright Protection and Knowledge Access: Theoretical Frameworks

Introduction

As this thesis aims to improve TPMs in Thailand to comply with the WCT, it is important to study the underlying principles of this treaty to adjust the national laws to align with established international practices. The preamble of WCT represents recognition concerning the development of communication and information technology, which affect the production and consumption of artistic and literary works. This treaty also considers the significant role of copyright protection in motivating future creations and preserving the balance of interest between the creator and the larger public, especially in research, education, and access to knowledge.⁴¹ Therefore, this chapter critically reviews the fundamental concepts of copyright law and TPMs to ensure the interests of authors in the digital age, thereby incentivising them to generate and distribute new creativities to society. The fair use provisions and exceptions will be discussed to enable the users to access works and education. A number of works in the existing literature raise concerns about the broad legal framework of TPMs that overrides educational exceptions and hinders access to knowledge. While these arguments are widely debated, the knowledge gaps remain in understanding how global trends and other jurisdictions are designing TPMs to address these concerns and preserve the foundational principle of copyright law in balancing the interests of authors and knowledge dissemination.

1.1 Different Copyright Law Theories and the Need to Adopt them in the Digital Era

The principle of balance of interest between copyright holders and users is shaped by several international obligations, which include the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) that promote the protection of intellectual property to enhance technological innovation and transfer of technologies. TRIPS also emphasises social and economic welfare by recognising the opportunity of producers and users to access technological knowledge, which reflects the balance of private rights and

⁴¹ WIPO, 'World Intellectual Property Organization (WIPO) TRT/WCT/001 WIPO Copyright Treaty (WCT)' (WIPO Lex, 15 February 2012) <<https://www.wipo.int/wipolex/en/text/295166>> accessed 19 March 2022.

social welfare.⁴² The WCT implemented the principle of balancing between copyright protection and users' interests in the digital environment, particularly in relation to anti-circumvention rules. Therefore, copyright law has the basic principle of balancing the interests of a diverse group of stakeholders, including authors, content creators, publishers, and the public. It is necessary for authors to receive economic profits and moral rights from the works of their labour in order to maintain an incentive for producing further creations. The exclusive rights would enable the copyright holder to reproduce, adapt, and disseminate the works to the public. These rights guarantee that copyright holders will gain benefits in return for their investment during the production of a work.⁴³

However, it is important to note that copyright protection can be potentially abused as a marketing tool, causing monopolies on copyrighted works. For example, in the digital book industry, exclusive licensing schemes have hindered non-profit libraries' ability to make electronic resources available, which has an effect on educational users' access to knowledge. This situation will generate significant obstacles for students, researchers, and other legitimate users from accessing information. Especially at the early stage of creation, it is necessary for new creators to access existing works as inspiration and knowledge bases for their own works.⁴⁴ In order to prevent these potential issues, copyright holders are legally provided protection for a certain period of time, and after that, the creative works will fall into the public domain. Fair use provisions permit the individuals to engage with works in certain circumstances.⁴⁵ Hence, copyright law aims to reconcile the benefits between various parties by giving the copyright holders the exclusive rights for reproduction and communication of creative work in order to guarantee their intended financial benefits from the payment of remuneration. At the same time, copyright law also provides fair use provisions for enhancing the opportunities for users to access and exploit copyrighted materials in certain circumstances. The fair use provision is useful to ensure that existing knowledge and creations will be legitimately used for higher cultural and social development.

1.1.1 Legal Theories relating to Protection for Copyright Holders

The copyright protection plays a significant role in stimulating worldwide cultural creations. The authors should benefit financially from their works and also have the assurance that their intellectual property is

⁴² Article 7 of Agreement on Trade-Related Aspects of Intellectual Property Rights

⁴³ Geiger (n 1) 2-7.

⁴⁴ *ibid* 2-7.

⁴⁵ *ibid* 2-7.

securely protected to enjoy the fruits of their labour.⁴⁶ In this aspect, the protection of the creators should be strengthened, and the right to access information should be limited. If the protection is insufficient and unauthorised reproduction can be done easily and freely, this could have adverse impacts on future creations and innovation. Ineffective protection significantly diminishes the incentive for authors to create new and innovative works and leads to decreasing levels of creativity in society. Easy access and copying of copyrighted works without fair compensation may discourage authors from sharing their works with the public and concealing new knowledge.⁴⁷ Without effective protection to stimulate authors, the interest of the public would be harmed due to the decreased flow of creative works.⁴⁸ There are four fundamental approaches that reflect the importance of the copyright holder's protection, including natural law, reward for labour, stimulus to creativity, and social requirements.

Natural Law and Legal Reasons Behind Protecting Copyright

Based on this approach, the works are considered as the property of the authors, and they have exclusive rights to control the dissemination of the work and gain financial profits from their works under natural law. This approach emphasises that every person is both the owner of their bodies and the labour of their bodies. If every person owns their labour, then such people should own the creations of their labour. Therefore, they have a natural right to receive the economic profits from the works created by their labour and experiences.⁴⁹ The authors should have the legitimate right to control the future dissemination of a work, and the other individuals who want to access or use those creations should make a payment to ensure that the authors are compensated for their intellectual labour. Under this view, the copyright law is necessarily used to protect works created from the author's mind and prevent unauthorised access to and use of such creations by the public.⁵⁰ In general, creations are the property of authors, and the heart of this approach is to protect authors' rights over the interests of the public in free access to protected works.

⁴⁶ Gillian Davies and Gerhard Schricker, *Copyright and the Public Interest*, vol 1 (VCH Weinheim 1994) 3-12.

⁴⁷ Simon Walker and others, 'The TRIPS Agreement: Sustainable Development and the Public Interest' 4.

⁴⁸ Davies and Schricker (n 46) 9.

⁴⁹ Alfred C Yen, 'Restoring the Natural Law: Copyright as Labor and Possession' (1990) 51 Ohio St LJ 522-526.

⁵⁰ *ibid* 523-526.

“Reward for Labour” to Balance Interest

The second perspective is the principle of reward for labour: the creators should own the fruit of their labour.⁵¹ They deserve to gain reward for labour. It is arguable that the authors have to allocate a huge amount of time and labour during the process of creation. It is important to gain profits from their works to recoup their investment of time, labour, and money. The authors are therefore entitled to be compensated when their works are exploited by the public; reasonable remuneration can motivate a creator to continue working.⁵² In this aspect, remuneration is the fair payment that the copyright holder receives from the access, exploitation and licence of their works. It serves as a financial reward for the creation of existing work and an incentive to create future works. The remuneration is linked to the exclusive right, especially streaming and other models in relation to digital licence and exploitation. The provision of remuneration can be found in various international treaties, which include Article 11bis(2) of the Berne Convention, the TRIPS Agreement, the WCT, and the EU Directive.⁵³ Due to the investment during the process of production and the new complexity in online copyright infringement, adequate legal protections are required to guarantee the reward and ensure that the financial returns from the use of their work are sufficient for the creator’s investment.⁵⁴ Under this view, copyright is necessary for protecting the reward of labour because, in the absence of the author’s protection, there is a trend of decreased revenue for creators. The unauthorised copyright reproductions significantly undercut legitimate sales; users will prefer to use or copy the work freely instead of purchasing it from the author. This situation will result in insufficient compensation that returns to the creator's investment and inappropriate rewards for labour. In such a situation, authors might not create further works, and societies would probably suffer from a lack of creative development.⁵⁵

“Stimulus to Creativity” through Copyright Protection

The third argument that supports strong protection for copyright holders is a stimulus-to-creativity approach. Both the Statute of Anne of the UK and the copyright protection in the American Constitution

⁵¹ Mitchell Longan, ‘A System Out of Balance: A Critical Analysis of Philosophical Justifications for Copyright Law Through the Lens of Users’ Rights’ (2022) 56 783.

⁵² Davies and Schricker (n 46) 12-13.

⁵³ Christophe Geiger and Oleksandr Bulayenko, ‘Creating Statutory Remuneration Rights in Copyright Law: What Policy Options under the International Legal Framework?’ (2022) 1-10.

⁵⁴ Stavroula Karapapa, ‘The Press Publishers’ Right under EU Law: Rewarding Investment through Intellectual Property’ (2023) 155-166.

⁵⁵ Davies and Schricker (n 46) 9-10.

highlight the significant role of copyright protection in motivating creativity. The primary goal of the UK copyright law is to encourage learned creators to produce useful materials or write valuable books. The American Constitution also primarily aims to enhance scientific progress by securing exclusive rights to discoveries and creations of authors for limited times.⁵⁶ For this reason, copyright law is considered an effective mechanism for stimulating creativity. It is undeniable that marketing power and economic interests have the ability to generate an incentive for authors and publishers to invest a huge amount of their labour, skills, and financial resources during the process of producing and publishing original works.⁵⁷ The financial exploitation that the author gains from their creativity for a period of time could incentivise them to produce the new works.⁵⁸ Especially in the digital era, the copyright protection and anti-circumvention rules should be reinforced and modernised to address new complexities of copyright infringement to safeguard author investments.⁵⁹ Therefore, the authors are stimulated for creativity only if they are ensured that they are able to control their work's dissemination in the marketplace and that their creations are prevented from unauthorised reproduction by the public.

“Social Requirements” to Access Works

Accessing information is a social requirement; strong copyright protection is able to encourage authors and copyright owners to publish their creative works as widely as possible; and useful knowledge will be disseminated to the public at large. However, if the authors are unable to rely on effective protection, the valuable works can be shared with the public easily, and the reproduction of the work can be done without any charge. As a result, the authors may fear financial loss, hesitate to share their works, and often withhold their works from the public. They may prefer to keep the works created from their experiences and ideas a secret, and the opportunities for accessing knowledge for the public interest will be eliminated.⁶⁰ In sum, the higher the level of protection, the more creators are encouraged to produce and communicate their creative works to a wider public. This will effectively respond to the social requirement for access to information for further creative activities.

⁵⁶ *ibid* 13-14.

⁵⁷ *ibid* 13-14.

⁵⁸ Longan (n 51) 794-795.

⁵⁹ Karan Raghav, ‘Copyright Law in the Digital Era: Evaluating the Effectiveness of the Digital Millennium Copyright Act (DMCA)’ (2025) 6 *International Journal of Advanced Legal Research* 1-2.

⁶⁰ Davies and Schriker (n 46) 14-15.

1.1.2 Roles and Theoretical Concepts of Fair Use

Geiger and Jütte emphasised that copyright is a framework that aims to enable legal access to the work to foster further creativities, rather than only protect the exclusive right of the copyright holder against reproduction by others. While exclusive rights serve as an incentive for the author to create the works, the interest of the user in accessing materials is also a fundamental purpose of copyright.⁶¹ It is emphasised that the exclusive power of the copyright holders to control access is not absolute, because the catalogue of limitations would be taken into account to allow lawful users to gain access to the digital work without the copyright holders' consent.⁶² Fair use provisions, or copyright exceptions, play a key role in limiting copyright holders' exclusive rights and promoting the interests of the public by allowing particular groups of users to access or reproduce protected works in specific circumstances. Fair uses include uses for educational purposes, criticism, parody, and non-profit research, enabling people to interact with content protected by copyright in ways that do not unreasonably harm the authors' financial interests. The legitimate users are also allowed to exercise their rights without paying remuneration fees, which cannot be deemed an offence of infringement on the exclusive rights of the copyright holders. Without the fair use provision or copyright limitations, it would be practically difficult for individuals to receive permission for accessing and using the copyright materials, and they may unavoidably be required to pay unaffordable remuneration for using materials in every circumstance, regardless of whether the usages are considered fair or not. Thus, it is arguable that the copyright exceptions promote the public welfare by providing channels for legitimate users to exercise their rights without incurring transaction costs such as royalty fees or licensing fees in the event that the purpose of such use falls under specific circumstances of the exceptions.⁶³ The copyright exceptions play key roles in making the knowledge available to the public and inspiring further creations. Since creative works are mostly inspired by existing knowledge and experience, it would be impossible to develop new creations without the ability to access earlier works. As a result, it is critical to establish exceptions to the law or situations in which using certain content without authorisation is permitted. In the absence of proper exceptions, most activities would constitute infringement, including downloading or copying works from the internet, regardless of their intended use. It is difficult for educational institutions to provide necessary resources; researchers could be hindered by

⁶¹ Christophe Geiger and Bernd Justin Jütte, 'Copyright as an Access Right: Concretizing Positive Obligations for Rightholders to Ensure the Exercise of User Rights' (2024) 73 GRUR international 1019-1021.

⁶² Vasiliki Samartzi, 'Digital Rights Management and the Rights of End-Users' (PhD thesis, Queen Mary, University of London 2013) 76-77.

⁶³ Supasiripongchai (n 13) 8-10.

limited access to necessary knowledge; and new authors might be unable to draw inspiration from existing works. It seems to oppose the fundamental principle of copyright law.⁶⁴ Therefore, copyright exceptions also benefit society by allowing users access to knowledge, which fosters creativity and innovation. These approaches could balance the reward for the copyright holder with the opportunity for the larger public to access the works⁶⁵

While fair use allows the user to use the works without permission, the application is basically limited by the three-step test, which is established by Article 9(2) of the Berne Convention and reinstated in Article 13 of the TRIPS Agreement, as well as Article 10 of the WCT. The open-ended condition includes certain special cases that do not interfere with the ordinary utilisation of the work and do not unfairly harm the author's legitimate interests. The three-step test is flexible enough to allow courts to determine specific usage privileges on a case-by-case basis and serves as a model for national legislators introducing flexible and adaptable exceptions in national legislation. Additionally, this flexible approach codified by international treaties aims to be a balancing instrument, providing domestic policymakers adequate freedom to decide exceptions based on cultural, social, and economic context.⁶⁶ However, due to the open-end characteristic, it may create the uncertainty on justifying the lawful use. To resolve this ambiguity, judges adopt four factors to assess fair use and make it more predictable. The four factors consist of the purpose of exploitation (the transformative factor), the type of work, the amount and significance of the content taken, and the impact of its utilisation on the market. The Supreme Court pointed out this first element as a key to fair usage: whether the content has been copied word for word into another work or whether it has been used to make a contribution to the new creation. It is important to consider how original works are altered by a further expression or meaning and whether the creation contains new knowledge, new insights and new perspectives to make a difference or a greater contribution from the original.⁶⁷

Recently, the trend in the case law of the Court of Justice of the European Union (CJEU) is that user rights have a stronger legal position, which is a result of the concern for the balance of interest between the

⁶⁴ Supriya Srivastava, 'Anti Circumvention Law for The Protection of Digital Rights And Its Management in India A Critical Evaluation' (PhD thesis, Dr. Ram Manohar Lohiya National Law University 2021) 33-34.

⁶⁵ Simon Walker, *The TRIPS Agreement, Sustainable Development and the Public Interest: Discussion Paper* (IUCN 2001) 4-5.

⁶⁶ Christophe Geiger, Daniel Gervais and Martin Senftleben, 'The Three-Step Test Revisited: How to Use the Test's Flexibility in National Copyright Law' (2013) 29 Am U Int'l L Rev 625-626.

⁶⁷ Stanford Libraries, 'Measuring Fair Use: The Four Factors' (Stanford University), <<https://fairuse.stanford.edu/overview/fair-use/four-factors/>> accessed 6 May 2026.

exclusive right of the copyright holder and the user right to access the works in a digital environment and the connection between exceptions of copyright protection and fundamental rights. The exceptions serve as a mechanism to promote freedom of expression and other fundamental rights. The CJEU noted that exceptions create rights for users to engage with copyrighted works or other materials.⁶⁸ In the digital era, fair use gains more attention for its role as a necessary counterbalance to the widespread authority of copyright holders to control works through technological measures and licences. Narrow exceptions would restrict users' freedoms and could not address the rights of authors to restrict access to works on the internet.⁶⁹ The interests of the copyright holder and users should be balanced rather than promoting the exclusive right over the user's right by enabling copyright holders to control the access to the works. In some situations, a broad interpretation of the exceptions is important to reduce the impact on access to materials and knowledge. It is necessary to improve exceptions or permitted uses without authorisation from the copyright holder to ensure a fair balance of interests, especially when exclusive rights were widely protected by copyright and TPMs to cover all possible future forms of exploitation.⁷⁰ Rosati (2023) claims that the copyright system should be more flexible and adaptable, which would require additional or extended exceptions. They may reduce the restrictions on certain types of copyrighted material. The open-ended exceptions are more flexible and are compliant with the user expectations and practices to access digital resources.⁷¹

Additionally, the copyright limitations ought to be consistent with public policy and social needs, such as education, libraries, and public security. Educational institutions provide learning opportunities and enhance knowledge, while libraries play a crucial role in making knowledge accessible and preserving valuable works and cultures for future generations. Therefore, it is reasonable to grant these bodies particular privileges in the form of copyright exceptions. The copyright exceptions intend to either settle conflicts of interest between all combating parties or facilitate public policies.⁷² Due to these roles and principles of copyright exceptions, they should be adapted and applied to be in line with technical and social development. The fundamental roles of copyright exceptions should be preserved in the digital age to solve

⁶⁸ Geiger and Jütte (n 61) 1026.

⁶⁹ Apoorv Pragma, 'Private Ordering in Copyright Law: The Impact on Fair Use Activities on the Internet' (2023) 28 *Journal of Intellectual Property Rights (JIPR)* 104.

⁷⁰ Christophe Geiger, Franciska Schönherr and Bernd Justin Jütte, 'Limitations to Copyright in the Digital Age: Safeguards for User's Rights, Creativity and Author's Remuneration' 96.

⁷¹ Eleonora Rosati, 'Copyright Reformed: The Narrative of Flexibility and Its Pitfalls in Policy and Legislative Initiatives (2011–2021)' (2023) 31 *Asia Pacific Law Review* 41.

⁷² Supasiripongchai (n 13) 14-15.

the problem or at least reduce the adverse impact of TPMs on the ability of the public to access information. The fair use provisions play a key role in disseminating knowledge and promoting public welfare. These approaches maintain a balance of competing interests between copyright holders and the public in the digital copyright system. Adapting copyright privileges and proper exceptions to the anti-circumvention rules might encourage the lawful distribution of knowledge goods. It would minimise the restrictive effects imposed by TPMs and guarantee that the public will continue to gain access to digital knowledge. Specifically, with regard to academic and scientific knowledge exceptions, these are a vital component in generating an incentive to develop further creative works.⁷³ In doing so, the advancement in innovation would enhance a well-informed and skilled population that is indispensably engaged in the national development process. It is arguable that exceptions added to TPMs might be a great benefit for developing countries in relation to accessing information and promoting public values.⁷⁴

1.1.3 The Convergence of Copyright Exceptions and Access Knowledge

It is indisputable that no author can produce creative material without learning from existing works; copyright law must allow free spaces for new creators to access the existing ideas and re-use the other works.⁷⁵ It is important for domestic policymakers to strengthen the fair use concept, which enables unrestricted access and reuse of cultural information and useful knowledge. The provision on voluntary agreement for sharing of materials and exceptions to copyright or fair use should be well enforced. This ensures that the public is able to access shared culture and academic information in order to foster creativity for the benefit and innovation of the entire society.⁷⁶ The free movement of ideas and cultural and commercial exchange should be promoted for public interest and social development.

Samuelson pointed out that accessing information is necessary for the development and exchange of culture and knowledge. The copyright holder should be encouraged to create and disseminate new works to society, and the opportunities for the public to experience those works should be enhanced.⁷⁷ She also suggested that copyright law might be used to promote dissemination of creative works in three ways: by

⁷³ Okediji (n 5) 1-2.

⁷⁴ *ibid* 1-2.

⁷⁵ Christophe Geiger, 'Promoting Creativity through Copyright Limitations: Reflections on the Concept of Exclusivity in Copyright Law' (2009) 12 *Vand J Ent & Tech L* 523-524.

⁷⁶ Public Domain Manifesto, 'The Public Domain Manifesto' (24 January 2019) <<https://publicdomainmanifesto.org/>> accessed 22 February 2022.

⁷⁷ Pamela Samuelson and others, 'The Copyright Principles Project: Directions for Reform' (2010) 25 *Berkeley Tech LJ* 1181-1182.

encouraging the establishment of organisations needed for dissemination of new works; by promoting copyright holders' opportunities to deliver new works to viewers or audiences; and by limiting the creator's right to control over public uses of creative works, as well as facilitating educational instruments to access and exploit valuable works. These will result in the development of knowledge and new forms of creation. In addition, the copyright system should allow for the establishment of intermediaries that have authority to issue the licencing of some or all of the exclusive rights in order to enable users to access information and reduce the difficulties for legitimate users to receive permission for using the copyrighted works.⁷⁸

It is important to note that the idea and the expression of a work should be distinguished; only the expression or the way of representing information is protectable, but the ideas and facts remain in the public domain. It seems unfair for the user to be absolutely prohibited from accessing useful information. Thus, the public should be granted several exemptions, and the exclusive right to control access and prevent reproduction should be limited in order to preserve the essential values of freedom of expression. In addition, the interests of the public should be favoured by guaranteeing the right to privacy, promoting access to information, increasing the dissemination of knowledge through educational institutes, research development, and accessing libraries.⁷⁹

There are concerns about the negative impacts on the free movement of ideas and the exchange of knowledge caused by the excessive scope of exclusive rights. Strong copyright protection usually provides a monopoly position to the copyright holder; they have absolute authority to control access and prevent reproduction by the public. The users have the ability to access and reproduce the protected work only when such acts are permitted and the monopoly price of remuneration is paid. In this aspect, the number of people who are able to use and access the information will, therefore, decrease. Monopolies create difficulties for the production of future works; further cultural development and creative activities might struggle due to a lack of opportunities to access existing knowledge.⁸⁰ Some communities emphasised that the new creation and wide communication of valuable knowledge should be encouraged; a wide spread of academic, scientific, and practical information will benefit the large scale of societies. The greater the population's knowledge and education, the more civilised and economically advanced societies will be. Therefore, it is necessary to motivate educated and high-skilled individuals to communicate useful

⁷⁸ *ibid* 1181-1182.

⁷⁹ Severine Dusollier, Yves Pouillet and Mireille Buydens, *Copyright and Access to Information in the Digital Environment* (Paris 2000) 4.

⁸⁰ Myra Tawfik, 'History in the Balance: Copyright and Access to Knowledge' 86-89.

knowledge for the enhancement of public interest. The relevant agencies should be established in order to support a wide contribution of knowledge.⁸¹ The copyright system is an effective instrument for the academic development of the public. Educational opportunities should be increased by the continued production of useful materials and accessible academic works. On the user side, the exclusive rights of copyright holders should be limited to guarantee appropriate access and use of copyrighted works for the purpose of gaining, sharing, exchanging, transforming, and progressing knowledge.⁸²

1.1.4 Stringent of Copyright Protection and Fair Use in the Civil Law System

In the civil law world, the domestic copyright protection is strengthened, and the right holders are primarily protected. They focus mainly on the authors' rights frameworks which is individual personality or privacy rights of the authors outside of financial interest or ownership. The most essential component of this framework is moral right that recognises the inseparable relationship between the authors and their works rather than economic concerns. In other words, the authors do not produce the works only for monetary profit, but also to express their unique personality.⁸³ The moral right is the provision that preserves the non-economic interest of the author; its intention is to safeguard personal identity as expressed in their creation. Moral rights are unwaivable because they are directly linked to one's personality. They include the right to disclosure, paternity, integrity, divulgation, withdrawal, and authorship.⁸⁴ Usually, authors hold these rights regardless of whether they have sold or transferred copyright ownership to others.⁸⁵ The moral right is grounded in Article 6 bis of the Berne Convention. It enables the author the right to claim that they are the author of the work and to object to any deformation, damage, modification, or other action about the work that could be harmful to their reputation or dignity.⁸⁶ An author still has the right to be acknowledged as the creator and to oppose any distortion, mutilation, or other change of the works that

⁸¹ *ibid* 73-75.

⁸² *ibid* 73-75.

⁸³ Elaine B Gin, 'International Copyright Law: Beyond the WIPO \& (and) TRIPS Debate' (2004) 86 J Pat & Trademark Off Soc'y 765-767.

⁸⁴ Economies, 'Which rights are granted by copyright?' <<https://economie.fgov.be/en/themes/intellectual-property/intellectual-property-rights/copyright-and-related-rights/copyright/copyright-protection-works/which-rights-are-granted>> accessed 9 May 2026.

⁸⁵ D Bornas-Cayuela and N Wajzman, 'Online Copyright Infringement in the European Union: Films, Music, Publications, Software and TV (2017-2022)' 16.

⁸⁶ Cornell, 'Berne Convention for the Protection of Literary and Artistic Works (Paris Text 1971)' <<https://www.law.cornell.edu/treaties/berne/6bis.html>> accessed 6 April 2026.

would be harmful to their honour or reputation, even if they assign copyrights to a publisher or other agency.⁸⁷

The moral rights mainly preserve the author's reputation by protecting the creations that have intimate link to the author's personality. Moreover, these rights under civil law system establish the inalienable right which allow the authors to have the absolute right to express their ideas influenced by their perspective or other specific skills. The creators are also entitled to control over the reproduction and distribution of these works.⁸⁸ However, it is importance to note that in order to receive the intensive copyright protection, the civil law countries require the higher level of originality than those mandated in common law countries, because the works have to be produced with a degree of creativity for revealing the creator's personality.⁸⁹ However, it is important to note that there are court judgement emphasis the standard of originalities, The CJEU decisions in Infopaq International A/S v. Danske Dagblades Forenings clarified the principle of originality within EU copyright legislation. Originality is an expression of the author's own intellectual creation. Because they share the originality of the entire work, the components of a work are protected by copyright. As a result, the different components of a work are protected by copyright as long as they contain aspects that represent the author's intellectual creativity.⁹⁰

The originality was further emphasised in the case of Football Dataco Ltd v Yahoo! UK Limited. In addition to labour and skills, the author has to make certain efforts and use the skill or talent to create the works. Moreover, a work has a creative component or conveys its creator's personality in order to be protected by copyright. According to the court, a work qualifies as an intellectual creation if it expresses the author's personality, which the author could make free and creative choices about when producing the work. The court has also stated that if a work's features are set by its technical function, it would result in lacking of the originality. In this context, the court made it clear that originality should be evaluated by determining the exercise of free and creative choices as well as the author's personal uniqueness rather than by considering the complex nature of the technological process or the resources invested.⁹¹

⁸⁷ The Law.Institute, 'General Introductions to IP Rights — Key Aspects of the Berne Convention: Shaping Global Copyright Laws' (2 December 2025) <https://thelaw.institute/general-introductions-to-ip-rights/berne-convention-key-aspects-global-copyright-laws/#google_vignette> accessed 9 April 2026.

⁸⁸ Gin (n 83) 765-767.

⁸⁹ *ibid* 765-767.

⁹⁰ Case C-5/08 Infopaq International A/S v Danske Dagblades Forening [2009] <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:62008CJ0005>> accessed 19 April 2026.

⁹¹ Case C-604/10 Football Dataco Ltd v Yahoo! UK Ltd [2011] <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:62010CC0604>> accessed 19 April 2026.

In the aspect of copyright formality, they are the formal procedures required for obtaining a valid copyright, which may consist of registration, deposit, making a notice, or renewal procedures. They are prerequisites irrelevant to the basic requirement for the creation of the work, such as uniqueness, originality, level of creativity or fixation.⁹² The Berne Convention states that authors have the right to exercise and use their rights without any formality regarding works in which they are created.⁹³ Hence, copyright is unique among the regimes where exclusive rights are automatically recognised and enforced at the time of creation. It is not dependent on the completion of formalities. Some formalities are voluntary to maintain legal standing.⁹⁴ In civil law system, it is likely to be easy and convenience for the authors to enjoy their right without any formalities such as the process of registration and notice. The author also gains a higher level of shield in term of duration, the longer terms of copyright protection is provided, as well as the moral rights might last forever.⁹⁵

With respect to the fair use provision, it is normally enacted as a list of exempted uses which is more rigid and more legal security for the author than those existed in common law world.⁹⁶ However, the potential effects of this type of legislation is the lacking of flexibility, the limitations to copyright is trend to be narrowly interpreted. Under this philosophical approach, the copyright holders have legitimate right to obtain economic reward for the usage of protected works, The provision of statutory license is often used for the users who exercise their right under limitations to copyright, but they are obliged to pay fair remuneration to copyright holder.⁹⁷ In addition, even though statutory license is issued, the copyright holders still have authority to control the use of his work because they are able to participate during the process of licensing. The amount of compensation can be negotiated between the interested parties, but in the case that the agreement cannot be reached, arbitration bodies might be established to determine the amount of compensation.⁹⁸ Thus, it is arguable that the European legislature explicitly protect the copyright holder to enjoy a right to gain equitable profits for the permitted use of their works. In France, for instance, the right to receive a remuneration of private copying cannot be waived. The collecting societies are also organised to have an authority for collecting the reasonable compensation resulting from

⁹² Dev S Gangjee, 'Copyright Formalities: A Return to Registration' [2017] What if we could reimagine copyright 217.

⁹³ Daniel Gervais and Dashiell Renaud, 'The Future of United States Copyright Formalities: Why We Should Prioritize Recordation, and How to Do It' (2013) 28 Berkeley Tech LJ 1470-1472.

⁹⁴ Gangjee (n 92) 213-214.

⁹⁵ *ibid* 765-767.

⁹⁶ Geiger, 'Promoting Creativity through Copyright Limitations: Reflections on the Concept of Exclusivity in Copyright Law' (n 75) 519-520.

⁹⁷ *ibid* 519-520.

⁹⁸ *ibid* 542-544.

the exceptions-based uses of a protected works. Especially Germany where the collecting societies are considered as a representative of copyright holder to make contract with the individual, collect a fair remuneration and issue licensing.⁹⁹ According to the German Court, any duplication and other problems caused by the library's practice may be resolved by the payment of remuneration provided to collective society. The library could be legally administered to enable personal study in the context of duplicate and deliver the copies of works.¹⁰⁰ In conclusion, the copyright under the civil law system provides a higher level of protection to the creators than those established by the common law system. It contains the legal frameworks in connection with the author's right and the moral right that safeguard the identity and reputation of the creators. There is the provision on safeguarding the reputation and the protection in favour of the authors by guaranteeing that they have a legitimate right to obtain a fair share of remuneration from the limited-based use of their works.

1.1.5 Flexibilities of Copyright Protection and Fair Use in the Common Law System

Dissimilar to the civil law system, the common law nations have adopted the theory of an economic incentive into their copyright legislation instead of moral rights. Particularly, the US rejects moral rights from their copyright system because they primarily perceive financial interest regardless of the representation of the author's personality.¹⁰¹ Economic rights enable copyright holders to gain financial profit from exploitation of their works by others; these rights provide the author with exclusive rights to commercialise the work.¹⁰² Economic rights are drawn from several Berne Convention articles which include reproduction, translation, and adaptation rights stated in Articles 8–14), even though they are not contained in a single clause. These are formally regulated within the framework of the treaty.¹⁰³ To ensure the economic rights, copyright law grants the exclusive right to authors to allow them to manage the usage of their creations by others to receive income. Right holders may permit or prohibit specific uses

⁹⁹ *ibid* 530-531.

¹⁰⁰ Kenneth Crews, 'Standing committee on copyright and related rights: Study on copyright limitations and exceptions for libraries and archives' (WIPO, 26 August 2008), <https://www.wipo.int/edocs/mdocs/copyright/en/sccr_17/sccr_17_2.doc> accessed 25 March 2023.

¹⁰¹ Gin (n 83) 765-768.

¹⁰² Economies, 'Which rights are granted by copyright?' <<https://economie.fgov.be/en/themes/intellectual-property/intellectual-property-rights/copyright-and-related-rights/copyright/copyright-protection-works/which-rights-are-granted>> accessed 9 May 2026.

¹⁰³ Berkman Klein Center For Internet & Society at Harvard University, 'Module 4: Rights, Exceptions, and Limitations' (28 May 2025)

<https://cyber.harvard.edu/copyrightforlibrarians/Module_4:_Rights,_Exceptions,_and_Limitations#:~:text=For%20example%2C%20Article%2012%20of%20the%20Berne,to%20translate%20a%20work%20into%20other%20languages.> accessed 10 May 2026.

of their works, such as copying the works, dissemination and communication of content to the public.¹⁰⁴ Economic rights are transferable; the author may sell or transfer this right to others.¹⁰⁵ The economic incentive theory typically highlights economic reward, motivating authors to create valuable works for society. This philosophical approach emphasises that the authors have to invest their capital, time, and labour during their initial process of production; they should obtain economic benefits in return for their investment. However, because the cost of unauthorised copying is very low, the author might not take the risk of making an investment in original creation if their works could be copied easily and freely.¹⁰⁶ This approach therefore supports a limited monopoly in order to enhance an economic incentive; the authors are allowed to obtain profit from their creation, and free-rider or unauthorised copying should be prevented to secure the interest of copyright holders.¹⁰⁷

However, it is important to note that an economic incentive theory also addresses preserving the balance between the public domain and copyright protection. Under this philosophical approach, a monopoly is legally established in a limited term, which is generally shorter than the author's right framework recognised in civil law countries. In general speaking, the length of copyright protection and the monopoly term have to be long enough; this duration should be sufficient for the creators to recoup their investment and gain a reasonable profit from their work. Nonetheless, the monopoly could not last too long because excessive copyright protection might adversely affect the public domain and the ability to access information.¹⁰⁸ With regard to the originality standard, the requirement in common law nations seems to be lower than that in civil law countries. The common law countries provide protection for works that originated with creators without any copying, and these materials have to be created with a sufficient degree of independent labour, skill, and judgement to justify the copyright protection.¹⁰⁹ Additionally, copyright is alienable in common-law countries; it is essential to have more formalities to be capable of transfer or sale. The process of registration and notice is officially launched to allow the author to protect their economic reward or benefit from such a reward.¹¹⁰

¹⁰⁴ Bornas-Cayuela and Wajzman (n 85) 16.

¹⁰⁵ GOV.UK, 'Guidance The rights granted by copyright' <<https://www.gov.uk/guidance/the-rights-granted-by-copyright#:~:text=Economic%20Rights,-Economic%20rights%20give&text=This%20would%20usually%20be%20by,or%20by%20selling%20the%20rights.>>> accessed 15 March 2026.

¹⁰⁶ Gin (n 83) 765-768.

¹⁰⁷ *ibid* 765-768.

¹⁰⁸ *ibid* 765-768.

¹⁰⁹ *ibid* 765-768.

¹¹⁰ *ibid* 765-768.

Fair uses or fair dealings in common-law countries are drafted in the form of open-ended provisions. This type of legislation is more flexible than those existing as a catalogue of exempted uses; the open-ended provision provides free space for judges to have wider discretion to react in new situations.¹¹¹ The provision of copyright protection and fair use under common law is relevant to utilitarian foundations.¹¹² This theoretical basis grants the public the prerogative right to access knowledge and intellectual works in order to improve overall social welfare. The expansive creator's monopoly, however, should be restricted, and the author's rights to be awarded are unnecessary under the utilitarian models.¹¹³ Furthermore, this flexible framework enable the courts to expand and limit the scope of exceptions, as well as provides rule makers with a free space to enact domestic legislation that effectively safeguards domestic copyright limitations while satisfying national cultural, social, and economic interests. In this way, existing fair use might be widely interpreted, new legitimate uses may be introduced, and the information services are promoted in order to disseminate useful knowledge in several circumstances.¹¹⁴ Senftleben also said that the flexibility of common law characteristics is able to respond to the needs of the public in a digital environment, and equitable remuneration is a potential tool to fulfil the balancing of benefits between the copyright holder and society. In sum, it is arguable that freedom of public use is the rule and the rights of the author are the exception.¹¹⁵ The public's interest in accessing information is primary protected under the Common Law system.

1.2 Fundamental Roles of Technologies and TPMs on Digital Age Balance

Due to the rapid development of information systems, the practical way of exploitation and the manner of permitted uses are changed by advanced technology; an infinite number of copyrighted works can be accessed and reproduced by uploading and downloading on internet system.¹¹⁶ Due to these changes, technological measures became a key mechanism to deal with infringement in the digital era. A technological measure is a subset of DRM that has a range of functions, such as protecting digital material, identifying and authenticating the user to access the content, and detecting copyright violations.¹¹⁷ In

¹¹¹ Martin Senftleben, 'Bridging the Differences between Copyright's Legal Traditions-the Emerging EC Fair Use Doctrine' (2009) 57 J Copyright Soc'y USA 521-525.

¹¹² Okediji (n 5) 1-2.

¹¹³ Senftleben (n 111) 524-528.

¹¹⁴ *ibid* 524-528.

¹¹⁵ *ibid* 524-528.

¹¹⁶ Okediji (n 5) 25-26.

¹¹⁷ Apeksha Singh, 'Analysis of Digital Right Management Provisions under Indian Laws' (2022) 4 Issue 4 Indian JL \& Legal Rsch. 1-3..

addition to these roles, TPMs are used to enforce copyright law and the private contractual policies on access to works established by the copyright holder.¹¹⁸ It consists of encryption, access-control, copy-control, authentication, Limited Install Activations, Advanced Access Content, System Content Scrambling Framework, and password.¹¹⁹ Current technologies include time limits, and paywalls or subscriptions that control access to digital works. There are technical means used to block the downloading of streaming content, block the reproduction of online music and movies, watermarks, labelling and print blocking that restrict the unauthorised reproduction of digital content.¹²⁰ Technological measures enable a copyright holder to prevent or restrict any actions against a file in order to safeguard the copyright holder's interests. This might be accomplished by restricting a computer or other device from modifying, duplicating, shifting (format), storing, sharing, distributing, or employing digital materials. These would secure moral rights and financial profit for the copyright holders or creators of works.¹²¹ Technological measures that restrict customers' ability to access and use the content in the manner specified by the copyright holder may help copyright holders administer their works more effectively.

It is important to note that technological measures do not implement copyright legislation. The technologies could not replace intellectual property law; they are used to support or reinforce the legal framework by restricting access to and use of content without permission from the copyright holder. The use of technological tools may be necessary to enforce terms and usage guidelines set by the copyright holder or required by law. In addition, users are required to make a payment to gain the digital key to engage with the online content. Advanced technology facilitates the lawful reproducing and reusing of materials while ensuring that copyright holders gain compensation for private use. These could encourage security in the digital environment and prevent copyright infringement.¹²² All performances of technological measures enable a variety of business models, which include streaming of on-demand content, subscription, rental, gift, playback restriction, and download or side loading.¹²³ Due to its functionalities, it is important to introduce anti-circumvention rules to protect technological measures

¹¹⁸ Anthony D Rosborough, 'Technological Protection Measures' (2024) 7.

¹¹⁹ Srivastava (n 64) 45-52.

¹²⁰ WIPO, 'Proposal for a Study on Types of Business Models and Economic Opportunities Created by and Through the Implementation of Technological Protection Measures (TPMs)' (WIPO, 2025) <https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=652990> accessed 19 March 2026.

¹²¹ Swaraj Paul Barooah, 'Disruptive (Technology) Law? Examining TPMs and Anti-Circumvention Laws in the Copyright (Amendment) Act, 2012' (2012) 5 NUJS L Rev 586.

¹²² Srivastava (n 64) 41-52.

¹²³ Singh (n 117) 2-3.

against hacking or being destroyed. The role of technological measures and the anti-circumvention rules will be discussed in this section.

1.2.1 Preventing Online Copyright Infringement

Due to the unique nature of the digital environment, copyright works are easily reproduced and disseminated in perfect copies without any cost. It seems difficult for the copyright holder to identify the infringers, as the computer servers accommodate anonymous use.¹²⁴ Furthermore, the boundaries, jurisdiction, and expense of litigation remain unsolvable issues, which create significant obstacles for the copyright holder to claim infringement remedies. In this aspect, it is undeniable that the traditional copyright legislation is no longer adequate to deter copyright infringement in the internet system.¹²⁵ The copyright holder is entitled to control over access, duplication, and dissemination of digital work by employing technological measures or encryption.¹²⁶ These result in a decrease in copyright infringement. The anti-circumvention laws are likely to be more essential to providing unprecedented protection in favour of the authors.¹²⁷ It is necessary to revise the legal infrastructure to be in line with digital development by prohibiting the circumvention of technological measures and also outlawing the manufacturing and distribution of circumvention tools. Legal reconstructions could help copyright holders protect themselves from the severe threat of infringement in the online environment. The manufacture and utilisation of infringement-inhibiting technologies could prevent copyright infringement and reinforce legislative protection in the digital era.¹²⁸

1.2.2 Increasing Confidence and Creativity

In the digital world, the technologies might allow unauthorised consumers to duplicate and disseminate copyright content on the internet system.¹²⁹ Ginsburg mentioned that copyrighted works should be protected by technological measures that enable copyright holders to control unauthorised access and prevent unauthorised reproduction. Technological protections are useful for authors to enjoy their exclusive right to disseminate and reproduce their works for remuneration. In addition, the legal framework relating to TPMs should be reinforced in order to encourage authors and entrepreneurs to create and publish further valuable works because they are able to rely on the technical measures and laws

¹²⁴ Besek (n 7) 477-478.

¹²⁵ *ibid* 481-484.

¹²⁶ Barooah (n 121) 586.

¹²⁷ Besek (n 7) 477-483.

¹²⁸ Samuelson and others (n 77) 1193-1195.

¹²⁹ *ibid* 1193-1195.

to secure the expected profits from their works. In this case, new business models will emerge to directly disseminate creative works on the internet. These could be done without any agents or assistance from the publisher.¹³⁰ It is arguable that the advancement of technologies has significantly contributed to the achievement of copyright's goal by encouraging authors to create and disseminate their new works to the public.¹³¹ In terms of users, the information available on the internet at a variety of prices would normally generate an incentive for online users to produce further creations. In other words, the digital innovation enables the authors or copyright industries to distribute their creative works in new formats, and network consumers from all over the world might obtain the devices to engage with existing creations and inspire them to create their own creative content. The new works would be produced and digitally shared with others.¹³² These would result in exchanging knowledge and enhancing creativity around the world. Hence, technological measures are important to protect the interests of copyright holders against unauthorised access to and use of their works. The anti-circumvention rules should be effectively enforced. The combination of technological measures and stringent laws could secure copyright holder interest, and an increased variety and quality of works would be offered to the public, which would benefit the entire society.

1.2.3 Delivering Works on More Convenient Platform

The digital delivery might allow users to experience the works because information technology seems to be useful to reduce the burden of searching for, exchanging, transmitting, and purchasing the information in favour of the consumer's interests. Additionally, the benefits of advertising and targeting promotions might result in lower search costs and price cuts.¹³³ In other words, copyright laws and anti-circumvention rules would generate economic motivations for individual expression, and these incentives would be more effective where private media channels are fostered and they are legally protected to distribute the creations to a wide local audience.¹³⁴ Shira Perlmutter and Ginsburg have argued that TPMs are established to encourage copyright holders to explore new methods of publication and also achieve new business

¹³⁰ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 36-37.

¹³¹ Samuelson and others (n 77) 1193-1195.

¹³² *ibid* 1193-1195.

¹³³ Samartzi (n 62) 43-45.

¹³⁴ Gin (n 83) 775-779.

models.¹³⁵ Individual creators are also able to deliver their works on a variety of platforms, and they could control commercial uses by themselves regardless of whether or not they are in the media industry.¹³⁶ In addition to online delivery businesses, the implementation of anti-circumvention rules might encourage agreement between copyright holders and other businesses involving user device manufacturers and software developers because these devices would typically become more important for consumers to access the content disseminated on the internet. It would assure that the devices manufactured by the technical-tools business will gain widespread acceptance from consumers.¹³⁷ These enable users to access the work from various platforms at a variety of prices. In doing so, a number of legal scholars have supported the idea that these legislative frameworks would contribute a wide range of benefits to copyright holders and societies, and users would be able to access more materials on more different platforms. These provisions increase opportunities for the new publication mechanisms, facilitating consumers to enjoy digital works that they could not otherwise experience in the analogue world.¹³⁸

1.2.4 Price Discrimination and Online Access Cost Reduction

Moreover, the users would experience a variety of choices for accessing copyright works at a variety of prices and on more convenient platforms. This provision additionally fosters a wide range of new dissemination models, including e-books on various online databases, motion picture downloads, or other music services on digital media.¹³⁹ Ginsburg has also identified that the protection of technological measures and digital deliveries seems to be attractive to consumers because a limited play would allow the system of price discrimination. If the copyright law does not permit these online deliveries due to the principle of exhaustion of rights, which gives the copyright holder the power to control their works, these materials might not be offered at differently priced levels. It is likely to be impossible for consumers to enjoy copyright works at an affordable price.¹⁴⁰ Besek identified that TPMs have the fundamental goal of increasing the options offered to users. In general, this approach enables consumers to access more choices of copyright materials in a more convenient form. They might choose either limited access to gain limited

¹³⁵ ; Shira Perlmutter, 'Convergence and the Future of Copyright' (2001) 23 European Intellectual Property Review 174; Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 12-16.

¹³⁶ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 36-37.

¹³⁷ Besek (n 7) 498.

¹³⁸ *ibid* 391-466.

¹³⁹ *ibid* 389-390.

¹⁴⁰ Jane C Ginsburg, 'Can Copyright Become User-Friendly? Review: Jessica Litman, Digital Copyright (2001)' (2001) 25 Colum JL & Arts 87-89.

use of works at a lower payment or unlimited access and use of copyright content at a higher price.¹⁴¹ The clearest example of this is that viewers could enjoy online movie downloads for a cheaper fee rather than the more expensive cost of purchasing hard copies. The users might be charged a smaller amount of fees for accessing a large number of academic materials embodied in digital databases instead of paying a full price for every single book. It might be said that these are positive developments in user-facilitating legislation.¹⁴² If access could not be effectively restricted by the distributors, then all users would consequently be charged a higher fee for unlimited access, regardless of their demand and economic status. Thus, digital deliveries would definitely enhance the ability of consumers to engage with the protected works at a different rate of price based on the number of times and proportions that they seek.¹⁴³ Technological measures provide protection against unlimited reproduction and redistribution. These encourage use-facilitating business and increase the abilities of users to access information that goes far beyond those accommodated by fair use provision. Therefore, it is arguable that technological measures play a key role in disseminating copyright works, preventing infringement, securing the interest of copyright holders, and encouraging further creations.

The Technical Evolution of Technological Measures

The report of Rosborough divides technological measures according to their technical purposes and implementation. Prior to the advent of digital formats, rightsholders employed analogue or physical controls to prevent illegal reproduction. Macrovision and VHS were used to change cassette tapes into invisible video signals. When a user tries to record a tape onto another Video Cassette Recorder (VCR), the image is rolled, darkened, or mixed up. The copy is incomprehensible. Audio cassettes had physical protection, which was called "record protection", in the form of tiny square holes that controlled a device to be unable to record. There is creative verification that the industry of video games used complex analogue techniques, such as puzzle solving, manual lookups, and the need for physical dongles or keys in order to play games.¹⁴⁴

In terms of the digital era, there are two forms of technological measures, including cryptography and information hiding. Cryptographic techniques employ encryption to protect content, which can only be decrypted with a password or access key. Symmetric encryption exploits a single private key that both the

¹⁴¹ Besek (n 7) 474-475.

¹⁴² *ibid* 478-490.

¹⁴³ *ibid* 479-480.

¹⁴⁴ Rosborough (n 118) 20-27.

sender and the recipient share. Asymmetric encryption utilises a public-key method in which content is encrypted using a public key, while decryption requires separately assigned private keys. Information-hiding techniques are used for the work that contains signals or metadata that regulate its use. Apple's FairPlay detected copies of works and the number of times the works were played. It restricted the number of machines that could play the Advanced Audio Coding (AAC) files by using encrypted layers. Moreover, the Portable Document Format (PDF) is widely used for managing private data and for preserving and transmitting copyright-protected literary works. PDF documents can be encrypted by passwords and electronic signatures using cryptography to verify authenticity and rights of users for protection from unauthorised access and copyright infringement.¹⁴⁵

For web-based technological measures, the shift from downloading files of works to streaming and platforms has necessitated additional technological measures to prevent consumers from getting access to content. Forensic watermarking is a technique based on information hiding to protect copyrighted digital works. The method operates by making slight alterations to images, text, video, sound or other media that contain user identity information. Forensic watermarking is used to prevent and trace illegal reproduction and distribution of digital material. Server and file-level controls are the most common method, which necessitates authentication of users (password/username) in order to access content kept on a server. To prevent consumers from unauthorised accessing and downloading the data, subscription-based streaming content platforms such as Netflix, Spotify and academic databases employ encrypted connections to establish a trusted execution environment where decryption occurs on the user's device in a separate manner. These technological protections enable users to access and play works across a safe and encrypted connection to online resources. Regarding the continual development and complexity of digital technologies, it is essential to assess the effect of technical measures and TPMs on copyright protection, user rights, and access to digital knowledge.¹⁴⁶

1.3 Impacts of Technological Measures and TPMs

Even though TPMs have played important roles in the digital environment, there are discussions on the adverse impacts of technological measures and the anti-circumvention rules. The lessons learned from this investigation will be taken into account to suggest new legislative models for Thailand to tackle these issues.

¹⁴⁵ *ibid* 20-27.

¹⁴⁶ *ibid* 20-27.

1.3.1 Impacts on Fair Competition

In the aspect of fair competition and innovative development, many devices on the market might be technologically locked to communicate only with specific devices produced by the right holders. The anti-circumvention concept is that it creates a technological barrier for consumers to engage with alternative replacements produced by unauthorised manufacturers. It could be said that technological measures and anti-circumvention laws might prevent competition in the market for replacement parts; they would be enforced to preserve monopolies for specific manufacturers carrying out the maintenance and repair business.¹⁴⁷ Galatagekar (2024) argued that technology is applied to lock consumers into using specific platforms and restrict access to materials on different devices or services. For example, a consumer who purchases digital content that is protected with a technological measure from a vendor may not be able to use that content on devices or platforms provided by other vendors. This would lead to unfair competition.¹⁴⁸ The empirical analysis of TPMs under the DMCA of US notes that the use-controls and access-controls could effectively enhance the ability of copyright holders to restrict access to their digital works, thereby empowering their market position.¹⁴⁹ Nevertheless, the monopoly market power of copyright holders also causes economic costs by chilling educational development, research and innovation. The economic costs were also empirically found in terms of user welfare. Technological lock-in is used to restrict fair competition in the market, which goes far beyond preventing copyright infringement. These include preventing the devices or services provided by third parties or hindering the consumer from using their preferred accessories. The works can be used only with specific devices; this generates a monopoly position and precludes users from choosing more affordable works.¹⁵⁰

Moreover, a technological measure may have an impact on the right to repair. Many software programs are difficult to detect and only show up after users try to fix their devices. Devices may become locked or malfunctioning if accessories from third-party or unauthorised repair services are employed, limiting users to selecting original product repairs and replacement parts.¹⁵¹ There are concerns about the protection of technological measures. One fear is that creative activities and innovation might be hindered if technology

¹⁴⁷ Besek (n 7) 506-507.

¹⁴⁸ Omkar Ashok Galatagekar, 'Digital Rights Management and Competition Law: Striking a Balance between Copyright Protection and Market Access' (2024) 2 LawFoyer Int'l J Doctrinal Legal Rsch 683.

¹⁴⁹ Justin Hughes and Dan Ankenman, 'An Empirical Study of the DMCA's Anti-Circumvention Provisions' (2022) 715-720.

¹⁵⁰ *ibid* 730-735.

¹⁵¹ Zicheng Wang, 'Obligations Concerning Digital Rights Management (DRM) in International Law-What Are the Strategies for Developing Countries to Deal with DRM from Legal Perspective?' (2025) 31.

manufacturers are legally required to produce products and systems that respond to anti-circumvention rules.¹⁵² These lead to unfair competition in the domestic market.

1.3.2 Impacts on Personal Uses

For the exception for personal use under traditional copyright law, this limitation in many domestic anti-circumvention laws seems to be eliminated. It is arguable that the main mission of copyright and TPMs is to encourage the creators to recoup the investments they have made in producing their works; this could be done by providing protection for the copyright holder to control commercial exploitation of their creative works. Therefore, personal uses are likely to be prohibited to secure the economic profits of the copyright holder. It is important to note that in the absence of exceptions for personal use, copyright protection in the digital era expands the exclusive right of the copyright holder to restrict duplication or communication of works for private use, which may occur on a small scale.¹⁵³ However, it has been argued that private use does not affect the exploitation of copyright holders, or at least that this exemption might cause only trifling harm to copyright holders. Moreover, the prohibition on personal use seems to be unacceptable to ordinary people because it might cover all uses of copyrighted works. These would be obstacles for the user to access information and also overrule the public's perception of creative works.¹⁵⁴ For these reasons, the legislation should respect consumer self-expression as well as privacy interests by allowing them to gain personal use in spaces reasonably expected of them. The personal use exemption should continue to exist in anti-circumvention regulation; it would facilitate reasonable public expectations to engage with creative works and also create an appropriate balance between private and public interests.¹⁵⁵

1.3.3 Impacts on Libraries and Educational Sector

It is arguable that some exemptions provided by traditional copyright law are restricted in the digital era. Some are overruled by anti-circumvention laws, especially the exception in connection with the educational sector.¹⁵⁶ Libraries or educational organisations are academic institutions established to serve social development by creating books and journals and sharing other materials with the public. These would

¹⁵² Samuelson and others (n 77) 1194.

¹⁵³ *ibid* 1212-1213.

¹⁵⁴ *ibid* 1229-1232.

¹⁵⁵ *ibid* 1229-1232.

¹⁵⁶ Okediji (n 5) 1-9.

increase knowledge, cultural, and innovative improvement, and the ability of people to interact with the world and the digital environment around them would be enhanced.¹⁵⁷ Thus, the preservation of the knowledge materials seems to be essential for the public, and libraries or educational organisations have the institutional duty to carry out this essential function. The users could access knowledge and creative works recorded by these institutions, but the libraries could complete this task only if they were able to make preserved copies of works available to the public. Nonetheless, the anti-circumvention rules are likely to overrule lawful research and other academic activities. It is undeniable that there are exemptions from the prohibition of circumvention for libraries, encryption research, and reverse engineering. Okediji emphasised that the exceptions for libraries and education promulgated in national legislation are very narrow. They place a number of conditions hindering the capabilities of libraries to make digital materials accessible for users. The activities enabling the availability and circulation of knowledge are limited. In other words, there are restrictions on the nature of libraries that fall within the scope of exception, such as publicly funded or non-profit libraries. The type of works and the form of copies that the libraries can copy are also regulated. It seems insufficient to meet legitimate research needs, and that might have a chilling effect on educational development and research activities.¹⁵⁸

Recently, TPMs remain a significant obstacle to research, learning, education, preparing for teaching, and class teaching, even where non-infringing users attempt to engage with that material through on-site systems or at university libraries. The educational exceptions of TPMs seem to be narrow and unclear for the researcher and other educational communities. The fair users under traditional copyright law may not be familiar with TPMs exceptions, and they may be afraid to exercise their rights to access the works. The users do not understand what technologies are protected by TPMs or what activities may constitute illegal circumvention or fall within the scope of exceptions. They may not take the risk to exercise TPMs' exceptions in practice. These lead to an inability to access digital content, even for educational purposes.¹⁵⁹ Wang (2025) also highlighted that educational uses presently remain the most common topics discussed worldwide. The impacts of TPMs on accessing knowledge and digital learning resources remain unresolved. In the copyright industries, subscription business models and pay-per-use become increasingly widespread, which enables content distributors to govern and authorise access to digital content. There is the broad adoption of licence contracts and application of technological mechanisms allowing the copyright holder

¹⁵⁷ Samuelson and others (n 77) 1233.

¹⁵⁸ Ruth L Okediji, 'The Limits of International Copyright Exceptions for Developing Countries' (2018) 21 Vand J Ent & Tech L 733.

¹⁵⁹ Rosborough (n 118) 71.

to set terms and conditions to engage with the digital content regardless of whether the works are in the public domain. They are in a favourable position and are able to overlook fair use and TPMs' exceptions for research and education. The flexible educational exception might conflict with copyright industries that attempt to restrict the use of digital media by unpaid users. For instance, the current technologies could hinder the format transformation of protected content. Despite having the same format, accessibility would be limited to a single device, regardless of whether a similar operating system is applied. Thus, while transferring devices, non-infringers may no longer be able to access or use digital works, and they have to contact the content provider to make a request to access the materials again. These restrictions seem to impede researchers and educators from engaging with digital learning materials.¹⁶⁰

Hence, the unclear and overbroad protection of technological measures and the narrow list of existing exceptions might put many circumventors at risk of being legally liable.¹⁶¹ Anti-circumvention provisions highly affect librarians and educational sectors. Copyright law and anti-circumvention regulation should facilitate libraries and academic institutions in fulfilling their tasks.¹⁶² At the same time, it is important to consider the effect of such legislation on the market for copyright materials to ensure that non-infringing users have sufficient access to creative works. Libraries and academies should have the privilege to duplicate portions of materials upon the request of a lawful user.¹⁶³ With this aspect, the user could enjoy copyright works for legitimate purposes, which might encourage research and promote the improvement of science in society. Therefore, librarians and educators should be legally safeguarded from the negative impacts of overbroad anti-circumvention provisions; the potential adverse effects on fair use should be minimised; and the ability to access information and the public domain should be expanded.¹⁶⁴

1.3.4 Impacts on Developing Countries

Neil Weinstock Netanel explained that the royalty for accessing databases may obstruct the free flow of knowledge and ideas by restricting the ability to experience the protected works. These costs might be unaffordable for people, particularly those from developing countries.¹⁶⁵ Elaine B. Gin supported the idea

¹⁶⁰ Wang (n 151) 28-29.

¹⁶¹ Pamela Samuelson, 'Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised' (1999) 14 Berkeley Tech LJ 545.

¹⁶² Samuelson and others (n 77) 1232-1234.

¹⁶³ *ibid* 1232-1234.

¹⁶⁴ Okediji (n 5) 27-28.

¹⁶⁵ Neil Weinstock Netanel, 'Asserting Copyright's Democratic Principles in the Global Arena' (1998) 51 Vand L Rev 296-326.

that digital lockdown and the imposition of copyright royalties on low-income countries may lead to economic losses for all involved parties. The authors are unlikely to obtain more compensation because the works might be too expensive to be consumed in poor areas. Although the technological measure could protect the creator from piracy losses, they would not gain royalties. And the users would typically deny access to information, which often serves as valuable resources for political, educational, and social development in developing countries.¹⁶⁶ Because of the problematic issues surrounding the enforcement of anti-circumvention rules and the inappropriate exceptions discussed previously, welfare interests and the proper model for protecting technological measures remain unrealised. These might have adversely affected developing and least developed nations whose capacity to access information on reasonable conditions is directly related to the limitations to legal protection provided for the copyright holders.¹⁶⁷ In the digital world, the limitations are co-extensive with enhancing the quality of education and public welfare. The legal protection of technological measures should be designed with respect to the context of developing countries, and the ability to access knowledge should not be overlooked, as this approach is an essential part of the copyright balance.¹⁶⁸ In this aspect, the exceptions for academic sectors and relevant organisations facilitating access to digital content should be well established. Libraries and other educational institutions should be the avenues of access to databases rather than charging for the knowledge goods. The developing countries should be legally allowed to access information networks in reasonable terms.¹⁶⁹

1.3.5 Pay-Per-Access Society and the Impacts on Access Knowledge

Since a vast majority of works are made available to consumers in online or electronic form, the users are required to follow unfair conditions established by the distributors (such as payment, the number of accesses, or duplication). The technological measures are employed to restrict unauthorised access to and exploit protected materials they contain, which may include encryption or password control.¹⁷⁰ Pragya noted that the authors employ technological measures, code, and contracts to restrict the freedom of users to access the work.¹⁷¹ Some systems encrypt the contents to limit the consumer's ability to view, play, download, and print digital works. Unlimited access is likely to no longer exist in digital control because

¹⁶⁶ Gin (n 83) 775-778.

¹⁶⁷ Okediji (n 5) 1-9.

¹⁶⁸ *ibid* 25-34.

¹⁶⁹ *ibid* 25-34.

¹⁷⁰ Besek (n 7) 449-452.

¹⁷¹ Pragya (n 69) 94.

consumers have to encounter specific licence terms decided by content providers. These conditions may involve the start time, number of accesses or copies, duration, price, and limitations placed on the ability to access specific devices.¹⁷² The encrypted works are provided on a long side with the licence terms. The consumers are required to accept the conditions or make a payment to receive the key that allows them to decrypt the content. John T. Mitchell argued that the implementation of licence terms goes beyond the exclusive rights provided by copyright protection. These would impose more restrictions on the user than those within the scope of copyright legislation. He also suggested that the new business models encouraged by technological measures could either expand the boundary of copyright, prevent trade, or restrain fair competition in the markets.¹⁷³ However, the anti-circumvention legislation includes extra-copyright mechanisms that produce an unprecedented layer of protection for copyright holders with respect to controlling the dissemination of creative expression. The embrace of this provision transfers the power to restrict access to and use of copyright materials from national legislators to private authors.¹⁷⁴

The public domain is defined as being free or accessible to any individual in the general public for any purpose, without the need for a right owner's approval or permission and at no expense. Additionally, the term is used to describe intellectual property that is ineligible for exclusive ownership, meaning that no one holds proprietary interests in the public domain. The public domain is common and available to everyone for access and exploitation without any restrictions; it is not the personal possession of any person.¹⁷⁵ Therefore, the public domain generally refers to intellectual works that are not covered by copyright or other intellectual property protections, or for which the duration of protection has expired, making them publicly available. The public domain sometimes expands to encompass any materials whose access and usage would not be restricted by the exclusive right of the copyright holder, such as the exploitation of work under exception. In other words, the public domain can be defined as open content or intellectual common to emphasise the free and unrestricted use of works by the public, which reflects the nature of sharing and collaboration.¹⁷⁶ It consists of content that was not eligible for protection, such

¹⁷² Besek (n 7) 449-452.

¹⁷³ John T Mitchell, 'DRM: The Good, the Bad, and the Ugly' (2004) 56 *Colleges, Code and Copyright: The Impact of Digital Networks and Technological Controls on Copyright: Publications in Librarianship* no 56 40-41.

¹⁷⁴ Okediji (n 5) 1-3.

¹⁷⁵ European IP Helpdesk, 'Public Domain' (19 November 2020) <https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/public-domain-2020-11-19_en> accessed 6 June 2026.

¹⁷⁶ Séverine Dusollier and others, *Scoping Study on Copyright and Related Rights and the Public Domain* (WIPO 2016) 1-12.

as content that was not original enough to be eligible for copyright protection.¹⁷⁷ Therefore, there are some concerns that public-domain materials might be locked up. In order to avoid lawful circumvention, the distributors are likely to restrict access to the public domain by attaching them to copyright-protected materials.¹⁷⁸ Some complaints pointed out that the public domain is no longer protected by copyright or other relevant laws. It should belong to the public, in which everyone could engage freely without any constraint or paying for it. The anti-circumvention rules have no authority to put it in private hands.¹⁷⁹ These regulations may not expand the scope or duration of copyright protection. Authors should not be granted protection beyond the constitutional boundaries of copyright law. Expanding copyright protection would subsequently reduce the public domain's extent and deprive the public of common property.¹⁸⁰ The enforcement of anti-circumvention rules does not only affect access to the public domain; it also controls the ideas and other unprotected information that copyright law leaves available for future authorship or further creations.¹⁸¹

Elaine B. Gin also raised another concern in connection with the lack of diversity of information: the channel of dissemination might be monopolistic, and the knowledge is likely to be disseminated by a few groups of publishers.¹⁸² In order to be published in a particular journal, the author has to transfer their copyrights to publishing industries or relevant organisations that have the means of distribution, such as newspapers, distribution companies, television channels, and other media outlets. Thus, specific media companies would be able to control the dissemination of ideas and information. When a small group of owners manages media channels, these corporations typically prioritise profit margins. They can absolutely decide where, when, and how to disseminate their literary works.¹⁸³ With this aspect, there is a high potential that only profitable materials will be selected to be distributed, and unpopular expressions will be rejected from publication. The marketability of creative works might be threatened. These might result in a limited diversity of information available to consumers; the opportunities for accessing knowledge would be arguably impeded by media outlets and excessive anti-circumvention rules.¹⁸⁴

¹⁷⁷ European IP Helpdesk, 'Public Domain' (19 November 2020) https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/public-domain-2020-11-19_en, accessed 6 June 2026.

¹⁷⁸ Besek (n 7) 468.

¹⁷⁹ Jane C Ginsburg, 'Copyright Legislation for the Digital Millennium' (1999) 23 Colum-VLA JL & Arts 173-175.

¹⁸⁰ *ibid* 173-175.

¹⁸¹ Samuelson and others (n 77) 1236.

¹⁸² Gin (n 83) 777-778.

¹⁸³ *ibid* 777-778.

¹⁸⁴ *ibid* 777-778.

1.3.6 Incompatibility of Technological Measure and First Sale Doctrine

The first-sale doctrine or exhaustion of rights is recognised as an exception to intellectual property infringement. If the products have been lawfully introduced to the market, the rights holders, who have received adequate remuneration for the first sale, cannot control the subsequent distribution.¹⁸⁵ Exhaustion is the end of the copyright holder's right to control a copy of a copyrighted work after the first sale or other transfer of ownership of the copy with the copyright owner's permission.¹⁸⁶ In general, the principle of exhaustion of rights is a fundamental principle of intellectual property law. Once a work has been sold or distributed for the first time, the owner of the rights can no longer object to its resale or further distribution in a certain region. This is a mechanism to achieve a balance between the free flow of works in the market and the rights of owners. It is governed by particular legal provisions to guarantee fair implementation.¹⁸⁷ Although the Berne Convention of 1886, as revised in 1979, and the WCT do not reference copyright exhaustion, Article 6 of the 1994 TRIPS Agreement states signatories may regulate the issue of exhaustion as long as they comply with the most favoured nation and national treatment non-discrimination principles.¹⁸⁸

In comparison to the analogue society, the works are produced and disseminated in a physical medium. The consumers who acquire a hard copy of expected works are able to gain unlimited access, and the copies of works can be sold or transferred to another owner in accordance with the exhaustion of the right principle.¹⁸⁹ The first sale doctrine and the exhaustion of rights provide various benefits to consumers of digital works. These theories permit the redistribution of copyrighted works, allowing many more users to enjoy them, as well as facilitating those who could not afford the full price of a first-hand work. At the same time, the price-competitive option for obtaining new copies might be useful in the context of lowering the price of works.¹⁹⁰ The first-sale doctrine under the traditional copyright law, however, no longer exists in the digital era. Technological measures may limit access and reproduction of digital works, embedding electronic content in specific devices or platforms, hindering consumers or purchasers of protected

¹⁸⁵ The IPKat, 'Exhaustion of rights (first sale doctrine): what are the broader implications of the CJEU's ruling in Art & Allposters?' <<https://ipkitten.blogspot.com/2015/01/exhaustion-of-rights-first-sale.html>> accessed 6 March 2026.

¹⁸⁶ AIPPI, 'Resolution Question 240 Exhaustion issues in copyright law' (2014) <https://abpi.org.br/wp-content/uploads/2019/05/AdRes_Q240_141014.pdf> accessed 9 March 2026.

¹⁸⁷ Dreyfus, 'Exhaustion of Rights' <<https://www.dreyfus.fr/en/lexicon/exhaustion-of-rights/#:~:text=Exhaustion%20of%20rights%20is%20a,Applicable%20Legal%20Provisions:>>> accessed 9 March 2026.

¹⁸⁸ AIPPI, 'Resolution Question 240 Exhaustion issues in copyright law' (2014) <https://abpi.org.br/wp-content/uploads/2019/05/AdRes_Q240_141014.pdf> accessed 9 March 2026.

¹⁸⁹ Besek (n 7) 473.

¹⁹⁰ Samartzi (n 62) 47.

material from selling the works or copies to others. There is criticism that the anti-circumvention rules have created an unprecedented right in favour of copyright holders that might cause a digital lockup. The users have to make a payment each time they access or use copyrighted works, and these create monopolies for the copyright holders to sell or dispose of their works.¹⁹¹

The example of the technological measure providing an economic advantage to the copyright holder is geo-blocking, a common method of restricting access to digital content. By limiting access to works based on the geographical location of users, geo-blocking is a technology that effectively maintains the concept of copyright territory in the boundless online world. Geo-blocking allows right holders to set various pricing for different regions, separate the markets for the digital content geographically, and maximise financial profits from the use of the work. Online content access can be limited on the number of users and duration. Geo-blocking enables copyright holders to deny access to users based on nationality, residence, or location. It leads to unequal access to works protected by copyright across nations. Furthermore, the terms of service agreements of media and digital service platforms prohibit the transfer of user accounts. The subscriber's legal descendants are unable to gain access to online databases because they do not inherit or automatically get the subscription. Only the subscriber may utilise downloads, and the works are frequently only usable for a certain amount of time after they are downloaded. The permanent use is disappearing. The user remains able to access the information only while the subscription service exists, and if the subscription term expires, the user frequently has no right to continue enjoying the work. Likewise, libraries and cultural institutions are only able to access the content while the subscription agreement is in effect.¹⁹²

It is arguable that technological measures provide excessive competitive advantages and exclusivity to the copyright holder and make creative works closer to private products. The digital work protected by encryption mechanisms is unlikely to serve the public with the available information as physical carriers did. Digital technology and anti-circumvention rules create a new business model that offers consumers a wider range of works and a more convenient way to access them than physical mediums, but it also limits users' ability to experience works previously available to them under copyright exceptions and the first sale doctrine.¹⁹³ Thus, TPMs could not achieve the balance between the interests of the copyright holder and

¹⁹¹ Besek (n 7) 467-473.

¹⁹² Eleni-Tatiani Synodinou, 'Access Restrictions in a Dematerialized World: An EU Copyright Law Perspective' (2024) 11.

¹⁹³ Samartzi (n 62) 227-228.

the public, which is the underpinning of copyright laws. This imbalance has not occurred when works were delivered in an analogue environment.¹⁹⁴

1.4 TPMs-Established Access Rights to Strengthen Right Holder Control

Since the anti-circumvention rules across jurisdictions prohibit the violation of access-control technologies, devices designed to circumvent technological measures are also restricted. These approaches create a new right for copyright holders to use technological measures to control access to their works, which can be called an "access right." This right empowers the copyright holder to govern the manner in which users engage with their works, such as the amount of material that can be viewed, the duration of access, or the number of devices displaying the works. Additionally, access rights strengthen copyright protection in the digital environment because works cannot be copied and redistributed without first being accessible. Access rights have become one of the most crucial rights for authors in the digital era.¹⁹⁵ According to June M. Besek, access is defined as the capability to experience or comprehend a work; in other words, it could basically refer to the ability to view, watch, read, or listen to a material.¹⁹⁶ In the analogue world, copyright content is normally embodied in physical objects, which seem to make it easier for the copyright holder to control access to their works. Due to the advancement of information technology, however, the exploitation of works has changed from having hard copies to directly experiencing the electronic version of content.¹⁹⁷ The dematerialisation of works has shifted control to the administration of resource access.¹⁹⁸ The ability to access the copyright works was not limited to individuals who had physical possession of the means containing the protected contents. The users who have the necessary devices could intercept and access the works without any requirement for purchasing or actual possession. With this aspect, unauthorised access emerged; the copyright holder could no longer control the access by physically regulating the dissemination and communication of their works to the public, which might lead to serious danger to the copyright holder's interests. Nonetheless, it is important to note that access is necessary for the other use of copyright works in the digital era because access is likely to be prerequisite to the other use, and the users are unable to copy or modify the works without the ability to access them.¹⁹⁹

¹⁹⁴ *ibid* 227-228.

¹⁹⁵ Marlize Conroy, 'A Comparative Study of Technological Protection Measures in Copyright Law' (Thesis, University of South Africa 2006) 239-240.

¹⁹⁶ Besek (n 7) 474.

¹⁹⁷ Jane C Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (2002) 50 J Copyright Soc'y USA 113-115.

¹⁹⁸ Synodinou (n 192) 1.

¹⁹⁹ Conroy (n 195) 240-241.

If the copyright holder could regulate access, they would effectively prevent the reproduction, distribution, and other uses of their works.²⁰⁰

In order to avoid economic loss, the copyright holder attempts to find new mechanisms to control access to their works; these would include contracts, licensing, and technological measures.²⁰¹ In general, the authors are able to limit the listening or viewing of a work through the application of measures such as encryption and scrambling (so-called access control).²⁰² The anti-circumvention rules provide additional protection to the copyright holder in terms of prohibiting the circumvention of access control used by the copyright holder to protect their works.²⁰³ These approaches result in a new access right for the copyright holder, which could be considered the ability to permit someone to access a certain object. Gasaway explained that the access right is the right of the authors to restrict the access and utility of their works. If the copyright holders have the access right, they would typically be able to control how the users perceive the work and also to prohibit the unauthorised reproduction conducted by the users.²⁰⁴ Furthermore, the access right may entitle the copyright holder to impose a variety of restrictions on the user. The copyright holder may restrict access to the work, including controlling the number of consumers enjoying works, the type of machines or devices used to display the content, and the length of time that people may access the work.²⁰⁵ These would result in the right to set a price for the user to pay in order to gain access. Therefore, the access right is not solely the authority to grant initial access; it certainly encompasses the right to regulate usage as well.²⁰⁶ In a digital environment, it will become the author's most significant right.²⁰⁷

Moreover, an access control measure can serve two purposes: (1) to prevent initial access and (2) to deny access after a secondary check finds that it was unauthorised.²⁰⁸ Access control can be considered a mechanism used to manage admission to a particular system and online resources. This approach might

²⁰⁰ Ginsburg, 'Copyright Legislation for the Digital Millennium' (n 179) 143-144.

²⁰¹ Conroy (n 195) 241.

²⁰² Besek (n 7) 432-453.

²⁰³ Conroy (n 195) 244.

²⁰⁴ Gasaway (n 11) 269-271.

²⁰⁵ *ibid* 269-271.

²⁰⁶ Thomas Heide, 'Copyright in the EU and US: What Access-Right' (2000) 48 J Copyright Soc'y USA 366-370.

²⁰⁷ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 113-114.

²⁰⁸ MDY Industries, LLC v. Blizzard Entertainment, Inc., 629 F.3d 928 (9th Cir. 2010); See also Casetext Part of Thomson Reuters, 'MDY Industries, LLC v. Blizzard Entertainment, Inc.' (Casetext, 14 December 2010) <<https://casetext.com/case/mdy-indus-llc-v-blizzard-entmt-inc>> accessed 29 March 2022.

combine two steps, including the authentication of the user and allowing authenticated consumers to access. For the first step, access control would authenticate the user in order to identify whether or not the users or clients are permitted to log on. After the authentication of the user was approved, the access control would then allow the authenticated user to access an online database or specified resources.²⁰⁹ However, in order to be granted access, the consumers might be required to accept company policies as well as certain permission levels provided to them. Access control allows the rights holder to establish the terms and conditions governing access and exploitation. It is arguable that the copyright holder may gain benefits from issuing licences for digital works by setting the initial terms and conditions of access and use.²¹⁰ The clearest example of this is the Westlaw legal database. The mandatory password is an effective technological measure used to prevent unauthorised access to online journals. Academic organisations and individuals have to pay licence fees to receive the password or digital key necessary for accessing or viewing digital articles. In the case where consumers choose to destroy or deactivate the Westlaw password page rather than paying a licence fee, they prefer to experience the articles in the database without any payment. This act would be deemed a violation of anti-circumvention legislation.²¹¹

1.4.1 Understanding the Access Right vs. Other Rights

First of all, it is essential to recognise that copies differ from authored works; the copy refers to a physical object containing particular data or works; the works, in other words, are embodied in the copy. In the digital era, even if the user obtains a copy of a work, they cannot access or apprehend the work until the valid password is entered and the correct device or computer is used. Therefore, access to the work is an initial and repeated activity. The users could listen to the music, view the movies, or read the online paper after they entered a valid password to gain access to the work.²¹² In this regard, when the law prohibits circumvention of access controls, it effectively prevents the user from hearing or reading the works without invading the access rights of the copyright holder. An interesting question arises as to how the access right differs from other exclusive rights, such as communication rights and reproduction rights, and whether or not access controls become exclusive rights under the copyright regime.²¹³ Marcella Favale argued that the access right is dissimilar to the reproduction and communication rights because the reproduction right

²⁰⁹ Samartzi (n 62) 152.

²¹⁰ *ibid* 152.

²¹¹ *ibid* 152.

²¹² Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 125-131.

²¹³ *ibid* 125-131.

allows the copyright holder to permit or ban any form of duplication. The communication right, in turn, allows the copyright holder to authorise or forbid any dissemination of particular works to the public by an analogue or wireless platform.²¹⁴ Ginsburg confirmed that access controls have become an essential component of copyright protection in the digital environment, but this right is independent from communication and reproduction rights. Access controls are the right to regulate the manner in which the public experiences the protected work, which seems to differ from the concept of public communication or reproduction.²¹⁵ Generally, the copyright holder may communicate their works to the user's device or hard drive, or the consumers may purchase a copy of the work. However, the work could not be opened, and the user could not apprehend its embodied contents unless the consumer gained the password or a key to access the work. The key might vary depending on the nature and level of consumption of the work. Due to the ability to control access, the copyright holder could limit the number of people listening or watching, the duration of reading, and the number of devices playing the works. These restrictions are based on the price paid by the consumer.²¹⁶ On the other hand, the traditional right to reproduce or the right to communicate with the public would not have covered most of these behaviours. The communication right, for example, does not interfere with the personal enjoyment of a particular performance by the users, which might be listening to music played by a portable audio disc player. Moreover, the reproduction or dissemination rights primarily allow the copyright holder to control the manufacture and distribution of copies. Once a copy is sold, however, copyright law traditionally does not restrict the purchaser's ability to use the work or create further copies.²¹⁷

Furthermore, there are arguments concerning whether or not the access right becomes the exclusive right under copyright legislation; these would affect the limitations applied to this right. In general, if the access right is separate from traditional exclusive rights, it might not be relevant to copyright exceptions, but in the case that the access right is considered an exclusive right, it would also be subject to copyright exceptions.²¹⁸ Many writers argued that this right is an exclusive right under copyright protection. As the world moves into the digital age, the nature of the rights provided to the author has transformed into a

²¹⁴ Marcella Favale, 'The Right of Access in Digital Copyright: Right of the Owner or Right of the User?' (2012) 15 *The Journal of World Intellectual Property* 5-9.

²¹⁵ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 120-121.

²¹⁶ *ibid* 120-121.

²¹⁷ *ibid* 119-125.

²¹⁸ *ibid* 113-116.

right to control access in order to effectively prevent unlawful infringement.²¹⁹ Similarly, Jane C. Ginsburg said that exclusive rights are not simply communication and reproduction rights, but an access right is included. Without access controls, copyright protection might be unrealistic in the modern world; it would become an essential part of copyright, which is governed by the same limitations applicable to other rights.²²⁰ On the contrary, according to Marcella Favale, a number of existing pieces of evidence demonstrate that the new right of access separates from the exclusive rights offered by copyright regimes. It is undeniable that both access control and copyright law are legal mechanisms for forcing or controlling the behaviour of consumers. Access control is used to prevent unauthorised activities by restricting the ability to access the works before the infringement or unpermitted act is conducted. In contrast, the copyright law basically imposes liability on the user after infringement or unlawful behaviour has occurred.²²¹ Additionally, access right under anti-circumvention rules does not cover all of the materials protected by copyright; access rights primarily apply to digital works. In contrast, the other exclusive rights include either analogue or electronic versions of copyrighted works. Favale also emphasised that even though the access right distinguishes from the exclusive right under the copyright regimes, the authors should not be able to restrict access to their works beyond traditional exclusive rights.²²²

Based on the discussion above, although traditional copyright law recognises only the right to copy, modify and communicate the work to the public, the access right is formally reconsidered by the EU directive, the DMCA of the US, the CDPA and other jurisdictions. Due to the change of technologies, the users can directly experience the electronic version of content on the internet system.²²³ Administration of copyright protection has to be the ability to control resource access, which includes implementing access-control measures to prevent unauthorised access to and use of content.²²⁴ The access right implemented by technological measures becomes a key mechanism to reinforce copyright protection and prevent infringement in the digital era. Access is necessary for the other use of copyright works in the digital era because access is likely to be a prerequisite to other uses. This access right enables the copyright holder to restrict the following use of their work, which leads to preventing reproduction and dissemination of work

²¹⁹ Conroy (n 195) 269-271.

²²⁰ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 113-116.

²²¹ Favale (n 214) 10-11.

²²² *ibid* 10-11.

²²³ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 113 - 115.

²²⁴ Synodinou (n 192) 1-6.

by others.²²⁵ Therefore, it could be concluded that the argument on whether or not the access right is one of the exclusive rights remains unsolved, but the establishment of anti-circumvention rules and development of technologies applied to technological work make the access right function as an exclusive right of the copyright holder. Access controls are now a crucial part of copyright protection in a digital environment; this right should be protected on a similar level as copyright protection.²²⁶

1.4.2 Access Rights: Strengths and Issues Worldwide

Because the new access right has played an essential role in the digital world, there are critical arguments concerning the information available to educational communities. On the one hand, Ginsburg supported the access right, which provides legal protection to the author and is an essential component of the copyright regime. This right should be established to respond to the new platform of dissemination of copyright materials. Through the development of access control, the copyright legislation could be improved to cover the practical exploitation of authorship works in the digital era. The legal capability of copyright holders would be strengthened to regulate digital access to their works.²²⁷ The access controls would provide sufficient protection to the new business model and encourage the copyright holder to disseminate their works online by ensuring that the users are unable to copy or disseminate the works without permission. Access right also enables the copyright holders to control the manner of users engaging with the works and aim to ensure that copyright holders receive compensation for access to and use of their works.²²⁸ These would preserve the right of the copyright holders to gain benefits from their intellectual labour, and the economic incentive to generate further creative works would be maintained.²²⁹ Without the protection of access rights, many users might access copyrighted content by infringing rather than purchasing or making a payment for licensing; the unauthorised access and copy would be widespread.²³⁰ It seems to be difficult for the copyright holders to retain their exclusive rights over their works, and the copyright protection provided to the author would become ineffective and unrealistic. In the electronic world, therefore, the access right should become one of the exclusive rights of the copyright

²²⁵ Conroy (n 195) 240-241.

²²⁶ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 113-116.

²²⁷ *ibid* 113-114.

²²⁸ Gasaway (n 11) 269-274.

²²⁹ Favale (n 214) 7-14.

²³⁰ Besek (n 7) 489.

holder.²³¹ These might be useful to protect all interested parties. In terms of the benefits to consumers, access control technologies provide the most convenient way to gain permission and access to the works.²³² It might be employed to provide a wide range of works with a variety of priced options for the user to experience protected works. If the digital delivery of contents and access control were not secured, this new platform of dissemination would be discouraged. The users would consequently be charged for all accesses and uses, regardless of the actual level of consumption.²³³ Thus, the access right or access controls should be legally established as they contribute to the benefits in favour of either the copyright holder or the consumers. This right could reinforce the protection provided to copyright holders against infringement and enable users to access more works at a wider variety of prices.

Likewise, it is essential to provide intensive protection for the access right. Since access-control technologies are frequently circumvented in private, detecting and enforcing the legal sanction to users who bypass access control to enjoy digital works is more difficult than those personal acts of duplication in the analogue world.²³⁴ In general, the individual who carries out photocopying or CD burning in order to engage with unlimited access to the works embodied in hardcopies is more likely to be detected and sued for copyright infringement than the user who removes an access-control device to enjoy a time-limited or regional-coded work, who is unlikely to be found and sued by the copyright holder for violating the anti-circumvention rules. In some cases, the user might go beyond the private act of access control circumvention by reproducing copies of digital contents and then disseminating them to the public over the internet.²³⁵ Thus, domestic legislation should offer additional protection to access right and access controls to prevent economic harm to copyright holders.

Access control could be a double-edged sword: while access control measures can effectively protect copyright holders, they also have the potential to be misused to limit public access to digital materials and contribute to monopolistic practices. Marcella Favale argued that the access right provides legal protection in favour of the copyright holder, but the public interest is overlooked. This right restricts the ability to access legally acquired works rather than encouraging their public availability. Additionally, public access

²³¹ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 113-116.

²³² Gasaway (n 11) 273.

²³³ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 124-125.

²³⁴ R Anthony Reese, 'Will Merging Access Controls and Rights Controls Undermine the Structure of Anticircumvention Law' (2003) 18 Berkeley Tech LJ 624-625.

²³⁵ *ibid* 624-625.

to works is one of the most important public interests, and it is a fundamental goal of the copyright regime.²³⁶ Ginsburg confirmed that it seems to be too much theory that access controls are not designed to prohibit the exercising of fair use privileges; these approaches are mainly established to secure a new business model that contributes to price discrimination based on the intensity of access. However, it is important to note that it would be acceptable for non-infringing users to compensate for initial access, but the problem arises when they cannot gain continued access at reasonable prices and terms.²³⁷ As a result, the user might be required to pay for every single access or an unaffordable price for licencing; they could not acquire the protected material from a library or other public source, even for non-infringing purposes. Ginsburg expressed her concerns that the copyright works would be electronically produced and the printed copies would disappear in the near future. The overprotection granted to copyright holders might be realised, and the principle of free expression, the exchange of knowledge, and the progress of science may be seriously endangered.²³⁸ The access right enables the copyright holder to set terms and conditions that limit the availability of digital works. They could regulate the user's manner in experiencing the work. The length of access, the number of uses for viewing and listening, and the number of devices used to play the work might be limited in connection with the amount of fees paid by the consumers. These restrictions might override "the progress of science," which is the fundamental principle of copyright legislation.²³⁹ It is arguable that the access right reinforced by legal protection enables the copyright owners to govern the access and utilisation of electronic works; this would shift legal enforcement from penalties for copyright infringement to legal liability for unauthorised access.²⁴⁰

Laura N. Gasaway asserted that passwords or encryption are basically used as access control to restrict the ability to experience the works; they might be used with the public domain or date-expiring materials by including them with copyrightable content. This strategy hinders the users from accessing both copyright works and public domain. Moreover, she was also concerned about the preservation of electronic works and access controls that might preclude libraries or other educational institutes from fulfilling their roles as the preservers and public resources of information. In an analogue environment, the user might purchase copies of works to ensure their unlimited access, and the printed versions of works are available through

²³⁶ Favale (n 214) 1-2.

²³⁷ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 128-131.

²³⁸ *ibid* 128-130.

²³⁹ *ibid* 116-121.

²⁴⁰ Gasaway (n 11) 290.

libraries or other public institutes. After the libraries obtain books and other materials, these copyright works are traditionally made accessible for library users by reading or lending copies of the works without any requirement of seeking permission or payment. Access controls are likely to override traditional services from public sources, replacing access to the works with a pay-per-use system, and not exempting the purpose of the study from this provision.²⁴¹ Although libraries or academic institutes take on the responsibility of investing in digital databases to facilitate their users, the reality is that the argued communities do not have sufficient budget to afford the royalties set by the content distributors. Accessing information in reasonable terms seems impossible in the digital age, and library users are required to make a payment for their access, depending on their level of engagement. Only those who have the ability to afford the key may have access to knowledge.²⁴² For these reasons, Gasaway expressed concern about the severe impact on library and academic development. Students or other users could not access the copyright works, even from public sources such as libraries, due to the access control. As most of the works would become available in electronic format, the access right would allow copyright holders to issue licensing for restricting access and reproduction of their works, and technological measures are employed to achieve this purpose.²⁴³ Furthermore, the anti-circumvention of access controls is reinforced, these would result in adverse effects on learning and research by regulating the dissemination of creative materials. Users in the academic and research communities are typically impeded in accessing intellectual property. Thus, the access controls and licensing system raises serious danger for research and academic communities where the unaffordable price of royalty is required without any negotiation.²⁴⁴ Because of the increase in digital versions of information and the shrinking budgets of libraries and educational institutes located in low-income countries, universal access seems impossible. As a consequence, while some individuals or countries could purchase access to pay-for-view works, many others do not have the financial ability to afford it. The availability of knowledge to developing countries and other disenfranchised groups would decrease, and the access controls would divide the globe into those who could afford knowledge and those who were excluded from digital information.²⁴⁵ In brief, the overbroad protection provided to the access right would exclude non-infringing users from digital works; it would also impede educational development, and only those who could afford the fees would be able to engage with copyright materials. It is important

²⁴¹ *ibid* 270-300.

²⁴² *ibid* 270-271.

²⁴³ *ibid* 269-271.

²⁴⁴ *ibid* 301.

²⁴⁵ *ibid* 301.

to find a solution or legal mechanism to reduce these potential effects, as will be discussed in the following section.

1.4.3 Access Right Exceptions to Prevent Knowledge Availability Concerns

As discussed prior, if access becomes a right, it would affect the user in terms of their ability to access copyright works for non-infringing purposes. In order to prevent this impact, the appropriate limitations should be taken into account when encountering the potential imbalance that might occur in an online environment. There is some argument regarding whether the fair use provision should be adopted for access rights under the TPMs. On the one hand, fair use privileges seem to be useless in a digital environment. Due to the price discrimination allowed by access controls, all consumers are able to enjoy copyright works at very low prices, so the exercise of fair use might be more costly than pay-per-access.²⁴⁶ The clearest example of this is listening to the song. Copyright holders are not required to subsidise the privileges in the analogue world; the fair user has to put more effort into hearing the music from the radio. These would be the costs of non-monetary transactions, which might be more expensive than price discrimination in an access-controlled environment. It would be cheaper and more convenient to enjoy the greater availability of digital music at a variety of prices in relation to the amount and duration of engagement. Therefore, it could be said that the access controls offer a more convenient platform and a better way for the user to experience the digital content.²⁴⁷

According to the other point of view, by contrast, without the initial access to the online works, the fair use provision might be eliminated, and the users would be excluded from accessing digital materials and knowledge. In order to prevent this potential impact, Ginsburg contended that the access right would become an essential component of copyright protection, but if hardcopies or unprotected versions of copies no longer exist, the proper limitations to the access right are required to ensure that digital access rights do not undermine educational and non-infringe uses. Without the well-established exemptions and other legal mechanisms, access control seems to be more than a component, but it is likely to be "Uber-copyright legislation." Additionally, because access rights have become an essential part of copyright protection, they should be protected in line with the other exclusive rights provided under traditional copyright law. Thus, traditional limitations or fair use provisions adopted in the analogue era should be

²⁴⁶ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 127-128.

²⁴⁷ *ibid* 127-128.

applied to the access right to avoid the potential imbalance caused by the access control.²⁴⁸ Ginsburg also proposed that the exceptions on anti-circumvention legislation could not be limited to a set of narrow exceptions; these exceptions should be broadened to accommodate evolving digital access. It seems unnecessary to adopt a full range of fair use as a defence against the prohibition on access control circumvention, but the anti-circumvention legislation should preserve some of the traditional exceptions that could address the context of electronic distribution. Moreover, the new exceptions should be established to allow the circumvention of access control when the unprotected versions of works are no longer available.²⁴⁹ The exception should be modified to permit the circumvention of access control technologies to lawfully experience non-copyrightable works and raw information. In her point of view, the access right should regulate solely the unauthorised initial obtain of copies of electronic works, but the non-infringing users should then be allowed to remove the access control attached to works that they have legitimately acquired to pursue their fair use purpose.²⁵⁰ Access right was initially formed as a result of technological advancements, and technological measures and anti-circumvention rules were introduced by the copyright holders to control access. The need for certain privileged public uses, nevertheless, remains unchanged.²⁵¹ This means that a sophisticated and updated limitation mechanism under the digital copyright system should be properly designed to allow access to electronic works. In general, the fundamental principle of copyright is the balance of interest between the right holders and the public, and this balance should be preserved when the works are produced or distributed in digital form.²⁵²

Similarly, the concern about inappropriate limitations and locking up non-copyrightable materials has widely gained international attention. Based on the Draft Recommendation on the Promotion and Use of Multilingualism and Universal Access to Cyberspace and the report by the Director-General, the member states are required to ensure that the copyright privileges are strengthened, especially the exceptions for education, critical review, and science; these exceptions could not be undermined by the improper use of access controls and technical measures. In particular, this organisation also encourages Member States to enact their domestic intellectual property legislation in a manner that guarantees free access to essential

²⁴⁸ *ibid* 113-114.

²⁴⁹ *ibid* 130-131.

²⁵⁰ *ibid* 130-131.

²⁵¹ Samartzi (n 62) 77.

²⁵² *ibid* 77.

information for a modern democratic environment and public domain works.²⁵³ Additionally, access barriers should be removed, and specific exceptions should be provided in favour of academic communities for free and unlimited access to information. The advancement of the internet is a significant tool that enables the worldwide electronic publication of journal content. All of the scientists, teachers, students, and other academic members should be allowed to enjoy unrestricted access without any charge. The proper privileges of education would enhance creative research and improve educational standards; knowledge would be exchanged from every corner of the world. These would lead to a reduction in inequality in connection with accessing digital information and unify the intellectual standard between developed and developing countries.²⁵⁴ Thus, to maintain the balance between the interests of the copyright holder and the public, copyright privileges and other appropriate exceptions should be introduced to access right. The public domain should not be subject to access controls; the privileged access to copyright materials should be available to academic communities to enhance research and foster the exchange of knowledge.

1.5 Arguments concerning TPMs and Digital Works Access

The challenges of achieving a balance between the public interests and the copyright holder's protection have been recognised and discussed on a national and international scale. Various unsolved debates still exist regarding the degree of legal protection for technological measures and the public's right to access knowledge, which will be represented in detail below:

1.5.1 Arguments concerning TPMs and Fair Use

Although societies might gain a wide range of benefits from the enforcement of anti-circumvention legislation, there are serious arguments regarding the preservation of fair use provisions and other copyright exceptions on the internet. On the one hand, it is arguable that fair use was mostly designed during the analogue period, when copyright works could be reproduced and published in an acceptable amount of printed versions. This statutory provision seems to be ineffective in determining which uses of digital works should be legally permitted.²⁵⁵ Additionally, supporters of copyright privileges often fail to resolve the fundamental concerns regarding the appropriate protections of materials embodied in digital

²⁵³ UNESDOC Digital library, 'Draft Recommendation on the Promotion and Use of Multilingualism and Universal Access to Cyberspace and report by the Director-General' (unesdoc.unesco.org) <<https://unesdoc.unesco.org/ark:/48223/pf0000123274>> accessed 13 November 2022.

²⁵⁴ Gasaway (n 11) 304.

²⁵⁵ Samartzi (n 62) 11-13.

form. Fair use might cause unlimited copying and unauthorised distribution of the works in digital media.²⁵⁶ It is arguable that this approach also fails to preserve the incentive of creators to invest their resources and effort to produce valuable works because their creations might be enormously published by file-sharing programmes without any compensation.²⁵⁷ As Mark Stefik stated, the arguments concerning fair use applied to digital works are sometimes incorrect because the publishing risks in the digital form are definitely different from those in the hard copy medium. It seems to be more difficult for the infringers to reproduce and disseminate thousands of analogue copies of a material, but they could duplicate and publish thousands of digital works with a single keystroke without any expense. It could be noted that publishers and other anonymous users gaining unauthorised access on the basis of traditional copyright exceptions would routinely generate an economic loss for copyright holders.²⁵⁸ Fair use might become an unreasonable defence against unauthorised copying in a digital environment, as Amanda Lenhart and Mary Madden pointed out that it would be common for many users to download and duplicate the works regardless of whether or not the materials are protected by copyright. Piracy and unlawful circumvention have always resulted in damage to businesses and economic losses. It is likely to be unfair for copyright holders to subsidise widespread free access and use of digital works under traditional privileges.²⁵⁹

For private use in the digital era, the reproduction and dissemination of protected works can be done quickly and easily without any compensation, and the quality of digital copies is equal to the original works. The copies can be stored in multiple formats or places. The available works on the internet are no longer for personal or family use, but they can be viewed by a larger number of people worldwide.²⁶⁰ Moreover, technological goods facilitate libraries and academic institutions to reproduce an unlimited number of copies and keep such works for an infinite period of time. Therefore, the exclusive right and interest of the author cannot be secured by traditional copyright protection, and multiple publications and transformations conducted by academic institutions, libraries, and private use cannot be deemed fair.²⁶¹ The others stated that the implementation of copyright limitations should not lead to inadequate and ineffective protection of technological measures because these regulations do not impose any obstacles

²⁵⁶ Besek (n 7) 477.

²⁵⁷ *ibid* 477.

²⁵⁸ Mark Stefik, *The Internet Edge: Social, Technical, and Legal Challenges for a Networked World* (MIT Press 2000) 97.

²⁵⁹ Amanda Lenhart and Mary Madden, 'Music Downloading, File-sharing and Copyright' (Pew Research Center: Internet, Science & Tech, 31 July 2003) < <https://www.pewresearch.org/internet/2003/07/31/music-downloading-file-sharing-and-copyright/> > accessed 15 August 2023.

²⁶⁰ Okediji (n 5) 21-28.

²⁶¹ *ibid* 21-28.

on the opportunity to engage a variety of traditional copyright exceptions. These prohibitions are unlikely to adversely affect non-infringing users under the fair use provision. The privileges of traditional copyright, which include fair commentary, criticism, parody, research, and other educational purposes, remain available. In addition, fair use does not require digital copying; this provision has flourished for a long time before digital media and the internet became available. People are able to access, quote, or comment on the copyright works without reproducing them digitally.²⁶² It is undeniable that the printed copies could be amended and reproduced; the books could simply be photocopied; a television programme could be videotaped; and a sound recording might be re-recorded. However, in the analogue world, the consumer could not reproduce and re-disseminate copyright works on a large scale in a click, as facilitated by digital media.²⁶³ For this reason, the anti-circumvention rules arguably send the users back to an environment in which technology remains cumbersome, rudimentary, and expensive to accomplish the rival copying against the copyright holder's control of markets for the creative work.²⁶⁴ The clearest example of this is DVD movies. Even though DVDs are protected by technological measures, their content is able to be commented on, quoting excerpts might be done from their screenplays, and parts of the film or tape's pictures, audio, and video can be rerecorded by pointing a camera or microphone at it.²⁶⁵

Moreover, the others critically argued that even though digital contents are locked up by technologies, alternative formats of work remain available for non-infringing uses; these seem to be enough to preserve copyright limitations. According to a district court in California, the argument concerning the fair use and access controls on e-books has been rejected. The court justified that the technical controls did not prevent the users from comparing contents or quoting a text for educational purposes or criticism. From a technological perspective, it might be more difficult for non-infringing users to enjoy copyright materials in the old-fashioned way. Fair use, however, is still possible, and the quoting could be done by hand-writing or re-typing instead of "copying and pasting" from digital databases. Additionally, the court cited that it seems unnecessary for a fair use provision to guarantee a lawful user access to the information on the most technically convenient platform. Thus, the ability of consumers to enjoy their privileges is not deprived

²⁶² Besek (n 7) 498.

²⁶³ Ginsburg, 'Copyright Legislation for the Digital Millennium' (n 179) 152-155.

²⁶⁴ *ibid* 152-155.

²⁶⁵ *Universal City Studios, Inc. v. Corley*, 273 F.3d 429 (2d Cir. 2001); See also Casetext part of Thomson Reuters, 'Universal City Studios, Inc. v. Corley' <<https://casetext.com/case/universal-city-studios-inc-v-corley>> accessed 29 July 2023.

when they use the works by retyping or making hard copies.²⁶⁶ Although the e-books are locked, another version of the same work or paper copies may exist; a handwritten copy could be made. It could be said that the anti-circumvention regulations have already provided a space of liberty for the user to engage with copyright works. Nonetheless, this provision does not have to guarantee the users the most convenient way to access information, or to enjoy the highest quality of liberty. The fair use provision does not entitle consumers to acquire materials in the most convenient format.²⁶⁷ In this point of view, the application of fair use seems to be unnecessary for anti-circumvention legislations

On the other hand, there are concerns that the constitutional exception might be undermined and that non-infringing users might be precluded from the digital environment. Despite being introduced to safeguard the economic profits of copyright holders, these laws might prevent non-infringing consumers from accessing works. It would result in a chill in the improvement of education. There is some potential that the printed versions or other hard copies of copyright materials might be eliminated, and most of the works are likely to be disseminated in electronic form. A wide range of technological measures and new business models are additionally adopted to restrict availability as well as distribution of the works to the public.²⁶⁸ In many cases, the users are permitted to access protected works, which might be limited in terms of duration, the scope of access (for instance, the consumers may be allowed to access some of the materials, but they are not permitted to access all of the content contained in a database), or the nature of the use or access (for example, the consumers may be allowed to read or listen to protected materials, but they are not permitted to reproduce the works).²⁶⁹

Criticisms claim that technological measures are unable to distinguish between copyright infringement and legitimate purposes. The argued technologies and the legal prohibition on circumvention may restrict the capability to access and use the copyright materials. These might be employed as a mechanism to prohibit all consumers and fair users from taking advantage of their copyright privileges.²⁷⁰ In addition, Pamela Samuelson and colleagues are concerned that fair use might be eliminated by the current legal structure, which allows copyright holders to over claim their rights and prevents non-infringing users from accessing

²⁶⁶ *United States v. Elcom Ltd.*, 203 F. Supp. 2d 1111 (N.D. Cal. 2002); See also Casetext part of Thomson Reuters, 'United States v. Elcom Ltd.' <<https://casetext.com/case/us-v-elcom-ltd>> accessed 15 July 2023.

²⁶⁷ Besek (n 7) 511.

²⁶⁸ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 127-128.

²⁶⁹ Besek (n 7) 476-477.

²⁷⁰ Wencke Basler, 'Technological Protection Measures in the United States, the European Union and Germany: How Much Fair Use Do We Need in the Digital World' (2003) 8 Va JL & Tech 9.

the information. This over-claiming might impose high costs of litigation and thereby undermine several uses that would be found legitimate.²⁷¹ Currently, a number of content is protected by various digital locks, preventing users from deactivating them, even for fair use.²⁷² TPMs are employed to secure the economic profits of authors, and they also create monopolies or restrict competition in the market. The copyright holders are able to control access and prevent the reproduction of their works. This provision has an adverse effect on accessing knowledge and eliminates a number of fair activities, including review, criticism, parody, private research, and teaching.²⁷³ Due to the high financial prerequisite identified by copyright holders, there are concerns that protection for technological measures would harm educational activities and other users' privileges, since TPMs might no longer contain the exceptions or fair use established under traditional copyright law.²⁷⁴

Technological measures do not only protect expression, but they also block the public from accessing facts, ideas, methods of operation, and procedures, which is in conflict with the basic principle of copyright protection. Moreover, technology cannot differentiate between authorised circumvention for fair use or public domain works and those illegal circumventions that are deemed copyright infringement. The devices or tools used for circumvention are also banned under anti-trafficking provisions. Therefore, legitimate users are unable to exercise their rights and access to information because they do not have the available equipment that is necessary to be used for circumvention unless they have the technological skill to circumvent or the ability to manufacture the necessary equipment themselves. This provision creates an extensive burden on fair use.²⁷⁵

For the concern involving the anti-device approach, it is undeniable that the prohibition on trafficking circumvention devices seems to be at the heart of anti-circumvention rules; it effectively reinforces the copyright holder's ability to control the digital works and limits the tools on which users can access the protected works.²⁷⁶ Many national laws attempt to severely implement the provision of anti-trafficking circumvention devices to prohibit the practical ability of users to access information and enjoy their copyright privileges. A number of users argue that these restrictions should be revised because they prohibit non-infringing uses. It is unlikely to be a concealable area of interest between copyright holders

²⁷¹ Samuelson and others (n 77) 1210.

²⁷² Pragma (n 69) 103.

²⁷³ Besek (n 7) 476-477.

²⁷⁴ *ibid* 476-477.

²⁷⁵ Basler (n 270) 8-10.

²⁷⁶ Besek (n 7) 468.

and the public. This approach inhibits the manufacture or dissemination of technical tools that were made to circumvent a technology employed to control access to or prevent reproduction of protected works. In addition, the prohibition on circumvention devices seems to have been enacted very stringently, and without proper exemption, most circumvention devices might be eliminated. As a result, the circumvention devices would be insufficient in the domestic market to accommodate permissible uses. Without the availability of circumvention tools, users' privileges seem to be meaningless because unskilled users cannot avoid technological measures by themselves to access protected works.²⁷⁷

The restriction on trafficking devices and the lack of necessary tools for circumventing have posed a significant problem for non-infringing users who may be allowed to copy the works for non-infringing purposes. Without circumvention tools, it is impossible for users who do not have technical skills to bypass technological measures without circumvention tools. These might lead to the nullification of fair use privileges under the traditional copyright system. The restrictions also limit some activities, such as time-shifting, creating backup copies, and distributing to friends and family.²⁷⁸ Generally, technological measures might prevent not only copyright infringement activity but also a large number of lawful activities, fair uses, and other activities that copyright holders cannot legitimately object to. Because of the broadening scope of TPMs and the severe implementation of these legal regimes, users are at risk of facing serious legal liability. They might fear engaging with copyright privileges to develop further creative activities.²⁷⁹ With this problem, consumers and members of academia raised questions about who might be properly responsible for the societal costs and burdens of the halted creative and technological innovation, as well as the impact on other lawful activities due to deploying technical measures and enforcing anti-circumvention regimes.²⁸⁰ It seems impossible to reconcile the anti-circumvention rules with fair use provisions or exemptions under copyright law. Technologies are likely to be too crude to facilitate all the privileges under the legislation.²⁸¹ It is arguable that TPMs provide the copyright holder with an absolute right to control the information by using digital locks. These nullify the fair use provision and create significant obstacles for the public to access useful knowledge.

²⁷⁷ *ibid* 468.

²⁷⁸ *ibid* 468-477.

²⁷⁹ Samuelson and others (n 77) 1194.

²⁸⁰ *ibid* 1194.

²⁸¹ Besek (n 7) 476.

1.5.2 Arguments concerning TPMs and Digital Lock-up

There are concerns that the adverse impact of anti-circumvention legislation is digital lockup. The term "digital lock-up" refers to a situation in which exceptions under copyright law become ineffective, either because of contractual restrictions that request users to accept specific terms and conditions constraining the legitimate uses of electronic works or due to technological measures used by the copyright holders. These technical mechanisms might be exploited to preclude the use of works in a way permitted by traditional copyright legislation.²⁸² With this aspect, the copyright holders are entitled to lock up all of their digital contents. By using technological measures, the consumers might be required to pay for every single reading, viewing, or browsing of the works.²⁸³ This approach is commonly applied by developing specific technology that limits the equipment on which encrypted works can be accessed. Only the consumer who makes a payment and device manufacturers and services who agree with conditions established by the copyright holder are allowed to produce specific devices used to incorporate certain technological measures and access protected content.²⁸⁴ These would assure that the payment is made and that other requirements are complied with in favour of the copyright holder before transmitting the key or password to allow the consumers to decrypt the works.²⁸⁵ Without payment, the users might be excluded from digital knowledge.

In contrast, the fear of digital lockup is unlikely to be a reality. Goldstein explained that most digital works are continuing to be available on other platforms in the marketplace. Due to marketing models, some kinds of works are funded by advertising to be copied and distributed to as wide a public as possible. These might include news or websites that enhance the ability of consumers to access information.²⁸⁶ Moreover, as argued prior, the pay-per-use system would ensure that the users gain the quantity and quality of works at the lowest price, particularly literary works, motion pictures, sound recordings, and television programming. According to the roundtable discussion organised by Jane Besek, this meeting consisted of numerous participants and students, but only a few concrete examples of non-infringing uses restricted by TPMs and digital lock-up. Most of the issues were concerns that might occur in the future.²⁸⁷ Hence, from

²⁸² Thomas Heide, 'Copyright, Contract and the Legal Protection of Technological Measures-Not the Old Fashioned Way: Providing a Rationale to the Copyright Exceptions Interface' (2002) 50 J Copyright Soc'y USA 315-317.

²⁸³ Besek (n 7) 1194.

²⁸⁴ *ibid* 503.

²⁸⁵ *ibid* 452.

²⁸⁶ Paul Goldstein, 'Fair Use in a Changing World' (2002) 50 J Copyright Soc'y USA 146.

²⁸⁷ Besek (n 7) 496.

the perspective of TPM's supporters, it is likely to be overstated concerning digital lockup and the unaffordable costs of accessing information. The technological measures and anti-circumvention rules did not affect the availability of work and did not lead to digital lock-up.

1.5.3 Critiques of Supporting Stringent TPMs

Many authors have pointed out that the availability of digital materials without any restrictions would harm the interests of copyright holders; further duplication and publication would be inconsistent with copyright's principles.²⁸⁸ The infringement would become more simple through file sharing programs, and it would be more widely distributed regionally as social media as well as the internet are available to consumers living around the world.²⁸⁹ These would cause serious danger to the financial incentives of copyright holders who make investments in the production and publication of their creative works.²⁹⁰ For this reason, a number of copyright industries and their representatives have claimed that they should be legally entitled to control over the duplication and dissemination of digital information. They should also be allowed to restrict the design and manufacture of all technologies related to digital information.²⁹¹ Many policymakers have determined that technological measures are important, and anti-circumvention rules should be strengthened by covering either acts of circumvention or trafficking circumvention tools to protect copyright holders effectively. The prohibition should not be limited to users who directly circumvent technological measures; it is likely to be inadequate and ineffective. In most cases, the infringer could accomplish the circumvention by using computer programs or devices. Therefore, it is necessary to provide legal protection against producing, importing, and supplying circumvention tools.²⁹² Many supporters of anti-devices commented that the anti-trafficking devices provision should be broadly enacted. They also identified that it seems to be an unnecessary burden for copyright holders to demonstrate the primary use of particular tools in terms of whether such technologies are exploited to accomplish infringement. This would be difficult to prove about the primary purpose of technology distributed in the market.²⁹³ For these reasons, when the dangers of illegal circumvention and infringement are severe, the technological devices should be deemed illegal if their purpose is to bypass a technical

²⁸⁸ Besek (n 7) 481.

²⁸⁹ Lee Rainie and Mary Madden, 'The State of Music Downloading and File-Sharing Online' (Pew Research Center, 31 July 2003) <<https://www.pewresearch.org/internet/2003/07/31/music-downloading-file-sharing-and-copyright/>> accessed 25 November 2022.

²⁹⁰ Samuelson and others (n 77) 1193.

²⁹¹ Samuelson (n 161) 532-534.

²⁹² Ginsburg, 'Copyright Legislation for the Digital Millennium' (n 179) 138.

²⁹³ Samuelson (n 161) 551-553.

measure employed by copyright holders to safeguard their digital content. There is criticism that exceptions for anti-devices ought to be very narrow in order to ensure the effectiveness of anti-device regulation.²⁹⁴ Moreover, exemptions to this provision should be limited; the overwhelming exceptions might confuse consumers and create difficulty to administer. These would enable an underground market for circumvention devices and services, which would endanger the lawful market for copyright works by reducing confidence in the integrity and effectiveness of technological measures employed to restrict access to the materials.²⁹⁵ Hence, the prohibition on either the act of bypassing or trafficking of circumvention devices would reinforce barriers against copyright infringement by using the combination of technological controls and legal prohibition.²⁹⁶

1.5.4 Critiques of Supporting Fair Use to TPMs

Due to the several impacts of technological measures and anti-circumvention rules, many commentators suggested enhancing the exceptions to ensure that users are not precluded from digital knowledge. Ruth Okediji pointed out that while the implementation of anti-circumvention legislation is unrestrained, the exceptions and application of public welfare norms remain underdeveloped on an international scale. The legal protection of copyright distributors has been explicitly expanded by international agreements, but the exceptions and public interest concerns are not articulated at the same rate as the rights of copyright holders. The limitations are left to the discretion of states without any real enforcement.²⁹⁷ Additionally, technological measures have changed the way of protecting the works and created significant barriers for access to information. It is important to improve exceptions to anti-circumvention rules to eliminate the difficulties of accessing and diffusing copyrighted works and to be in line with digital development. The broad exceptions to these regulations would assure the availability of digital materials for non-infringing uses. The exceptions of traditional copyright should be applied to TPMs, and new limitations to digital copyright protection should be enforced for greater opportunities of accessing information under this technological development. Domestic policymakers have to regulate the legal framework to balance the interests of different parties, and new ways should be provided to enable users to access and use useful knowledge in a digital environment.²⁹⁸ The fair use approach is a principle element of the copyright legislation; this provision has the main objective of maintaining balance between the interests of the

²⁹⁴ *ibid* 551-553.

²⁹⁵ Singh (n 16) 560.

²⁹⁶ Ginsburg, 'Copyright Legislation for the Digital Millennium' (n 179) 138.

²⁹⁷ Okediji (n 5) 1-3.

²⁹⁸ *ibid* 27-29.

copyright holder and the public, which should not be undermined. Therefore, even effective protection for technological measures is essential in the digital era, but it is important to regulate the act of circumvention against those measures without diminishing this goal.²⁹⁹ The proponents of fair use also contended that the exemptions should be broad because fair use is the most essential part of copyright law. In their point of view, fair use is a constitutionally mandated provision that provides a great benefit to society; it should not be overruled by the protection of technological measures. Thus, the anti-circumvention rules should not prevent fair users from reading, listening, or browsing works. Legitimate users should be able to access information or extract ideas. They should be entitled to exercise the full range of fair uses involving research, scholarship, commentary, and criticism.³⁰⁰ Martin Senftleben contended that the traditional copyright privileges should remain applicable in the digital world; the right to disseminate information, the intergenerational equality approach, and the exemption from private study should be maintained.³⁰¹ Gasser and Ernst also suggested that national laws should apply the exemption for private study to either analogue or digital materials. Private copying should be exempt from legal liability; the copyright holder may receive reasonable compensation for this activity.³⁰² By paying remuneration to copyright holders, the impact on the market of works is reduced. The copyright holders are rewarded with financial payments, and the users are ensured to access and use the works based on the goal of copyright law. Making the works available to users could preserve cultural prosperity and foster the free flow of knowledge, which is meaningful to encourage further creativity.³⁰³

Samartzi also suggested that a link between anti-circumvention legislation and copyright infringement should be legally recognised, and the act of circumvention should be allowed based on the existence of copyright privileges. Additionally, the compulsive approach should be applied to TPMs; some exceptions should be mandatory, which could be classified as a right. These important privileges could not be undermined by a contract.³⁰⁴ National legislation should permit non-infringing circumvention. In other words, liability for technological circumvention should be bound to copyright infringement. If the users

²⁹⁹ Reese (n 234) 648-650.

³⁰⁰ Besek (n 7) 476-477.

³⁰¹ Martin Senftleben, *Copyright, Limitations, and the Three-Step Test: An Analysis of the Three-Step Test in International and EC Copyright Law*, vol 13 (Kluwer Law International BV 2004). 158

³⁰² Urs Gasser and Silke Ernst, 'Best Practice Guide: Implementing the EU Copyright Directive in the Digital Age' (Open Society Institute 2006). [viitattu 6.7. 2007] Saatavilla <[www.muodossa http://www. soros. org/initiatives/information/articles_publications/publications/bestpractice_20070315/eucd_20070315. pdf](http://www.muodossa.org/initiatives/information/articles_publications/publications/bestpractice_20070315/eucd_20070315.pdf)> accessed 11 January 2023.

³⁰³ Wang (n 19) 118-122.

³⁰⁴ Samartzi (n 62) 248-267.

bypassing technological measures were not liable for copyright law, then anti-circumvention rules should not place liability to them. He also stated that the legislature should add a full range of fair use provisions to be an exemption to anti-circumvention rules.³⁰⁵ These would leave breathing space for the users to enjoy their privileges under copyright legislation without undue impact on the overall level of legal protection for distributors or copyright holders. Moreover, the exemption for non-infringing purposes should be applied to the provision of anti-trafficking devices.³⁰⁶ Since the manufacture and dissemination of circumvention technologies are prohibited, few users are able to obtain them. The consumers may not engage in lawful acts of circumvention, even though copyright law permits the act.³⁰⁷ The absence of a circumvention device seems to undermine fair use and other privileges because the majority of consumers do not have the technological ability to complete the circumvention of technological measures without the assistance of a necessary tool.³⁰⁸

Pamela Samuelson raised some concerns that, although TPMs provide certain exceptions to allow legitimate circumvention, those exceptions are excessively short-sighted.³⁰⁹ Additionally, the anti-device provisions are highly ambiguous and provide overbroad protection in favour of copyright holders. This legislation should be amended by adding broader and more general exceptions. It should be clear whether it is lawful to manufacture devices necessary to engage in fair use and other privileges under anti-circumvention regulations.³¹⁰ If the circumvention device should be legally allowed to be manufactured and disseminated solely for non-infringing purposes, then the law should not penalise those who use the circumvention tools to engage in lawful activities. In this regard, lawful users who do not have sufficient technological skill might acquire the necessary tools to access protected works. If such a device is employed only for permitted activities under fair use provisions, the protection of the copyright holder is unlikely to be seriously undermined.³¹¹ Pamela Samuelson suggested revising the law to permit the act of circumvention of access control technology for non-infringing or other legitimate use. The anti-trafficking devices should be amended to allow the circulation of necessary tools to enable the circumvention of technological measures for lawful uses. Such uses should encompass fair use and any privileges provided

³⁰⁵ Reese (n 234) 663-665.

³⁰⁶ *ibid* 655-659.

³⁰⁷ *ibid* 655-659.

³⁰⁸ *ibid* 655-659.

³⁰⁹ Samuelson (n 161) 519.

³¹⁰ *ibid* 519.

³¹¹ Reese (n 234) 657-659.

by the copyright law.³¹² The provision for anti-trafficking devices should be effectively implemented without deleterious effects on the ability to exercise in computer security testing, reverse engineering, encryption research, and other lawful activities necessary for technological development. It is important to diminish the breadth and ambiguity of the provisions to avoid harm to competition and innovation in relation to the technology of information.³¹³ The courts should be granted the authority to assess whether tools designed for circumventing technological measures comply with regulations, particularly if these tools are intended for preserving fair use and other legal privileges. If the circumvention devices are not decided or produced solely for commercial significance and there are no deleterious effects on the goal that the anti-device rules intend to reach, the court might have discretion to allow the devices available for non-infringing uses, and such devices should not be deemed to violate the law.³¹⁴

Furthermore, the provision of anti-trafficking devices should contain provisions that permit the production or dissemination of circumvention devices to enable non-infringing uses. Even though anti-circumvention regulation in many countries preserves the right to hack a copy control measure for non-infringing uses, this right might be overridden if necessary devices cannot be developed to bypass the technological measure or otherwise the user cannot gain access to such devices.³¹⁵ Therefore, fair use provisions should continue to play a significant role in the digital era. These privileges should be applied to either the prohibition on direct acts of circumvention or anti-trafficking devices. The general exceptions or other legitimate purposes would make the anti-circumvention rules adaptable, flexible, and fair.³¹⁶ In brief, it is crucial to refine the breadth and ambiguity of the anti-circumvention rules to prevent adverse impacts. The anti-circumvention provisions should entitle copyright holders to have an exclusive right to restrict the copying of their works in digital form and the dissemination of it to the public. At the same time, the countries should continue to apply fair use in domestic anti-circumvention rules, and they should be able to create new limitations appropriate to accommodate non-infringing users in the digital environment. In addition, the law should exempt infringement liability for those who merely make facilities available to communicate works to lawful users.³¹⁷

³¹² Samuelson (n 161) 546-549.

³¹³ *ibid* 522-524.

³¹⁴ *ibid* 548-549.

³¹⁵ *ibid* 546-560.

³¹⁶ *ibid* 545-546.

³¹⁷ *ibid* 528-531.

For developing countries, the exceptions to anti-circumvention legislation are an important strategy to facilitate social development by providing the privileges and necessary means for lawful users to engage in intellectual knowledge. Either international or national legislation should address the legal challenges in the digital age by establishing the legal framework with respect to welfare goals.³¹⁸ Many legal commentators have given precedence to the role of fair use provisions in disseminating knowledge and promoting public welfare. This approach involves balancing the interests of copyright holders with public access needs. The copyright privileges and proper exceptions placed on the anti-circumvention rules might encourage the effective distribution of knowledge goods. Specifically, with regard to academic and scientific knowledge exceptions, these are a vital component in generating an incentive to develop further creative works.³¹⁹ In doing so, the advancement in innovation would enhance a well-informed and skilled population that is indispensably engaged in the national development process. One could argue that adding fair use to TPMs could greatly benefit developing countries in engaging with knowledge and promoting public values.³²⁰ Gin also suggested the recommendations that the copyright law and anti-circumvention regulation should play a role in maximising the ability to access knowledge for enhancing social development. It is undeniable that copying is normally the cheapest method to deliver ideas or copyright works to the public in developing countries. The minimal levels of TPMs and the flexible copyright legislation should be implemented by considering social norms. The necessary institution should be established to foster the knowledge available to areas that would not be able to gain access.³²¹ Furthermore, whether or not technological safeguards protect the copyright materials, fair use privileges and appropriate exceptions should apply. Okediji noted that the WCT does not require the member states to provide legal protection to technological measures in a manner that is inconsistent with traditional copyright legislations.³²² Thus, the anti-circumvention rules should be implemented alongside limitations that include access for criticism, education, personal use, and other purposes recognised in the analogue era. Fair use should be applied to preserve flexibility for national legislators to develop exceptions in connection with their local contexts.³²³

The copyright holders are not provided unlimited protection, but they are legally protected by their way of expression, which contains the exact words used by the authors in their works and the concept in which

³¹⁸ Okediji (n 5) 32-35.

³¹⁹ *ibid* 1-6.

³²⁰ *ibid* 1-6.

³²¹ Gin (n 83) 775-778.

³²² Okediji (n 5) 27-29.

³²³ *ibid* 27-29.

they arrange the data.³²⁴ Furthermore, fair use provisions codified in the traditional copyright statute fundamentally shape and limit the boundary of copyright protection, ensuring that the public can access and use copyrighted materials under certain conditions. The exceptions play an important role in balancing the exclusive rights of copyright holders with the opportunities for accessing information by certain groups of users.³²⁵ Mitchell recommended that the anti-circumvention rules should be enacted and enforced with these balancing principles, ensuring they do not overly restrict access to digital works. In this aspect, the implementation of technological measures should be regularly assessed to determine whether the damages outweigh the benefits.³²⁶ The public harm caused by using technological measures should be considered and prosecuted as unlawful because they extend the scope of protection in favour of the copyright holder far beyond those recognised by traditional copyright law, preventing the public from taking advantage of digital works. Mitchell also suggests that the legal model enforced in the analogue world may be applied to the digital era. The copyright holders should be encouraged to have control over the access and use of their creations to prevent infringement, but they should not be allowed to abuse them, engage in unlawful price-fixing of their works, or engage in monopolistic behaviour.³²⁷

To ensure non-infringing uses, the court should have authority to allow the other defences against the anti-circumvention rule to legitimise the circumvention, such as existing exceptions under traditional copyright law or the defence regarding the insufficient harm to copyright holder interest. These would ensure that users are able to enjoy a wide range of privileges for copyrighted works.³²⁸ Moreover, courts and relevant regulatory bodies should be allowed to develop exemptions for 'fair circumvention,' treating these as general equitable defences. This approach would adapt the fair use doctrine to the digital age, allowing for circumvention when it serves the public interest without significantly harming the copyright holder. The argued organisations are additionally entitled to create new limitations for TPMs that fit the facts of the situation and the social needs.³²⁹ In many countries, law enforcement offices, administrative agencies, or other public institutions (like libraries and copyright-collecting societies) have significant authority to determine the permissible uses and the applicability of exceptions. These might lead to practical enforcement of statutory provisions and exceptions that facilitate lawful users to access knowledge

³²⁴ Samuelson and others (n 77) 1190-1193.

³²⁵ *ibid* 1209-1214.

³²⁶ Mitchell (n 173) 1-2.

³²⁷ *ibid* 1-2.

³²⁸ Samuelson (n 161) 545-546.

³²⁹ Jane C Ginsburg, 'Copyright Use and Excuse on the Internet' (2000) 24 *Colum-VLA JL & Arts* 1.

materials.³³⁰ These institutions are meaningful in promoting access to copyright works and also provide a platform through which users could negotiate to access digital materials on affordable terms. In many situations, they are representatives of copyright holders who issue licences to local institutions to engage in mass duplication.³³¹ The additional solution is the self-help circumvention; the user should be legally permitted to gain access to the works by the self-help circumvention under the copyright exceptions. This permission might be issued according to particular conditions, which can either be officially stated or implied in the relevant legislations.³³² Based on these critics, therefore, the exceptions could minimise the adverse impacts of anti-circumvention rules and technological measures; these ensure that the knowledge is available for education. The courts and relevant public and private institutions might play an important role in disseminating creative knowledge. The variety of organisations preserving copyright works and digital materials might prevent the monopoly and facilitate non-infringing uses in every corner of the world.

According to the literature review, the legal reasons and theories of copyright protection are to secure the interests of authors and motivate further creativity. The significance of fair use in promoting knowledge accessibility, education, and the preservation of works for future generations, especially in the digital age, is informed by previously published works. Many researchers distinguished between infringing activities and those that are non-infringing. Additionally, the extensive studies have explored the effectiveness of technological measures and anti-circumvention rules in reinforcing copyright protection in the digital environment. They also provoke ongoing debates about user rights and the adverse impacts on educational institutions, libraries, access to knowledge, and other non-infringing uses. Internationally, there are wide discussions that TPMs nullify fair use or exceptions. They often highlight the unconcealability of protection provided to copyright holders and the availability of knowledge and educational materials. TPMs hinder lawful uses, such as academic research, teaching, and the preservation of digital works. There are also gaps in the literature regarding how various jurisdictions, especially in the context of digital innovation, apply the concept of striking a balance between copyright protection and knowledge access under exceptions. These gaps raise important questions about how to reform TPMs to effectively prevent only copyright infringement and comply with global standards without endangering the fundamental principle of traditional copyright law and fair use in terms of balancing the interests of all stakeholders. These gaps

³³⁰ Okediji (n 5) 20.

³³¹ *ibid* 19.

³³² Samartzi (n 62) 244-245.

indicate a need for more extensive comparative investigations, which will be discussed in the following chapters.

Conclusion

Copyright owners frequently employ technological measures to control access to and prevent the use of digitally produced copyrighted works. This chapter, therefore, explores the core concept of copyright protection and its exceptions to uphold these objectives in the digital realm. Copyright law aims to protect copyright holders' rights and encourage further innovation in society. The combination of technical measures and anti-circumvention regulations reinforces copyright protection and effectively combats infringement on the internet. In contrast, exceptions to copyright law or fair use enable users to access information and interact with copyrighted works under specific circumstances. This chapter also explores the underlying principle of accessing materials in terms of promoting research and education because the creators have to use the existing knowledge to produce further creativity. The thesis examined how technological measures affect fair use and access to knowledge, especially in developing countries that have limited budgets for database subscriptions. The thesis highlighted ongoing debates regarding technological measures, fair use, and digital lock-up. This chapter sheds light on the idea that anti-circumvention measures may offer copyright holders additional protection beyond the scope of copyright laws. Users may be overruled if the system lacks effective exceptions and other mechanisms for implementing privileges. Hence, these literature reviews show that there are gaps in understanding how to reconcile TPMs and user rights to access knowledge while also upholding the main idea of copyright law, which is to find a fair balance between the interests of copyright holders and the public in the digital world. This thesis will discuss these issues in detail.

Chapter 2

Anti-circumvention rules (TPMs): Key to Understanding Global Online Copyright Protection Dynamics

Introduction

This chapter critically explores TPMs, with an emphasis on the comparative and international aspects. Despite TPMs' aim to protect copyright in the digital era, there are significant variations in how these laws are applied across jurisdictions to effectively regulate infringing access and use of copyright works. The study will thoroughly examine Thailand's TPMs and their attempts to adhere to the WCT and the DMCA, which also discusses the uncertainty in the extent of protection and prohibition under Thai TPMs. To address these issues, this chapter will explore WCT, which serves as an initial model requiring member states to provide effective legal protection to technological measures. However, the additional purpose of the WCT is to promote the balance of interest between creators and the public by promoting the availability of education, research, and information in societies.³³³ The EU Directive identifies the regional standard of TPMs across the European Union. Additionally, the DMCA would offer a legal strategy to effectively prevent online copyright infringement. The CDPA of the UK provides the clear scope of protection and prohibition. India is representative of a developing country and WCT signatory; it reflects the minimalistic model and challenges of implementing TPMs within a context of compelling public interest concerns. Hence, copyright holders are now provided three layers of legal protection. The protection provided by traditional copyright law is the first layer. The second layer of protection is the technological measures that are used to prevent unauthorised access and unpermitted reproduction, such as passwords and encryption. The final layer is the legal protection that prohibits the circumvention of the legitimate technical measures used by the authors; this is the new layer of protection under international and domestic jurisdictions.³³⁴ The comparison of TPMs in these jurisdictions would offer insight into how various legal systems apply and interpret the TPMs to effectively protect the authors' rights without endangering access to knowledge.

³³³ WIPO Copyright Treaty, preamble.

³³⁴ Jacques De Werra, 'The Legal System of Technological Protection Measures under the WIPO Treaties, the Digital Millennium Copyright Act, the European Union Directives and Other National Laws (Japan, Australia)' in *Adjuncts and Alternatives to Copyright: ALAI Congress June 13-17, 2001, New York, USA= Régimes complémentaires et concurrentiels au droit d'auteur: Congrès de l'ALAI* (2002) 3.

Additionally, this comparative investigation would offer an understanding of global trends and best practices in TPM regulation for possible reforms of Thai law, as will be discussed below.

2.1 Development of TPMs in Thailand and Attempt to Harmonise Laws with Global Standards

As Thailand is a party to WIPO and the Thai parliament sought to enter into the WCT, it is important to improve the Copyright Act of Thailand to comply with this international agreement and global standards. The anti-circumvention rules in Thailand were initially implemented through the amendment of the Thai Copyright Act in 2015. This version contained several problems concerning vague definitions and inadequate protection provided to technological measures. Although the anti-circumvention rules under the Copyright Act B.E. 2558 were revised to expand the scope of protection provided to technological measures, many characteristics of the previous provisions remain unchanged. Therefore, this section would study the development of TPMs in Thailand to demonstrate the attempt to reinforce these provisions. The lessons learned from the former version and other jurisdictions will be used as guidelines to interpret and enforce the new legislation.

2.1.1 The First TPMs of Thailand: The Failure in Protecting Copyright

The laws began to take effect on 4 August 2015, after being announced in the Royal Gazette on 5 February 2015. It was the first version of TPMs in Thailand, which contained a number of challenges regarding the general wording of legal definitions, the scope of prohibition, and insufficient protection for copyright holders. The details and difficulties of this version will be critically analysed hereafter.

The Inaccuracy on Legal Terms and Uncertainty on Scope of Protection

This version defined the term “technological measure” as technology designed to control access to or prevent reproduction of a copyright work or performance recording, and such technology is used to protect copyright works or performance recordings effectively.³³⁵ Based on this definition, it seems clear that this provision protects only technologies used with copyright work and performance recording. This legislation did not cover technological measures embodied in non-copyright materials or the public domain. According to court decision number 308/2564, the defendant infringed on the plaintiff’s broadcast works, which are copyright materials. The defendant violated technical measures for financial profits by selling, providing set-top boxes, and converting the signal through the plaintiff’s internet. The defendant created a true ID

³³⁵ Section 3 of The Copyright Act (NO. 2) B.E. 2558 (2015).

account by using membership information gained from the smartcard of another person who was a member of the plaintiff's set-top box. These have been done without any right or authorisation. Then, the membership data was employed to enable the set-top box to transmit or convert the signal via the internet, using a True ID box sold by the defendant. Buyers can watch the plaintiff's TV program through the internet using a computer. The court decided that these actions were unlawful circumventions of technological measures by encrypting the victim's signal. They obtained commercial profits by selling or providing True ID boxes and collecting service fees from the buyer to access broadcast works, which are copyright materials. Without authority, the defendant avoided technological measures with the knowledge that such acts may result in copyright infringement and harm the economic interests of the plaintiff. The defendants had to be liable for the unlawful circumvention of technological measures.³³⁶

With regard to the court judgement number 768/2563, the plaintiff claimed that the defendant sold or provided services to install devices. These tools enable others to use or convert signals to engage with broadcast works or interactive TV pay programmes. Then, the set-top box purchased from a website was used to receive or convert the signal in order to view live broadcasts and TV programs. These shows were copyright works of the plaintiff's company, and the defendants carried out these activities with the knowledge that their actions may infringe the copyright and cause economic damage to the plaintiff's company. The plaintiff asserted that these activities could be deemed a circumvention of technological measures under Article 53/4 of the Copyright Act. Nonetheless, the plaintiff withdrew the complaint in connection with a violation of the Copyright Act. The judge consequently did not provide an explanation or decision on the circumvention of TPMs under this law. These activities remained illegal under other regulations, such as the Operation of the Sound Broadcasting Service and the Television Broadcasting Service Act, B.E. 2551 (2008), and the Computer-related Crime Act, B.E. 2550 (2007).³³⁷ Although there are a few judgements regarding the protection of technological measures in Thailand, these cases disclosed that the Thai Copyright Act establishes the link between anti-circumvention rules and copyright protection. The law basically protects technological measures used with copyright work or prevents copyright infringement.

It must be noted that there are two types of technological measures, which include access controls and rights control or use controls. Access controls prevent users from entering or viewing copyrighted content

³³⁶ The Court Decision No. 308/2564 (2020).

³³⁷ The Court Decision No. 768/2563 (2019).

without authorisation, while rights control or use control restricts users from reproducing, modifying, and redistributing the content. In terms of the nature of technological measures falling within the purview of the previous version of anti-circumvention rules, the laws protected access controls and copy control. These might refer to passwords and encryption. The provisions cover technology designed to control access and establish a new right to restrict access to digital materials for copyright holders, which is separate from the exclusive right provided by copyright law. Although copyright law does not establish any right for the copyright holder to prevent the public from accessing their works, it seems difficult for users to access hard-copy materials without authorisation. In the analogue world, copyright works were created in the form of physical copies, such as printed books and paintings. The users have to obtain or possess the hard copy of the work in order to view, read, or listen to copyright content. The work could be disseminated hand-in-hand. The reproduction of physical materials is expensive and time-consuming. Even though the copyright protection did not establish access right for the copyright holder, they are able to determine whether to make their works available to the public. In the analogue era, it was likely to be more difficult for the user to engage with the works. Users can easily access and duplicate copyrighted works shared on the internet in the digital age.³³⁸ Thailand's social and technological contexts have also changed. The majority of copyrighted works were produced in electronic format, and Thai people widely consumed digital materials. It is important to employ technical measures to restrict access to copyright materials, and the law should be implemented to prohibit the circumvention of access controls. These enable copyright holders to rely on technological measures to control access to their works, and they would gain compensation for the use of their works. The anti-circumvention rules would guarantee that technological measures are not freely circumvented.

However, the issue rests with copy-controls or technology used by copyright holders to prevent duplication of their work once the user gains access to materials. The definition includes technologies designed to control reproduction, or copy-controls, which seem to be narrower than the exclusive right of the copyright holder. It is important to note that traditional copyright protection guarantees the exclusive right of the copyright holder to copy, modify, and communicate their works to the public. The users are prohibited from duplicating, adapting, or disseminating the work without the holder's permission. However, anti-circumvention rules under the Copyright Act (No. 2) 2015 limited the definitions of technological measures to those designed to restrict reproduction. This affected the scope of legal protection under Thai TPMs.³³⁹

³³⁸ Boonruangsri (n 9) 123.

³³⁹ *ibid* 100-104.

This term seems to be more restrictive than in other jurisdictions and excludes other exclusive rights of the copyright holder. Generally, the protection might be limited to copy-control technologies. The law may be interpreted to not cover the technological measures designed to safeguard the other exclusive rights of the copyright holder. The previous version of anti-circumvention rules did not protect the technologies designed to prevent modifying and communicating digital materials to the public. These technological measures might become irrelevant to anti-circumvention legislation. The circumvention of technologies designed to prevent modification and dissemination of electronic materials might be widespread, which made the laws ineffective. Thus, the definition of technological measure appears inaccurate because it solely encompasses copy-controls rather than all types of technical measures designed to secure wider exclusive rights under copyright provisions.³⁴⁰

Moreover, the technological measure has to be effective in order to be legally protected, but the copyright act did not define the term “effective” or “effectively,” which causes a vagueness in the scope of legal protection. The lack of a definition for ‘effective’ or ‘effectively’ creates uncertainty in determining which technological measures are protected or qualify for protection by law and how effectiveness should be measured. To fall within the anti-circumvention rules, it remains unclear whether the operation and function of technological measures, or their level of resistance against hacking. Copyright Act B.E. 2558 (2015) also provided a definition of the word “circumvention” as any action that makes technological measures ineffective.³⁴¹ In terms of legal prohibition, this version bans the circumvention of technological measures or any service facilitating violation of technological measures with the knowledge that such acts may lead to infringement of copyright or the performer's rights. These activities would be considered a violation of technological measures.³⁴² The clearest examples of circumvention are decryption and password hacking. The previous anti-circumvention rules required specific intent from violators; the doers are legally liable if they deactivated technological measures with the knowledge that doing so would facilitate copyright infringement. The last requirement is that copyright infringement occurs as a result of a violation of technological measures. The specific intent and result of circumvention reflect a connection between TPMs and copyright legislation. However, the plaintiff bears the burden of proving to meet all of these requirements in order to place legal liability on circumventors. The requirement for plaintiffs to

³⁴⁰ *ibid* 97-101.

³⁴¹ Section 3 of The Copyright Act (NO. 2) B.E. 2558 (2015).

³⁴² Section 7 of The Copyright Act (NO. 2) B.E. 2558 (2015).

demonstrate specific intention resulting in copyright infringement presents significant practical challenges, as it is often difficult to prove whether a violator was aware that their actions would infringe on copyright.³⁴³

The Copyright Act, B.E. 2558, did not specify the technological measures that are covered by protection. The prohibition of circumvention might mainly rely on the definition of technological measure, which banned the violation of technology designed to control access and prevent reproduction.³⁴⁴ Based on the former chapter, it is understandable to safeguard access controls as they are effective technologies that secure the economic interests of copyright holders in the digital world. Access controls would basically foster a new business model that enables copyright holders to control the behaviour of users to access their work. The number of people viewing, listening, and engaging would mainly depend on the level of payment.³⁴⁵ It ensures that the works are not freely available to the public without compensation. The combination of technology and legislation would reduce copyright infringement in the digital world. However, the access right is really new in Thailand; it plays a significant role in enabling only the individuals who pay royalties to access the works. The access right might exceed the conventional boundaries of copyright legislation. It may impede the competition, and exceptions or fair use under traditional copyright law may be overridden. Education might be threatened because access control hinders the use of open or free software. Without the ability to engage with existing databases, it would unavoidably discourage technological innovation, academic research, and publication.³⁴⁶ Therefore, the legal protection for access controls and access right should be carefully implemented to maintain the balance of interest between the copyright holder and the public. It is necessary to introduce mechanisms to monitor and prevent the impact of this provision.

A key argument concerning the protection provided to copy-control measures is the significant overlap between TPMs and existing copyright law, particularly regarding how circumvention of copy-controls relates to copyright infringement. The circumvention of copy-controls would normally lead to the reproduction of works, and the reproduction is already covered by copyright infringement. It seems unnecessary to establish liability under anti-circumvention rules for violators in addition to copyright infringement, thereby rendering additional protection measures less meaningful. Moreover, this provision

³⁴³ Boonruangsri (n 9) 123-124.

³⁴⁴ *ibid* 100-109.

³⁴⁵ Gasaway (n 11) 270.

³⁴⁶ Vincent Ooi, 'Licence to Lock: The Overextension of Technological Protection Measures' (2021) 35 *International Review of Law, Computers & Technology* 274-276.

might encourage owners to employ anti-copying technology in their materials, which is a challenge for the general public to violate technological measures without technical knowledge. Even if the duplication of works is permitted by fair use, the application of copy-controls may impede the individual's ability to use the works for non-infringing purposes.³⁴⁷

According to several legal definitions discussed, it is critical to clearly define the type and effectiveness of technological measures. The precise explanations would be useful to identify the forms, functions, efficiency, characteristics, and qualifications of technological measures that are legally protected. The definition of effective technological measures directly affects the scope of legal protection.³⁴⁸ The illustration of the term “circumvention” would significantly influence the boundaries of legislative prohibition. As the TPMs were a new provision in Thailand, the legal definitions would help relevant organisations interpret and enforce the law. The public would be enabled to understand the legislative concepts and specific technology that the laws aim to protect.

The Lack of Anti-Trafficking Circumvention Device Provisions rendering Ineffective Copyright Protection

The main issue of the Copyright Act B.E. 2537 (1994) is the absence of any restrictions on the manufacture, sale, or distribution of devices designed to circumvent technological measures. Therefore, this version does not place legal responsibility on the person who manufactures, sells, or renders services for these tools. These would result in the uncontrolled availability of circumvention devices in Thailand, which facilitate individuals to deactivate technological measures to use copyright works. As a result, copyright holders and digital works are not adequately protected. It is unable to prevent or reduce online piracy.³⁴⁹

Application of Fair Use for Access to Digital Works

Section 7 of the Copyright Act B.E. 2558 (2015) added Section 53/5 to the Copyright Act B.E. 2537 (1994) to insert the exceptions to anti-circumvention rules. The following situations do not constitute an infringement of technical measures: (1) necessary act that has been exempted from infringement of copyright; (2) for analysing components of a computer program to interoperate with other computer program; (3) for research, identifying and analysing the vulnerabilities in encryption technologies; (4) for

³⁴⁷ Boonruangsri (n 9) 111.

³⁴⁸ Ibid 107.

³⁴⁹ Department of Intellectual Property, ‘Report on analysis of potential impacts of the law’ (22 June 2020).

testing, examining, evaluating, or repairing the safety of a computer, computer network or computer system; (5) for preventing the usage of technical devices to collect or disseminate personal data about online activity of individuals; (6) an act by authorised officials for enforcing the law, facilitating national security or national defence, and other similar purposes; and (7) the circumvention conducted by a national library, archives, educational organisations or public non-profit broadcasting bodies to engage with copyright materials, and these institutions are unable to access the works by other methods.³⁵⁰

Section 53/5(1) of the previous version established a wide exception to anti-circumvention rules by adopting a full list of fair uses for these provisions. It allowed the users to engage with copyright work, but there are requirements that the usage does not interfere with the normal exploitation of materials by the copyright holder and does not unreasonably prejudice the legitimate rights of the holder. These conditions are considered in all exceptions. The non-infringing use included study or research without profit; personal use alongside close relatives or family members; criticism or comment with proper acknowledgement of copyright ownership; reporting the news on mass media with attribution of copyright ownership; duplication, adaptation, or display by authorised officials for administrative or judicial proceedings; reproduction, modification, or display by a teacher for non-commercial teaching; replication, adaptation of a portion of a work, or summaries by an educational institution or lecturer for sale or delivery to students in the class without profit; use for examination in the form of question and answer.³⁵¹ In terms of the exception for disabled people, the former version of the anti-circumvention rules allowed recognised or authorised bodies to facilitate disabled people's enjoyment of copyright works. The disabled person in this provision includes impairments in hearing, vision, intelligence, learning mobility, or other disabilities, as the Minister identified in the Government Gazette. The organisations are permitted to reproduce or modify legally obtained copyright works that have already been published or disseminated to the public. Additionally, the exception enables the organisations to communicate these recreated or adjusted materials to the public; they may distribute the work received from other institutions located both inside and outside Thailand. All of the activities have to be done for non-commercial purposes.³⁵² For the libraries, the exception allows the librarians to copy the work for utility in the library, and the copies of the work might be deliveries for use in another library. There is an exemption for the library to duplicate a portion of materials for research or study by another person.³⁵³ These exceptions would ensure that certain

³⁵⁰ Section 7 of The Copyright Act (NO. 2) B.E. 2558 (2015).

³⁵¹ Section 32 of The Copyright Act B.E. 2537 (1994).

³⁵² Section 32/4 of The Copyright Act B.E. 2537 (1994).

³⁵³ Section 34 of The Copyright Act B.E. 2537 (1994).

necessary activities, such as education and research, are not prohibited by anti-circumvention rules, thereby enabling technological and academic advancement.

Hence, the former exceptions to anti-circumvention rules encompass the fair use provision under traditional copyright protection. Section 53/5(1) did not contain any limitations on the categories of works that fall within the ambit of privileges. Therefore, it could be interpreted that the former version of anti-circumvention rules in Thailand allowed the fair user to circumvent technological measures to enjoy all types of copyright materials for non-infringing purposes. If individuals violate technological measures to use copyright works and exercise their rights under copyright exceptions, they are also exempt from the liability of anti-circumvention rules. In conclusion, the anti-circumvention rules under the Copyright Act 2015 established a wide range of exceptions to enable the user to enjoy copyright content for non-infringing purposes. The full list of exemptions to traditional copyright law is applied, and these exceptions cover all classes of copyright works. This provision reflects the attempt to make electronic work available for fair users and reveals the relationship between TPMs and copyright legislation.

2.1.2 Thai TPM Amendment to Address Global Copyright Practice in the Digital Age: Is it Good?

As the anti-circumvention provisions earlier indicated, these rules have been developed and implemented in other jurisdictions for a long time. However, TPMs in Thailand are just in the very early stages of development; the first piece of these provisions was introduced to the Thai copyright system in 2015. This law contains a number of problems in terms of interpretation, legal definition, and scope of protection. Moreover, Thailand aims to be a member of the WCT, which requires Thai copyright law to provide adequate protection for copyright works contained in digital forms. Nonetheless, the Thai Copyright Act of 2015 remained non-compliant with the requirements of such a treaty because it was not the amendment to certify the action of becoming a member at that time.³⁵⁴ The previous version of TPMs could not effectively protect copyright works in the digital environment because it prohibited only the direct act of circumvention but did not have provisions on anti-trafficking. Therefore, it is necessary to increase the efficiency of protecting copyright works to keep up with technological changes and improve TPMs to be in line with the WCT.³⁵⁵ For this reason, the revision of this provision gained more attention from the Thai parliament, lawyers, and other interested parties. The amendment was finally passed in Thailand. This new

³⁵⁴ Department of Intellectual Property, 'Report on analysis of potential impacts of the law' (22 June 2020).

³⁵⁵ Department of Intellectual Property, 'Summary of the results of the hearing on the Copyright Act draft' (9 August 2018).

draft of copyright legislation was approved by the Thai parliament in September 2020, and it was officially promulgated in February 2022. To compare with the previous version, this new legislation, directly modelled by the DMCA of the US, expands the scope of protection by providing protection against the trafficking of services or devices used for circumvention in order to protect the economic interests of copyright holders more effectively. The amendment provides legal protection only for technological measures used to prevent access to copyright works, and narrows down the exemptions to the offence of technological measure circumvention. The most significant change in these prohibitions is the anti-trafficking of services or equipment, which makes technological measures ineffective. The amendment additionally sets several exemptions for such liabilities. The main purposes of this revision are to make Thai law compatible with the obligations of the WCT and the Regional Comprehensive Economic Partnership (RCEP). Thailand consequently ratified the WCT on 13 July 2022 and became member number 113. This treaty entered into force in Thailand on 13 October 2022 (thirty days after the ratification date). The international agreement and the legal reinforcement would be useful to minimise piracy online, as well as secure the interests of copyright holders in Thailand.³⁵⁶ Thus, the adoption of the US legal model to revise national laws reflected Thailand's efforts to align more closely with international copyright enforcement standards, enhancing its legal framework to protect against increasingly sophisticated forms of copyright infringement. The anti-circumvention law under the new version would be discussed in great detail as follows:

The Changes on Definition of Effective Technological Measures

According to the amendment to the Thai anti-circumvention rules, technological measures refer to technology used to protect the exclusive rights of the right holder and performer under Thai copyright law or technology used to effectively control access to a copyright work or a recording of a performance.³⁵⁷ The connection between copyright protection and anti-circumvention rules remains. This provision protects only the technologies employed to protect copyright works; those used to protect public domain or other non-copyrightable materials would not fall within the scope of this legal protection. Additionally, the problem with the type of technological measure in the previous version was resolved. They adjusted the definition of technological measure to include access controls and right controls. The first technology is

³⁵⁶ Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <<https://drive.google.com/drive/folders/1pz6RDfDtdYKYGA2DLJgvovK1s9UX78gJ?fbclid=IwAR1t4cPJuhZDplkGzIzI2OzBOPefG3j4TBZhWbgfhyssxYSDkvs5STKbQk>>.

³⁵⁷ Section 4 of Copyright Act (NO.5), B.E.2565(2022).

those used to control access, which include passwords, encryption, the Advance Access Content System (AACS), and the Content Scrambling System (CSS). The latter type is the right controls. It is interesting that the copy-control technology under the former law was replaced by the right-control technology. It is used to protect the exclusive rights of the copyright holder and safeguard the digital work against copying, downloading, modifying, and disseminating to the public. This shift reflects a broader understanding of technological measure that extends beyond mere copy prevention to encompass comprehensive control over all forms of digital interaction with copyrighted works. The new definition covers technologies employed to prevent all utility of materials, which include those used to prevent reproduction, adjustment, and communication of the works to the public. The right-control measures include technology used to prevent screen capture or screencast and a read-only function. This legal revision would conform to the global technological context.³⁵⁸ Generally, this legislation protects any technology or device used to effectively safeguard copyright works and performance recordings. These would prevent copyright infringement and restrict unauthorised access to copyright materials. It is arguable that the definition is revised to make it the same standard as those that exist in international law and other domestic legislation, similar to provisions found in the EU CD, the DMCA, and the UK Copyright Act, which also cover either access-control devices or right-control devices. The new legislation contains the same provisions as the first version of Thai anti-circumvention legislation in terms of establishing a new right to control access to copyright holders that has not been protected by traditional copyright law.

Strengths and Unresolved Issues the New Definition of Effective Technological Measures

The legal definition of technological measures was revised in 2022 AD to increase the level of protection and be in accordance with international standards. With this approach, copyright holders would gain economic benefit from the enhanced protection of copyright works in the digital age. They are likely to have incentives for the creation of new works, enhancing works of art and culture, and creating prosperity in the arts and culture of the country. This amendment also had the main objective of demonstrating that Thailand has the legal capacity to effectively eliminate copyright infringement in the network environment in order to encourage copyright holders to invest in and run businesses in Thailand. These would lead to the advancement of the arts, science, and the economic development of the country, with creative

³⁵⁸ Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <<https://drive.google.com/drive/folders/1pz6RDfDtdYKYGA2DLJgvovK1s9UX78gJ?fbclid=IwAR1t4cPjuhZDplkGzIzI2OzBOPefG3j4TBZhWbgfhyssxYSDkvs5STKbQk>>.

industries as a mechanism to drive sustainability.³⁵⁹ In addition, if Thailand has an international copyright management system, it will help build confidence in the business sector. These would enhance the competitiveness of Thailand in the digital age in accordance with the Thai government's efforts to support innovation and intellectual property protection to facilitate economic growth and educational and technological advancement.³⁶⁰ Nevertheless, with the amendment of the definition of technological measures, a series of new problems have the potential to arise in the near future. The new law raises a significant issue with the unclear concept of technology. The new law provides a wider scope of legal protection for the technical devices used to safeguard the interests of copyright holders and control access compared with the previous one, which identified more detail about the type and concept of protected technology. The definition of technology contained in the Copyright Act of 2015 requires two qualifications of technological measure in order to obtain legal protection, including that such technology needs to be designed to prevent reproduction and access to copyright works, and it also must be used to protect copyright content effectively.³⁶¹ With this regard, it can be said that due to the uncertainty embodied in the language of the new laws, it has the potential to be widely interpreted to grant a higher level of protection to copyright holders by expanding the extent of legal protection against removal to all devices employed by the copyright holder to assure their economic interest without any consideration of the effect, original function, or primary purpose of technology. In other words, this provision does not protect solely the devices themselves that are produced for protecting the works; it also includes all of those to which the copyright works might be put. Based on the meaning defined by the Copyright Act of 2022, overbroad protection might be generated for copyright holders and all relevant technological devices. The digital database is likely to be effectively stymied, and the users might be prevented from accessing valuable materials. In brief, the concept of technology in this version remains ambiguous; it needs to be further revised by identifying certain characteristics of technological measures to create guidelines for future interpretation and also determine the balance of interests between copyright owners and the public.

Additionally, the new version includes the technology that the copyright holder uses to safeguard their exclusive rights and prevent access to digital materials. With this provision, the prohibition on circumvention is directly applied to protect the right to control access to copyright work; it offers a new right that empowers the copyright holder to lock their works, and the public might be precluded from

³⁵⁹ Department of Intellectual Property, 'Report on analysis of potential impacts of the law' (22 June 2020).

³⁶⁰ *ibid.*

³⁶¹ Section 3 of the Copyright Act (NO.2), B.E. 2558 (2015).

accessing copyright contents. Similar to the first version of the anti-circumvention rule, the new law remains silent on the explanation of effective technological measures. Due to the lack of a precise meaning to define "effective," the vexing difficulty arises in determining the level of efficiency that technological measures should have, the ability to resist the attempt to circumvent them for obtaining legal protection, how well they operate, and, in the event that the technology in question can be circumvented by accident or by the common skill of the user without any professional tool or technical equipment, whether or not it could be considered effective. It remains an unending discussion on how well the device functions to fall within the scope of protection against circumvention. With the uncertainty created by this new law, a strong argument can be raised that a wide range of technological measures might be potentially employed to prevent non-infringement users from accessing knowledge, and it might cause serious damage to social and educational development in Thailand.

It is arguable that although the second amendment of TPMs has taken place in Thailand, the existing difficulties are still unsolved, and the vagueness of the definitions remains unclarified. The vagueness of the law leads to uncertainty in court interpretations and difficulties for copyright holders and users, who may struggle to understand the extent of their rights and the boundaries of legally prohibited activities. Without clear definitions, copyright holders might restrict legitimate uses of copyrighted materials, while users might engage in activities that are unintentionally infringing, leading to legal conflicts and a chilling effect on education. Additionally, the ambitious definition may lead to problems with interpretation and enforcement. It seems difficult for relevant institutions to implement the law according to legal intentions. Especially the anti-circumvention laws are new provisions in Thailand. The legislative definition plays an important role in explaining the legal term and determining the scope of legal protection and the boundaries of prohibition. The definitions have to clarify the form, nature, and performance of technological measures to identify the scope of legal protection and enable the proper enforcement and interpretation of the laws. In order to protect technological measures, it is necessary to clearly define the meaning of technology or divides that the law aims to protect, and the prohibited activities have to be clearly explained.³⁶² Hence, it could be concluded that the legal definitions under the new anti-circumvention regulations are vague, and the level of protection for copyright holders goes far beyond those mandated in other jurisdictions. It is necessary to reform by establishing a clear scope of protection in order to be used as a guideline for interpretation and implementation in a manner that effectively

³⁶² Boonruangsri (n 9) 107.

prevents economic losses for the copyright holder and fits the specific circumstances in Thailand. Significant uncertainty and vagueness do not exist only in the definition, but also in the acts that are prohibited under anti-circumvention rules. The provisions concerning the direct act of circumvention and the preparatory act will be critically examined.

Prohibition on Act of Circumvention and Influences of the US's DMCA in Thai Law

Section 53/4 addresses the direct circumvention of technology used to control access to work. This provision stipulates that “circumvention of technological measures” means any act rendering technological measures used for controlling access ineffective.³⁶³ However, the most important word, “circumvention,” is not properly defined. It seems unclear what the scope of prohibition is and what activities are banned by this law. The definition is general wording without any illustration. Unlike the act of trafficking devices, this obligation does not appropriately identify the intention of the direct act of circumvention. It can be said that Article 53/4 is amended to make the circumvention of technological measures a strict liability. According to the report of DIP, the specific intent is excluded from an offence of technological violation because rulemaking in Thailand made an effort to distinguish it from an offence of copyright infringement and to comply with the WCT.³⁶⁴ The interesting question arises as to whether or not knowing or having reasonable grounds to know (bad faith) is required to fall within the scope of this prohibition. For this reason, it creates ambiguity in the case that the technical device is accidentally removed or some people destroy the technological measure by negligence, whether or not such actions can be deemed illegal circumvention. The removal of the knowledge requirement could significantly broaden the scope of the prohibited act, and anyone who doesn't realise they've deactivated a technological measure could face legal consequences. This provision may cover those who accidentally or unintentionally circumvent technological measures.³⁶⁵ Due to the vagueness inherent in this provision, as well as the absence of further clarification, it might lead to excessive enforcement in the future, and the user might be overruled. There is potential that the user inevitably confronts legal liability for committing circumvention, even though the direct act of violation has not been done in bad faith.

³⁶³ Section 53/4 of The Copyright Act B.E.2537 (1994) amended by Copyright Act (No.5) B.E.2565 (2022).

³⁶⁴ Department of Intellectual Property, ‘Summary of the results of the hearing on the draft Copyright Act that has been considered by the Council of State (6th Committee)’ 4 August 2020.

³⁶⁵ Dipinn Verma, ‘Anti-Circumvention Law of Copyright in India’ (2015) 6 International Journal of Intellectual Property Rights 26-27.

From the language of this section, it must be noted that the new law regulates a narrower scope of prohibition than that contained in the former law. It protects only technological measures that effectively prevent access to copyright contents. In other words, this anti-circumvention legislation prohibits individual acts of circumvention in connection with access controls, but it does not prohibit the circumvention of devices used for copy restriction. In the event that the violators circumvent right-controls, reproduction of the digital work occurs. The doers are not liable under anti-circumvention law, but they are still penalised for copyright infringement. In contrast, if the unauthorised user bypassed access-controls to reproduce or redistribute the works, the doers held the liability either under anti-circumvention rules or copyright legislation. It is arguable that the amendment separates the TPMs from traditional copyright laws.³⁶⁶ For instance, if the users want to watch the movies available on the streaming service but do not have the password because they did not pay the fees, they hack the password or technological measure used to prevent unauthorised access and then download the movies for their personal entertainment. Such users would be liable for anti-circumvention rules and copyright law separately. They would be penalised by anti-circumvention rules for violating access-controls, and they would be liable for copyright infringement due to their reproducing (downloading) the movies.

Similar to US law, the Thai copyright act excludes the protection provided to right-controls. These might be an effort to protect only the works that fall within the scope of the exclusive rights of copyright holders and leave enough room for non-infringing users to enjoy their right to duplicate copyright materials. Even though this law allows users to circumvent technical tools that control reproduction for the purposes of non-infringement, such fair reproduction is very difficult to do without first being accessible.³⁶⁷ As per the obligation discussed above, the application in relation to the non-infringement approach or fair use is likely to be seriously precluded. Because of the anti-circumvention on access control tools, the users could possibly exercise their rights only in the case that they have already lawfully accessed digital work. Despite the fact that copy control devices could be legitimately hacked, if non-infringement users are unable to access protected works, they might not be able to reproduce such materials in practice.

³⁶⁶ Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <https://fb.watch/s2W8qya_Vw/> accessed 9 September 2022.

³⁶⁷ Yuanyuan Hui, 'Protecting Copyright in the Digital Era in China: A Critical Analysis of the Relevant Law and Practice from a Comparative Perspective' (Durham theses, Durham University 2016) 406-407.

Insertion of Prohibition on Preparatory Activities as a Significant Reinforcement of Online Copyright Protection in Thailand and Global Practice Compliance

As discussed, the anti-trafficking provision was not established in the former version of the Thai Copyright Act. It has not established a provision for offences on services, products, or equipment that make technological measures ineffective. The absence of an anti-trafficking provision in the former Thai Copyright Act reflects a gap in addressing the circumvention activities. While the law focused on the individual act of circumvention, it did not account for the broader infrastructure supporting such acts through circumvention services and devices. Countries like the United States, the European Union, and Australia have successfully reduced circumvention activities by applying anti-trafficking provisions, creating a stronger deterrent against the distribution of circumvention tools. Thus, it is necessary for Thailand to increase the efficiency of anti-circumvention regulation by enforcing the provision of anti-trafficking devices. The argued obligation specified that a service, manufacture, sale, or distribution of services, products, or equipment that makes technological measures ineffective can be deemed a circumvention of the technological measure.³⁶⁸ Thailand is still notorious for copyright infringement and counterfeit goods, and there are a number of businesses involved in the manufacturing and distribution of devices that used to circumvent technological measures in Thai society. Thus, by stipulating such provisions in the copyright law, Thailand might be able to deal with the infringement of technology measures in a better way. It also reassures copyright holders and creators that their works will be adequately and effectively protected in the digital age.

The regulation on anti-trafficking devices is finally introduced in Section 53/6 under the new version of Thai TPMs. It mandates that any person who provides, produces, sells, or distributes a service, product, or equipment with the knowledge or reasonable ground to know that such service, product, or equipment is mainly aimed at making technological measures ineffective or by promoting that the service, product, or equipment can render technological measures ineffective shall be deemed to have violated the technology measure.³⁶⁹ As can be seen in this approach, it prohibits the dissemination of tools aimed at defeating technical measures that are employed by copyright holders to prevent every form of copyright infringement, including unauthorised access and reproduction of the protected works. It is interesting to note that Section 53/6 does not prevent the distribution of every technical product that might be employed

³⁶⁸ Department of Intellectual Property, 'Report on analysis of potential impacts of the law' (22 June 2020).

³⁶⁹ Section 53/6 of The Copyright Act B.E.2537 (1994) amended by Copyright Act (No.5) B.E.2565 (2022)

to circumvent rights and access control measures. This provision does not cover the trafficking of devices that, whether accidental or incidental, make the circumvention possible. In this aspect, the trafficking and manufacturing of devices and services seem to be legally prohibited in the following circumstances:

1. A person who manufactures, sells, or distributes the device with the intention or reasonable ground to know that the device primarily aims to violate a technological measure that effectively prevents access or effectively safeguards the rights of the copyright holder; or
2. The device is promoted or advertised as a tool that can be employed to circumvent technological measures.

The anti-trafficking provision places the legal liability on the person who provides services, produces, sells, or offers the circumvention devices to the public, and the offender has to carry out the argued business or activity knowing or having reason to know that such services, products, or equipment have the primary purpose of making technological measures ineffective. Unlike the direct act of circumvention, this provision is not limited to technology used for effective control of access but also includes those that effectively protect the rights of the copyright holder. However, the challenge lies in the fact that it seems to be sometimes difficult to examine and prove the primary purpose of particular devices. There is a high possibility that the business and service of hacking devices might be totally prohibited, and a wide range of technologies necessary for circumvention might be entirely eliminated from the Thai market.

Therefore, the amendment of anti-circumvention rules seeks to enforce the obligation to legally inhibit the circumventing technological measures applied by copyright holders for safeguarding their creations. In comparison to the former version of anti-circumvention rules, the new laws grant stronger protection to technological measures than those contained in the previous regulations. In addition to outlawing direct acts of circumvention of technological devices, they also forbid preparatory acts, which include the production, distribution, and trafficking of tools required to deactivate access control and copy controls of TPMs. It can be said that the new rule affords legal protection against both individual acts of circumvention and trafficking devices used for violations.

Evaluating Effectiveness of Current TPMs in Thailand in Online Copyright Protection

The revision provides protection to access-controls and initially introduces anti-trafficking provisions; these reinforcements allow the anti-circumvention rules in Thailand to be in line with those in other jurisdictions. It is undeniable that the new right of controlling access is very powerful in reinforcing the exclusive right granted to the copyright holder. The access right enables the copyright holder to control the manner in

which the consumers engage with the works. The anti-trafficking provisions target the devices and services used to bypass access controls, effectively regulating the spread of circumvention devices and safeguarding copyrighted works from unauthorised distribution. The legal frameworks effectively prevent the duplication and redistribution of works through the internet system. These legal revisions align Thailand with international treaties, such as the WCT. The improvements enable Thai laws to become acceptable in global communities and promote copyright protection at the national and international levels. Additionally, it promotes cooperation between government agencies and the private sector to prevent infringement and protect the exclusive rights of copyright holders on internet-based media. The improvement of Thailand's copyright protection would foster e-commerce and equitable trade by preventing internet piracy.³⁷⁰ In the absence of this regulation, infringers are able to freely circumvent the technological measure to access or use the protected works without any payment for royalty fees. Copyright holders will have no legal mechanism to protect their works in the digital age. Thus, there are a number of positive impacts that might occur in society. For the first advantage, the amendment of the anti-circumvention rule would provide more effective protection for copyright works in the digital age. These will help to solve the problems of copyright infringement on the Internet better than before. It strengthens copyright industries who legally operate their businesses on the internet and generates incentives for authors or inventors in the country to produce and develop new creative works.³⁷¹ With this regard, the ongoing creation of new works would result in the advancement of the arts and economic development of the country, and the creative industries would become a mechanism to drive sustainability in Thailand. The creators will be effectively guaranteed that they will have the opportunity to receive a benefit or compensation from the use and access of their copyright works. The strong protection of copyright works and technological measures would formulate the incentives for the creation of new works; it would increase the contributions of cultural materials, which would introduce the prosperity of the arts and culture in Thai society.³⁷²

The amendment to the Thai Copyright Act not only reinforces the protection for copyright works but also fosters economic development by creating a reliable legal environment that encourages domestic and foreign investment. The establishment of legal frameworks would give copyright owners or creators' confidence that technological measures and anti-circumvention regulations would appropriately protect their works. These would encourage the copyright holders to produce further creative works and

³⁷⁰ Department of Intellectual Property, 'WIPO Copyright Treaty (WCT)' (30 November 2018).

³⁷¹ Department of Intellectual Property, 'Report on analysis of potential impacts of the law' (22 June 2020).

³⁷² Ibid.

disseminate them to a wider society. Moreover, the enhancement of anti-circumvention legislation to be in accordance with international standards would demonstrate that Thailand has strong legal mechanisms to protect foreign entrepreneurs. For this reason, Thailand will become an interesting country for foreign investment, especially in the industries of internet media and digital content.³⁷³ For the final positive outcome, it is undeniable that the internet serves as a vast platform for global distribution of copyright works. By adopting international standards and becoming a party to treaties like the WCT, Thailand ensures that its copyright holders are protected worldwide, facilitating greater access and potential revenue from international users.³⁷⁴

Problems of current TPMs in Thailand and Impacts on Access to Digital Knowledge

For access-control protection, the circumvention of access-controls is prohibited, and the copyright holders are able to restrict the manner in which users engage with the works. The user would not be able to even view and comprehend the protected content. This obligation potentially nullifies the fair use provision by expanding broader protection for copyright holders and also giving them a legislative instrument to impede access without payment. This stringent level of protection may hinder technological innovation and educational development in developing countries such as Thailand, as it restricts access to resources that could otherwise support education and research. Moreover, technological measures might be applied to prevent non-infringement uses and access to public domains. It does not distinguish between technologies used to accommodate copyright infringement and those employed for lawful purposes. These may adversely affect a specific group of individuals, such as those wishing to use expired copyright works or the public domain. All digital works might be locked up by technological measures, regardless of whether or not they are copyrightable.³⁷⁵ Although TPMs do not cover technological measures used in the public domain, there is a lack of provision or guidelines for implementation to deal with this issue in Thailand. With this approach, Thai people might be required to pay for the use of works, and it may result in a pay-per-use society. This law additionally provides the authority for copyright holders to block consumers from accessing electronic content and lock down their works. In other words, copyright holders have the authority to regulate how digital content is used and make materials available only to consumers who pay royalty fees for accessing the knowledge.³⁷⁶ It seems to go very far beyond statutory copyright

³⁷³ Ibid.

³⁷⁴ Ibid.

³⁷⁵ Gasaway (n 11) 290-293.

³⁷⁶ Ibid 272.

prerogatives. If this approach is not well organised in Thailand, it may lead to excessive protection that favours copyright holders to the detriment of users, disrupting the equilibrium between protecting creators' rights and ensuring non-infringing users access to knowledge. The copyright law can no longer guarantee that certain groups of users have appropriate freedom to access and utilise knowledge in order to generate incentives for the ongoing formulation of new works. Therefore, it is important that specific social and academic needs be taken into account during the stage of legal interpretation and implementation. This legislation should be enforced in a manner that intensively prevents economic losses for copyright holders and promotes development in Thailand.

With regard to the provision of anti-trafficking devices, it seems to be more effective to reinforce the offense of circumvention, and the copyright holders are likely to be afforded a greater degree of legitimate protection in the digital environment. However, it is important to note that users also have a lawful right to access and consume creative material under certain circumstances, and technical tools might be needed for non-infringement use or in non-copyright works. The users cannot exercise their rights in practice because the business and service of hacking devices might be prohibited. In this context, only a minority group of people who have hacking skills would be able to access the information, but the other vast majority of people would be left behind and lack the opportunity to consume the digital contents.³⁷⁷ Especially in Thailand, which remains a developing country, accessing creative knowledge is necessary to improve the academic system and enhance the living standards of the Thai population. The unaffordable databases and technological measures seem to be significant barriers to the development of the educational system. In addition, most Thai people still have inadequate technological knowledge in terms of self-help for lawful circumvention. Without the assistance of circumvention devices or businesses providing circumvention services, it is very difficult for non-infringement users to deactivate the technological measures by themselves. There is an absence of a copyright exception or fair use that could be applied to anti-trafficking rules. Therefore, it can be said that regulations involving the distribution or manufacturing of circumvention tools are banned, regardless of whether or not the usage is lawful. These issues may have an adverse impact on the balance between the interests of the public and those of copyright holders. Furthermore, because users' legitimate rights to access copyright works as well as public domains cannot be guaranteed by the new anti-circumvention rules, this may pose a serious danger to public interests and eventually deter social development in Thailand.

³⁷⁷ Reese (n 234) 659-660.

2.2 Investigating TPM Legal Models and Experiences from Other Jurisdictions

Based on the several difficulties of the Copyright Act 2022 discussed prior, Thailand still encounters challenges in the legal interpretation and enforcement of anti-circumvention rules. Moreover, Thailand is a member of WIPO and has entered into the WCT, which obliges the contracting parties to establish effective legal protection and remedies for the technological measures employed by authors to protect their rights under copyright law. It is essential to investigate Article 11 of WCT to ensure the compliance of Thai copyright act with this treaty and examine how other jurisdictions address issues. In this part, the anti-circumvention provisions under international law, including WCT and the EU Directive, will be closely explored. These approaches under the DMCA, the CDPA, and the Indian Copyright Act would also be identified in this section.

2.2.1 The WCT Minimum Standard, Legal Issues, How Can Countries Learn to Join?

The World Intellectual Property Organisation (WIPO) is an international organisation established in 1967. Its basic principles are the development of effective international intellectual property protection, the encouragement of innovation, and creative activities for worldwide benefit.³⁷⁸ The protection of intellectual property is central to TRIPS, which requires members to reinforce intellectual property protection to enhance technological innovation.³⁷⁹ The WIPO also sought to promulgate the WCT and the WIPO Performances and Phonograms Treaty (WPPT), which aimed at resolving a number of challenges to infringement arising in the digital world. However, this research will only selectively examine the TPMs contained in WCT; these provisions can be considered the first international regulation that sets forth the minimum standard of anti-circumvention provisions on copyrighted works. Contracting states are required under the WCT to provide sufficient legal protection against the circumvention of effective technological measures used by authors to safeguard their legitimate rights in a digital environment.³⁸⁰ Nonetheless, a number of interesting questions and challenges arise in the interpretation and implementation of anti-circumvention provisions under WCT, which are necessarily to be explored as follows:

³⁷⁸ WIPO, 'Inside WTO' (WIPO) <<https://www.wipo.int/about-wipo/en/>> accessed 5 March 2023.

³⁷⁹ Article 7 of Agreement on Trade-Related Aspects of Intellectual Property Rights

³⁸⁰ WIPO, 'Summary of the WIPO Copyright Treaty (WCT) (1996)' (WIPO) https://www.wipo.int/treaties/en/ip/wct/summary_wct.html> accessed 5 March 2023.

Criticising Legal Terms and the Subject of the WCT's Protection

According to Article 11 of the WCT, it introduces protection for "effective technological measures," but there is no further explanation of the definition of effective. The treaty left the question for the domestic law of member states to resolve by mandating their own definition of this term in accordance with their legal and social conditions. It has been argued that an effective measure requires the intention to impair; it should be able to resist the acts that have attempted to remove or bypass the measure.³⁸¹ Another said that it should not be obsolete and too easily circumvented or even accidentally circumvented. However, it has also been noted that effective technological measures do not mean that they are completely unable to be circumvented, because if they are impossible to destroy, any legal protection might not be needed for these technical measures.³⁸² In general, only effective technological measures that have the appropriate capacity to prevent the relevant copyright infringement act should be legally protected.

Under Article 11 WCT, there is some unclear scope for the term "TPMs used by authors." The treaty does not provide a certain scope for "author." However, this provision should not be narrowly construed by applying to particular devices used by the authors themselves, which would make such an interpretation impracticable.³⁸³ Legal protection can be granted to technological measures used by rights holders, the author's successor in title, their agents, the intermediaries acting on behalf of the author, and licensees acting with the author's consent.³⁸⁴

The additional difficulty with the WCT is that Article 11 does not precisely identify what kind of technologies the WCT protects; it limits the protection for technical measures used in connection with TPMs and copyright legislation. In this regard, the member states are required to provide legal protection for only technologies that are used by authors in relation to the exercise of their rights under the WCT or the Berne Convention.³⁸⁵ It can be said that technological measures would be legally protected if they were used to secure the exclusive rights of authors under copyright law, or if such an act of circumvention would lead to the offense of copyright infringement.³⁸⁶ Thus, technological measures that are used to protect general

³⁸¹ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 14-15.

³⁸² De Werra (n 334) 10.

³⁸³ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 15.

³⁸⁴ Basler (n 270) 5.

³⁸⁵ Article 11 of the WIPO Copyright Treaty.

³⁸⁶ Gwen Hinze, 'Brave New World, Ten Years Later: Reviewing the Impact of Policy Choices in the Implementation of the WIPO Internet Treaties' Technological Protection Measure Provisions' (2006) 57 Case W Res L Rev 790-792.

data or other materials that are not subject to copyright law, or technological measures used in the public domain, would not be covered by Article 11 WCT. This is because authors do not use these technologies in the course of exercising their copyright.³⁸⁷ Furthermore, WCT forbids bypassing technological measures restricting acts pertaining to materials without the authors' consent or legal permission.³⁸⁸ This means that there is some convergence between the TPMs and copyright regulation; the Article 11 WCT only forbids circumvention against protected works that might result in copyright infringement.³⁸⁹ The contracting states are not required to afford adequate legal protection against acts of circumvention for the purposes permitted by legislation. The user could deactivate a technological restriction and access and utilise the protected works for private or educational uses allowed by national law regardless of the copyright holder's consent.³⁹⁰ Thus, the WCT establishes a link between anti-circumvention rules and copyright laws; the treaty allows the user to exercise their right under the provision of limitation or exception provided by the Convention and WCT Article 10. The act of circumventing a technological measure based on exceptions to copyright will not violate the WCT.³⁹¹

With regard to the nature of technological measures, they are usually classified into two categories: technologies applied to control unauthorised access to the works and technologies used to prevent the use of the works. The first type of technological measure is adopted to restrict any unauthorised user from accessing protected work. This technology can be deemed as the locked door to a room filled with digital material (an e-book). In order to view protected works, the permitted consumer needs to have the necessary key (password) to unlock the door and gain access to materials.³⁹² Further technology is a technological measure used to control the unauthorised use of protected works, which are normally referred to as "anti-copy" measures. However, this definition is not completely accurate because these technologies can be used to restrict not only the reproduction of the work but also control other performances of violations of other exclusive rights of the copyright holders.³⁹³ The additional challenge concerns the scope of legal protection provided by the WCT, and there has been an unending debate on the nature of the technological measures afforded legal protection by Article 11 of this treaty. As

³⁸⁷ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 19.

³⁸⁸ Article 11 of the WIPO Copyright Treaty.

³⁸⁹ De Werra (n 334) 11-12.

³⁹⁰ Samartzi (n 62) 248-250.

³⁹¹ *ibid* 249-251.

³⁹² De Werra (n 334) 4-5.

³⁹³ *ibid* 5-7.

mentioned earlier, this international regulation is also silent on this issue; it requires adequate legal protection only for technological measures that are "effective" and "used by authors."³⁹⁴ Nonetheless, the terms of technologies adopted to "control access" and "prevent reproduction" have not existed in the WCT, which creates considerable disagreement amongst legal scholars over which type of technical measure should be protected under national legislation. On the one hand, it should be noted that both the WIPO Treaties and the Berne Convention do not recognise a right of "access" as a list of exclusive rights granted by copyright holders. The legal regulation against circumvention of access control would go far beyond the basic principle of statute copyright law, as well as generating a new and possibly very wide exclusive right for the copyright holder.³⁹⁵ Others state that contracting states are required to protect technological measures adopted for "use" control, but they are not required to provide any protection for technologies applied to control access. Due to the fact that access control technologies can be used to restrict all usage to protected materials, lawful viewers or non-infringing uses would be overruled.³⁹⁶ The legal prohibition on access control circumvention would allow copyright holders to roughly control access to protected works; these new and extensive rights have not appeared and are also inconsistent with copyright rights provided to authors under the Berne Convention and the WCT.³⁹⁷ Samartzi addressed that these treaties do not cover access-controls, accessing for non-infringing purposes would be lawful, and the user would be allowed to circumvent the technological measures to engage with their privileges. Article 11 of the WCT prohibits the act of circumvention in the case that the bypassing access-control measure has been done for infringement.³⁹⁸ In other words, the WCT does not require protection for technologies applied for "access control", because it would override the boundaries of traditional copyright law. Access to creative works would be entirely restricted by the copyright holder, and the opportunity for users to exercise their right to exemption would be overridden.³⁹⁹

However, the opposite group of legal scholars claim that the WCT requires legitimate protection for technological measures used for access control because, to provide adequate legal protection to exclusive rights of reproduction for copyright holders under the Berne Convention, it is necessary to empower the

³⁹⁴ J Carlos Fernández-Molina, 'Laws against the Circumvention of Copyright Technological Protection' [2003] *Journal of Documentation* 45-48.

³⁹⁵ Hinze (n 386) 787-790.

³⁹⁶ *ibid* 787-790.

³⁹⁷ *ibid* 787-790.

³⁹⁸ Samartzi (n 62) 250.

³⁹⁹ Hinze (n 386) 787-790.

author to control access to digitalised works.⁴⁰⁰ It should be noted that there is a connection between the ability to access copyrighted works and other exercises, such as reproduction and dissemination to the public. The right to access cannot be definitely separated from other exclusive rights granted to authors. If the users are able to access and view the copyrighted works easily, such materials have a high potential to be copied and then disseminated worldwide. These would make it difficult for the copyright holder to prevent unauthorised reproduction.⁴⁰¹ In general, the TPMs used for access controls would effectively strengthen the exclusive right to reproduce, adapt, and communicate the works to the public, which is granted by the WCT.⁴⁰² It is important for domestic law to cover the protection of access-control measures.

The Uncertainties of Prohibited Activities under the WCT

The most significant challenge to the interpretation and enforcement of Article 11 WCT is the phrase "circumvention." The definition remains unclear in this treaty. It raises some uncertainties and interesting questions about: (1) What acts in connection with the circumvention of technological measures are unlawful? And (2), who is the offender who should be liable? In this issue, three potential approaches have been argued, including:

- The direct act of circumvention, the person who commits circumvention would be directly liable;
- The anti-trafficking devices or services used for circumvention, which can be called "preparatory acts." In this case, the distributors of circumvention tools or services would be directly liable.
- A combination of direct acts of circumvention and preparatory acts.⁴⁰³

It is important to note that in the process of drafting the WCT, these are the proposals containing the anti-trafficking circumvention devices, which prohibit the manufacture, importation, and distribution of circumvention devices. The proposals, however, were replaced by the current version of Article 11 of the WCT.⁴⁰⁴ Although the enforcement of anti-trafficking provisions would be more effective for protecting the technological measure and economic interests of copyright holders, it also creates more difficulties in preserving and facilitating the non-infringing uses of protected works. The ordinary users have no technical

⁴⁰⁰ *ibid* 789.

⁴⁰¹ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 16-18.

⁴⁰² *ibid* 16-18.

⁴⁰³ Fernández-Molina (n 394) 47.

⁴⁰⁴ Conroy (n 195) 55-75.

ability to avoid technological measures without any aid from circumvention devices.⁴⁰⁵ Therefore, if this prohibition is not structured carefully, the equipment necessary to make lawful uses will be removed from the domestic marketplace, and the opportunities for accessing information under exception will be unavoidably eliminated.⁴⁰⁶ Moreover, many entrepreneurs and researchers are concerned that it is a huge burden, and that it is difficult to prove that circumvention functions are only the side effects of their technological devices without any primary design or principal aim for unlawful circumvention. For this reason, the provision in the preparatory act is likely to have a negative impact on invention and investment in dual or multiple-purpose technical tools because all relevant devices are legally banned regardless of their primary function or purpose.⁴⁰⁷ In addition, there are significant concerns about the practical effect if the prohibition on trafficking devices and services of circumvention is misused to enlarge the monopolies of copyright holders. It is undeniable that this provision not only strengthens the extensive rights of content providers but also empowers monopolies to prevent all uses of materials, including non-copyrighted works, public domain, and those open to non-infringement uses.⁴⁰⁸ In short, once the TPMs are severed, the manufacture and dissemination of circumvention tools are widely prohibited. Without the necessary equipment and knowledge, a vast majority of consumers cannot circumvent technological measures to access digital knowledge. They are consequently overruled and left helpless.

On the other hand, there are critics that Article 11 of the WCT should be interpreted to cover the preparatory act in order to significantly increase the effectiveness of the TPMs for three main reasons. The first reason is that limiting the prohibition to the direct act of circumvention would create a huge burden for copyright holders because they have to detect and prove the personal acts of circumvention, which are usually committed in private at the consumer's home.⁴⁰⁹ Secondly, the devices and services adopted for violation are likely to have a more adverse impact on the economic interest and exclusive rights of copyright holders; the absence of tools and services results in less commission of circumvention, and it is easier for copyright holders or other interesting parties to pursue a smaller group of tool suppliers rather than the greater number of personal circumventors.⁴¹⁰ Finally, an interpretation that limits itself to the prohibition

⁴⁰⁵ Venugopal K Unni, 'Indian Copyright Law and Anti-Circumvention Provisions: Can a Please-All Regime Meet the Global Yardsticks?' (2015) 10 *Journal of Intellectual Property Law & Practice* 336-337.

⁴⁰⁶ Hinze (n 386) 786-788.

⁴⁰⁷ *ibid* 786-788.

⁴⁰⁸ *ibid* 786-788.

⁴⁰⁹ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 18.

⁴¹⁰ *ibid* 18.

on direct acts of circumvention rather than incorporating the prohibition on the manufacture and distribution of devices and services would reduce the effectiveness of the anti-circumvention provision and also be inconsistent with the WCT's Article 11, which mandates members offer sufficient legal protection and remedies to prevent technological circumvention. In general, TPMs under Article 11 of the WCT would be more pragmatic and meaningful if services and devices used for circumvention were legally banned.⁴¹¹ In addition, Professor Ginsburg pointed out the concern that there are some difficulties in the enforcement of WCT Article 11 in relation to the tools and services used for circumvention. If the prohibition on trafficking devices or tools is enforced broadly, it may create a significant barrier to accessing devices or services used for legitimate purposes rather than prevent the circumvention of copyrighted works. These result in the opportunity to access valuable materials under the exception provision being unavoidably eliminated. However, if these devices remain available for permitted purposes, it is possible for them to be abused for copyright infringement.⁴¹² It appears that if a person or service is entitled to manufacture or import a device used for circumvention, it would be harmful to the investment and creation of the copyright holder because, in the case that national law allows the dissemination of devices and services so long as they are used for permitted purposes, the same devices or tools may be widely used for copyright infringement, and the anti-circumvention rules would become worthless.⁴¹³ For example, circumvention equipment may be employed to remove technological measures for non-profit education under the exception of copyright, but the same device may be used to decrypt copyrighted works in order to make an unlimited amount of reproduction to distribute around the globe over the internet.⁴¹⁴ Therefore, the important challenge is left for national legislation to establish a framework regulating the distribution of circumvention tools and services without absolutely overruling fair use and creating a balance between copyright holders' benefits and social welfare.

Remedies and Punishment under the WCT, Leaving Freedom of Discretion for Parties

Article 14 of the WCT remains silent on effective remedy and punishment; it provides contracting states with a free space to determine appropriate penalties and enforcement mechanisms in accordance with their domestic legislation.⁴¹⁵ Thus, domestic legislators can enjoy essential freedom in the legal implementation as long as they issue adequate levels of protection. The civil measure, monetary liability,

⁴¹¹ *ibid* 19.

⁴¹² *ibid* 19.

⁴¹³ *ibid* 19.

⁴¹⁴ *ibid* 19.

⁴¹⁵ Article 14 of the WIPO Copyright Treaty.

criminal penalty, or other necessary measures are selectively imposed in order to comply with the treaty and respond to social needs as well as the legal system.⁴¹⁶

In conclusion, there are a number of ambiguities and uncertainties in the language of the WCT, which raises some complicated questions about whether natural types of technological measures would be legally protected and whether acts of circumvention would be prohibited by the treaty. The lack of specific clarification and enforcement mechanisms defined by the WCT invariably affects a balance between the interests of copyright holders and the public; these challenges of interpretation and implementation are left for national legislation to resolve. However, this provision is only the minimum standard for TPMs; member states are effectively afforded the freedom to determine the anti-circumvention rules in a way that accommodates their social needs and legal systems.⁴¹⁷ In this aspect, the E.U. Directive, which provides a greater explanation concerning anti-circumvention rules, will be critically analysed hereafter.

2.2.2 The EU Directive and Guidelines for European TPMs

The E.U. Copyright Directive is one of the influential international pieces of legislation on TPMs that is specifically adopted to implement the WCT Treaty.⁴¹⁸ The final version of the E.U. directive was enacted by the European Parliament and the Council on 22 May 2001, in order to create harmonisation in terms of copyright and related rights across Europe.⁴¹⁹ The anti-circumvention rules under the EU Directive contain considerably more detail and provide higher protection for copyright holders than the similar regulations enacted by the WIPO Treaties.⁴²⁰ In this aspect, the EU directive sets forth the provision of TPMs in Article 6, which legally prohibits the direct act of circumvention in Article 6.1 as well as the preparatory activities in Article 6.2. This directive also clarifies confusing technical terms by providing the definition of "effective" and "technological measure" in Article 6.3. In addition, the concern about excessive protection of copyright holders is addressed by mandating the provision of voluntary measures and other appropriate measures in order to enable users to exercise their legitimate rights under Article 6.4.⁴²¹ The adverse impacts of the

⁴¹⁶ De Werra (n 334) 13-14.

⁴¹⁷ Unni (n 405) 340-341.

⁴¹⁸ Séverine Dusollier, 'Tipping the Scale in Favor of the Right Holders: The European Anti-Circumvention Provisions', *Digital Rights Management* (Springer 2003) 462.

⁴¹⁹ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁴²⁰ De Werra (n 334) 24-27.

⁴²¹ Article 6 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

application of the directive would be closely monitored by the entitled commission under Article 12.⁴²² The member states are required to enforce their domestic legislation that complies with the regulations of this Directive, and these laws should be brought into force before 22 December 2002.⁴²³ This section will study the directive to gain international standards and legal models that may be used as guidelines to improve Thai laws. The details and challenges of this approach will be critically examined hereafter.

Legal Terms and Existing Debates on the Link Between TPMs and Copyright Protection

According to the definition provided under Article 6.3, TPMs means any devices or technologies that are designed to prevent or restrict any acts, and such acts have been done without authorisation from “the right holder of any copyright or any right related to copyright.”⁴²⁴ With regard to this definition, the question emerges regarding the connection between the legal protection for technical measures and copyright law. On the one hand, the European Commission presented that Article 6.3 requires a relationship between the use of technological measures and traditional copyright protection. This is consistent with Article 11 of the WCT, which allows copyright holders to employ technological measures to protect their rights under the WCT or the Berne Convention. In general, the phrase “acts that are not authorised by the right holder” in Article 6.3 basically entitles the copyright holder to exercise their exclusive rights under the copyright legislation by using technical mechanisms to prevent the unlawful infringement of their works in the digital era.⁴²⁵ Furthermore, the term “access control” is merely an example of how to define effective protection for technological measures. It could not be used to broaden the extent of the legal definition of TPMs under Article 6(3) beyond the copyright holder's normative authority to prohibit. In this regard, the Directive seeks to comply with the primary international treaty to implement the anti-circumvention rule by preserving the fundamental principle of copyright provision.⁴²⁶ There is an interpretation that, to qualify for protection under Article 6, technological protection measures have to be proportionate. It is the national court's responsibility to determine whether these measures meet the requirements for safeguarding copyrighted works and do not exceed what is necessary to realise this goal. Additionally, the national court should evaluate the evidence of the actual usage of the disputed

⁴²² Article 12 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁴²³ Article 13(1) of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁴²⁴ Article 6.3, Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁴²⁵ Akester (n 12) 25-26.

⁴²⁶ *ibid* 25-26.

devices to determine how frequently they are used to enable unauthorised copies of works and how often they are employed for purposes that do not violate copyright.⁴²⁷

By contrast, the opposite point of view argued that this legislation is implementable solely on the authorisation of the right holder. This definition has not referenced the link between TPMs and copyright infringement; it only mentions those that prevent or restrict acts that are unauthorised by the copyright holder.⁴²⁸ These result in some uncertainty about the scope of enforcement in the event that the users exercise their rights under the provision of an exception to copyright law, but such an act is unauthorised by the right holder. In this context, it is questionable whether technological measures applied to prevent the access and utility of works by fair users would be within the scope of protection or not.⁴²⁹ For example, if the copyright holder contractually prohibits the act of quotation for the purpose of news reporting, a technology adopted for preventing unauthorised access or unauthorised utility of such content would be enforceable, and the act of circumvention would be considered illegal under Article 6.3 of the directive or not because news reporting by making quotation has been done without any authorisation of the copyright holder, even though this act is allowed by copyright legislation.⁴³⁰ In other words, consumers who want to exercise their rights under the exception of copyright might legally access or copy technologically protected works only when they receive authorisation from the copyright holder, regardless of whether such exercise is permitted by copyright law. It can be said that this directive remains uncertain on the definition and scope of TPMs. There is some potential that overbroad protection might be granted to copyright holders that goes beyond those required by the WIPO treaty. The general public and fair users might be impeded from accessing copyrighted works.⁴³¹

Nonetheless, the directives provided more details on effective technological measures than the WCT. As defined by Article 6.3, not all technologies can enjoy the protection, but only technological measures that are able to perform a certain level of effectiveness will obtain the legal protection.⁴³² The directive provides protection against circumvention for the technological measures adopted for access control and copy restriction, such as scrambling, encryption, or other transformations of the work, which achieve the

⁴²⁷ Case C-355/12 *Nintendo Co Ltd v PC Box Srl and 9Net Srl* [2014] (EUR-Lex)(EUR-Lex) <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A62012CJ0355>> accessed 29 July 2023.

⁴²⁸ Fernández-Molina (n 394) 55.

⁴²⁹ De Werra (n 334) 25-27.

⁴³⁰ *ibid* 26-28.

⁴³¹ *ibid* 26-28.

⁴³² *ibid* 28.

protection objective.⁴³³ As a consequence, deficient or obsolete technologies that are easily removable or can be accidentally bypassed would not receive protection.⁴³⁴ It is important to note that the criteria for effective technological measures apply to both access controls and use controls. The wording of this provision includes both technological mechanisms used for access and use-control technologies, without identification of any distinction between these particular types of technological measures. It is arguable that the extent of anti-circumvention rules under the directive goes beyond those contained in traditional copyright law and the WIPO Treaty.⁴³⁵

Prohibited Act of Circumvention under the EU Directive as a useful Model for Intention Requirement

It is noteworthy that the Directive prohibits both the direct act of circumvention and the act of trafficking devices used for circumvention. The individual act of circumvention provision exists in Article 6.1, which forbids the violation of any effective technological measures. However, the acts can be deemed illegal circumventions only when the user carries them out with knowledge, or the person who circumvents them with reasonable grounds to know about the violation, and such user decides to pursue that objective.⁴³⁶ In this context, the mere fact of circumventing protected measures is insufficient to be deemed an offence; the knowledge or intention of circumvention has to be taken into account under the Directive.⁴³⁷ In general speaking, the prohibition of the direct act of circumvention contains a requirement of intention. This approach indicates that the act of circumvention with negligence is not enough to be punished; gross negligence or intention is legally prohibited.⁴³⁸ The aim of this requirement is to ensure that “innocent” acts of circumvention, by a general person who conducts them without knowledge or without reasonable grounds to know, and he or she continues to pursue the objective of circumvention, would not be guilty and would not receive any legal sanctions enforced by the direction.⁴³⁹ In short, the obligation to perform a direct act of circumvention requires the bad faith of the circumventor; the innocent user or circumventer without intention of violation is not liable under the directive.

⁴³³ Gasser (n 4) 59.

⁴³⁴ De Werra (n 334). 27-28

⁴³⁵ *ibid* 27-28.

⁴³⁶ Article 6.1 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society

⁴³⁷ Fernández-Molina (n 394) 56.

⁴³⁸ Basler (n 270) 11-13.

⁴³⁹ De Werra (n 334) 28-29.

Prohibition on Preparatory Activities for Reinforcing Copyright Protection in the Digital Era

Meanwhile, the preparatory activities are regulated under Article 6.2 of the Directive, which obliges the member states to enforce legal protection against the trafficking of circumvention technologies.⁴⁴⁰ In this regard, the manufacturing, importation, or sale of tools or services are banned if such businesses fall into the following three circumstances: (1) in the case that sales are advertised, promoted, or marketed for the objective of violating any effective technological measures; (2) in the case that products or devices have only a limited commercially significant objective or use other than to impair any effective technological measures; or (3) in the case that products or devices are primarily designed, created, applied, or performed for the objective of facilitating or enabling the violation of any effective technological measures.⁴⁴¹ These three different criteria are used to decide whether a device, product, or component is legitimate or illegitimate in relation to its potential use as a tool for circumvention. The provision applies to tools that are explicitly designed to function as means for circumventing, and the devices' value lies in their potential utility. The product's design, advertising, or marketing mainly highlight bypassing technological measures. The criteria are similar to those existing in the DMCA.⁴⁴²

Exploring the Guidelines for Legal Sanction and Remedies under the EU Directive

Article 8 of the directive mandates liability and legal responsibility for the entire directive. According to Article 8.1, in the event that the rights and obligations outlined in this Directive are violated, Member States have to issue suitable sanctions and remedies and implement any necessary action to assure their application. The penalties outlined above ought to be appropriate, effective, and deterrent.⁴⁴³ Member States are also required to generate measures for right holders to take any action to stop or reduce damages or apply for injunctions against infringing activities and the seizure of infringing means, products, devices, or components under Article 6.2 of the EUCD.⁴⁴⁴ It can be said that the provision of liability and legal sanction in the directive remains ambiguous without any specification on the type of legal liability (criminal sanction or civil liability). This flexibility allows the member states to implement sanctions and

⁴⁴⁰ Article 6.2 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁴⁴¹ *ibid.*

⁴⁴² Dusollier (n 418) 469.

⁴⁴³ Article 8 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁴⁴⁴ *ibid.*

liabilities as well as create measures to assure the efficiency of such legal procedures in order to be in line with their legal systems.

Evaluating the Anti-Circumvention Rules under EU Directive and its Impacts on Accessibility of Digital Knowledge as well as Economic Effects

The major problem with regard to Article 6 of the directive is the implementation of this legal model to create excessive TPMs that provide the right and monopoly for the copyright holder to control all utilities of technically protected works.⁴⁴⁵ Legitimate users might be restricted from exercising their rights, which are permitted by limitation or exception of copyright law, and technological measures might also be used to protect works for which the term of copyright protection has expired.⁴⁴⁶ It is undeniable that the prohibition on preparatory activities is very broad and also creates some difficulties of interpretation in terms of the three categories mentioned above. There are some devices that can be used for more than one purpose, and determining whether some multipurpose or multifunctional tools are illegal is still challenging.⁴⁴⁷ It appears that the trafficking of tools used for circumvention, either copy control or access control, is banned. The necessary devices used to access information remain illegal; the manufacture and dissemination of circumvention devices might be entirely removed from the domestic market.⁴⁴⁸ Moreover, there is an absence of specific exceptions to anti-trafficking rules and a lack of precise connection between these preparatory activities and any exceptions or the fair use provision under traditional copyright provisions.⁴⁴⁹ As a consequence, the exceptions under statute copyright law might be eliminated. The legitimate right to access and use the copyright works of the users would be overlooked, and the public's right to access knowledge would be seriously threatened due to the absence of devices and services enabling the circumvention of technological measures.⁴⁵⁰

In terms of economic impacts of TPMs, although TPMs were reinforced to protect digital works and economic interest of copyright holders, this attempt may not benefit either authors or users. Based on existing empirical study, the economic justification of TPMs can be reflected by the capability to address infringement, the impacts on market efficiency, consumer's choices and innovation. A significant

⁴⁴⁵ Gasser (n 4) 60.

⁴⁴⁶ *ibid* 59-61.

⁴⁴⁷ Dusollier (n 418) 467-469.

⁴⁴⁸ Hinze (n 386) 807-817.

⁴⁴⁹ Dusollier (n 418) 467-475.

⁴⁵⁰ Hinze (n 386) 807-817.

contributor to the expansion of the digital economy is digital content. The European Commission's publication states that as digital media continue to grow, more people access the internet. Digital content consumption is probably going to be crucial for business, social welfare, and e-commerce.⁴⁵¹ Empirical evidence from official institution represents that the online copyright infringement is decreased due to the enforcement of TPMs and the employment of technical means controlling access to digital content, especially in the industries of film and audiovisual content. Although piracy is reduced, users are unlikely to rely on legally licensed content. The combination of strong TPMs and technological control does not result in an increase in the consumption of licensed works or in the income of content providers.⁴⁵² The Organisation for Economic Co-operation and Development (OECD) report reflects the recent change in users' behaviours in consuming information in the digital environment. They tend to access works via open-source online learning materials, freely available content, or alternative platforms, rather than subscribing to traditional licensed content.⁴⁵³ Likewise, the change from traditional to digital media enables the user to consume more press publications, but publishers recently encounter more complexities in exploiting their exclusive rights.⁴⁵⁴ These can be considered challenges for member states to design and enforce anti-circumvention approaches in accordance with domestic needs and maintain the balance between copyright holder profits and public interest.

2.2.3 The U.S. DMCA TPMs and Their Influences on Thailand

The TPMs were enacted in the US DMCA in order to be in accordance with the requirements of WIPO treaties.⁴⁵⁵ It is the first national legislation that provides greater detail and higher protection to copyright holders than those existing in the WIPO. It introduces three new prohibitions concerning technological measures, including: the direct act of circumvention on technologies used to control access to the works; the act of manufacturing, offering, or distribution to the public of devices or services used for circumvention of access controls; and the act of manufacturing, offering, or distribution to the public of products and services used to circumvent technological measures that protect the exclusive right of the copyright

⁴⁵¹ Stavroula Karapapa, 'The Requirement for a "New Public" in EU Copyright Law' (2017) 42 European Law Review 63-69.

⁴⁵² Bornas-Cayuela and Wajsman (n 85) 10-13, 22-23.

⁴⁵³ OECD, 'OECD Digital Economy Outlook 2024 STRENGTHENING CONNECTIVITY, INNOVATION AND TRUST' (Volume 2, 2004) <https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/11/oecd-digital-economy-outlook-2024-volume-2_9b2801fc/3adf705b-en.pdf> accessed 7 April 2026.

⁴⁵⁴ Karapapa (n 54) 158-160.

⁴⁵⁵ Fernández-Molina (n 394) 48.

holder.⁴⁵⁶ Generally speaking, the DMCA establishes legal liability against access to copyright works, the dissemination of the tools used to gain access to copyright works, and the dissemination of the devices used to achieve reproduction or communication to the public, even when the circumvention tools are employed for non-infringing purposes. These provisions are independent of traditional copyright infringement; the hackers or distributors might be liable regardless of whether or not such acts would result in copyright infringements.⁴⁵⁷ Under this approach, legal protection seems to be expanded in favour of copyright holders by providing a new right of access control that has never been recognised under the traditional copyright law.⁴⁵⁸ In this vein, the anti-circumvention provision under the DMCA will be critically evaluated hereafter.

Legal Terms and Prohibited Act of Circumvention under the DMCA as One of the Most Effective TPMs

As mentioned above, Section 1201(a)(1) prohibits solely the individual circumvention of technologies used for access control, but it does not prevent the circumvention of measures that protect the exclusive rights of copyright holders. These might be because the violation of measures used to protect the rights of the copyright holder could be directly considered a copyright infringement. The circumventors who destroy right-control technologies to use the works would be liable for copyright infringement. At the same time, such an act might fall within the scope of the fair use provision, which is exempt from liability.⁴⁵⁹ Therefore, the anti-circumvention provisions under the DMCA legally ban the circumvention of technological measures used to control access; there is an explanation of the phrase "circumvent a technological measure" as to decrypt encrypted material, descramble scrambled content, or deactivate, remove, avoid, impair, or bypass a technological measure without the permission of the copyright holder.⁴⁶⁰ More specifically, the DMCA protects technical measures that effectively restrict access to copyright works. It defines the phrase "effectively controls access" as the measure by which the ordinary course of operation requires specific information, a treatment, or a process with the permission of the copyright holder in order

⁴⁵⁶ Section 1201 of the Digital Millennium Copyright Act of 1998.

⁴⁵⁷ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 25-26.

⁴⁵⁸ Hinze (n 386) 787-795.

⁴⁵⁹ Basler (n 270) 6-9.

⁴⁶⁰ Section 1201(a)(3)(A) of the Digital Millennium Copyright Act of 1998.

to access the work.⁴⁶¹ In order to be guilty, the act of destroying, deactivating, or bypassing the technological measure is required.

Based on the case law of *Ground Zero Museum Workshop v. Wilson*, Civil Action No. DKC 09-3288, the defendant worked for the plaintiff; he edited the plaintiff's website after getting illegal access to it. The plaintiff sued the defendant for a variety of reasons, including a violation of the anti-circumvention rule under Section 1201(a)(1)(A) of the DMCA because the defendant exploited the valid security code that was obtained while working for the plaintiff to access and make changes to the website after his job was terminated.⁴⁶² The District Court, however, found that the defendant did not violate the anti-circumvention provision of the DMCA since the defendant applied the combination of a valid security code and password that was intentionally provided by the plaintiff in order to access the website without any act of surmounting, puncturing, hacking, or evading the technological measure. This action does not fall within the scope of Section 1201. The court also provided the reason that only the mere fact of applying valid information to the password technology was not considered as circumventing that technology. The circumvention requires the action of the defendant to avoid, bypass, deactivate, decrypt, remove, or degrade the access control mechanism.⁴⁶³ Hence, the application of valid treatment or information in connection with a username, security code, or password to gain access to digital material without authorisation does not violate the DMCA's anti-circumvention legislation. It is arguable that the DMCA provides more detail and explanation for technical terms than the WIPO treaties do; the argument of efficiency and the act of circumvention in the DMCA seem to be less than those existing in the WIPO treaties.

The example of circumvention of technological measure could be seen in *Disney Enterprises, Inc. v. VidAngel, Inc.*, where VidAngel, Inc. (the defendant) provided an internet streaming platform that removed inappropriate content from TV shows and movies. The defendant would buy numerous works embodied in physical discs and subsequently decode each disc to generate a digital duplicate on a computer. The defendant took this action to identify various types of inappropriate content and allow clients to purchase edited works.⁴⁶⁴ The court determined that VidAngel's action of decrypting DVDs and streaming modified

⁴⁶¹ Section 1201(a)(3)(B) of the Digital Millennium Copyright Act of 1998.

⁴⁶² *Ground Zero Museum Workshop v. Wilson*, 813 F. Supp. 2d 678 (2011).

⁴⁶³ Casetext Part of Thomson Reuters, 'Ground Zero Museum Workshop v. Wilson' <<https://casetext.com/case/ground-zero-museum-workshop-v-wilson-4>> accessed 7 September 2023.

⁴⁶⁴ *Disney Enterprises, Inc. v. VidAngel, Inc.* No. 2:16-CV-04109 (9th Cir. Aug. 24, 2017).

content was in breach of Section 1201 of the DMCA. The court assessed the defendant's claim of fair use and determined that the use, which included both the removal of objectionable content and space-shifting, was not fair.⁴⁶⁵

As mentioned above, the DMCA mainly aims to outlaw the circumvention of access control measures. There are critics who said that this approach prevents the ability to access digital work until the users pay compensation or make a licensing agreement. The DMCA arguably prohibits the user from accessing and using the works over the internet without remunerating.⁴⁶⁶ Based on the interpretation existing in the US, the argument on the connection between copyright protection and anti-circumvention rules under the DMCA remains unsolved. On one side, the scope of the DMCA aims to protect copyright in the digital era.⁴⁶⁷ The protection is restricted to the rights of a copyright holder in accordance with Section 106 of the Copyright Act. The DMCA's anti-circumvention provisions do not completely prohibit all circumvention technology. Instead, its objective is to restrict the use of circumvention technologies as a means for copyright infringement.⁴⁶⁸ Therefore, the DMCA does not allow copyright holders to prohibit or charge for the access and use of works that have been lawfully duplicated and are in the public domain. The copyright holder could not prevent the legitimate transfer of lawfully made or obtained copies from one user to another. It is arguable that this provision obviously does not allow the author to misuse copyright as immunity in terms of employing technological measures for other purposes unrelated to copyright protection.⁴⁶⁹

Nonetheless, the definitions under 1201(a) remain problematic in terms of identifying the relationship between anti-circumvention rules and copyright protection. It might be broadly applied to all circumventions, regardless of whether or not the post-deactivation really infringes on the copyright law. The definition of the nature of technological measures might cover all technical devices, even though some of them are used for activities that exceed the purview of traditional copyright protection. It widely expands

⁴⁶⁵ Copyright Office, 'Disney Enterprises, Inc. v. VidAngel, Inc. No. 2:16-CV-04109 (9th Cir. Aug. 24, 2017)' (U.S. Copyright Office, 24 August 2017) <<https://www.copyright.gov/fair-use/summaries/disney-vidangel-9thcir2017.pdf>> accessed 19 September 2022.

⁴⁶⁶ Mitchell (n 173) 19-20.

⁴⁶⁷ Chamberlain Group Inc. v. Skylink Technologies Inc., 292 F. Supp. 2d 1023 (N.D. Ill. 2003); See also Casetext Part of Thomson Reuters, 'Chamberlain Group Inc. v. Skylink Technologies Inc.' <<https://casetext.com/case/chamberlain-group-inc-v-skylink-technologies-inc>> accessed 19 August 2023.

⁴⁶⁸ United States v. Reichert, 747 F.3d 445 (6th Cir. 2014); See also Casetext Part of Thomson Reuters, 'United States v. Reichert' <<https://casetext.com/case/united-states-v-reichert-1>> accessed 19 August 2023.

⁴⁶⁹ Mitchell (n 173) 19-20.

the protection to all technological measures employed by copyright holders in order to prevent access to their works.⁴⁷⁰ Acts that fall under Section 1201(a) of unlawful circumvention may not always involve copyright infringement or enable such infringement. Descrambling or decrypting allows unauthorised viewing or listening to a work, which may not necessarily violate the exclusive rights of the copyright holder under Section 106. To clarify, the act of descrambling and decrypting does not automatically lead to someone copying, distributing, or publicly communicating the copyrighted work. The DMCA established a separate right against circumvention under Section 1201(a) without the need for a connection to infringement. Therefore, the law provides either reinforcement for preventing copyright infringement or novel anti-circumvention provisions separate from copyright infringement.⁴⁷¹ Section 1201 of the DMCA does not prohibit users who commit individual circumvention of copy or other right control technologies. It also does not prohibit the consumer from using devices for circumvention. Thus, the non-infringing users are legally permitted to circumvent copy control technologies under the fair use provision; they would not be liable both for the anti-circumvention provision and for copyright infringement.⁴⁷² It is important to note that the circumvention of access control technologies is prohibited, and the fair use provision is no longer a defence to gaining access to electronic work. With this aspect, this is the evolution of the “access right,” which is not only a right to control access to their works but also the right to regulate users against the circumvention of access-control measures. Thus, the interesting argument arises about how non-infringing users can reproduce the copyright works when such material remains unable to be accessed. It seems impossible for the user to exercise their legitimate rights.⁴⁷³ In addition, Section 1201 is broadly interpreted by the US court. This legislation bans the trafficking of circumvention tools without any consideration of whether or not such devices are used for copyright infringement.⁴⁷⁴ It is very difficult for users to obtain devices in order to gain access to the digital contents. Hence, it is undeniable that the DMCA provides a right to control access to copyright holders. This new right is likely to be very useful to reinforce the legal protection against technical circumvention. Without being accessible to the works and lacking

⁴⁷⁰ Gasser (n 4) 62-63.

⁴⁷¹ MDY Industries, LLC v. Blizzard Entertainment, Inc., 629 F.3d 928 (9th Cir. 2010); See also Casetext Part of Thomson Reuters, ‘MDY Industries, LLC v. Blizzard Entertainment, Inc.’ (Casetext, 14 December 2010) <<https://casetext.com/case/mdy-indus-llc-v-blizzard-entmt-inc>> accessed 29 March 2022.

⁴⁷² Ginsburg, ‘Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience’ (n 2) 30-31.

⁴⁷³ Samartzi (n 62).156-157

⁴⁷⁴ Ginsburg, ‘Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience’ (n 2) 28-29.

circumvention devices, the non-infringing users might be undermined, and there is a high possibility that the ability to access and utilise the protected works will be mostly eliminated.

Prohibition on Preparatory Activities and Guidelines for Interpretation

In terms of anti-trafficking devices under Sections 1201(a)(2) and 1201(b), it should be noted that Section 1201(a)(2) bans the trafficking or dissemination of necessary devices employed for circumvention of controlling access measures.⁴⁷⁵ The latter section bans the trafficking or dissemination of tools that circumvent technologies safeguarding the exclusive rights of copyright holders. It is noteworthy that Section 1201(b) prohibits the distribution of products designed for circumventing post-access control technologies that are installed by copyright holders to prevent every form of copyright infringement (anti-reproduction, anti-distribution to the public).⁴⁷⁶ Hence, this approach would be applied in the circumstance that the user has already legally accessed the material, but then the distributor offers the device that facilitates the circumvention of copying control measures.⁴⁷⁷ According to the provision of anti-devices under the DMCA, it seems clear that the DMCA does not prohibit the trafficking of every product that might be used to destroy or deactivate the technological measure. This obligation does not ban devices that might accidentally or unwittingly circumvent the technological measure; it also does not prohibit technical tools that are primarily designed or might be employed for other purposes rather than unlawful circumvention.⁴⁷⁸ In this context, in order to be legally prohibited, the device and service have to fall within the scope of any three categories, as follows: (1) The device was primarily produced or designed to circumvent the technological measure that effectively prevents access to the works or effectively protects the other exclusive right of the copyright holder (Section 1201(a)(2)(A));⁴⁷⁹ (2) Although the tool is not primarily designed for circumvention, it has only limited commercially significant objectives or uses other than circumvention (section 1201(a)(2)(B));⁴⁸⁰ (3) The device is marketed for the use of circumvention (Section 1201(a)(2)(C)).⁴⁸¹ With this approach, the DMCA provides a scope of legal responsibility in relation to anti-trafficking devices, which is likely to reassure that distributors or manufacturers of electronic

⁴⁷⁵ Section 1201(a)(2) of the Digital Millennium Copyright Act of 1998.

⁴⁷⁶ Peter Singer, 'Mounting a Fair Use Defense to the Anti-Circumvention Provisions of the Digital Millennium Copyright Act' (2002) 28 U. Dayton L. Rev. 117-118.

⁴⁷⁷ *ibid* 117-118.

⁴⁷⁸ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 28.

⁴⁷⁹ Section 1201 (a)(2)(A) of the Digital Millennium Copyright Act of 1998.

⁴⁸⁰ Section 1201 (a)(2)(B) of the Digital Millennium Copyright Act of 1998.

⁴⁸¹ Section 1201 (a)(2)(C) of the Digital Millennium Copyright Act of 1998.

products would not be legally liable due to the fact that their devices might potentially be exploited to circumvent technological measures.⁴⁸²

The additional case related to the trafficking of circumvention tools is *Blizzard Entm't, Inc. v. Bossland GMBH*. Bossland GmbH was sued for creating and disseminating software for Blizzard's games.⁴⁸³ The court ruled that the defendants bypassed technological measures restricting access to Blizzard's games and engaged in various prohibited actions, such as acquiring, possessing, utilising, advertising, or marketing software in the United States, that violate Blizzard's intellectual property.⁴⁸⁴ In *Universal City Studios v. Corley*, the Plaintiffs claimed that the defendants had violated the anti-trafficking of circumvention devices regulation under the DMCA by posting DeCSS and disseminating the link to DeCSS on websites. DeCSS was designed to violate technological measures. This technical tool could cause economic harm to the copyright holder because it enables the user to decrypt or unlock DVD movies. Then, the same device could facilitate the user's ability to reproduce an infinite number of digital copies and globally distribute the content on the internet. The Court finally held that an injunction was a necessary solution in this case to reduce the plaintiff's loss. The judges noted that DeCSS not only encourages piracy but also forces the creator to seek expensive methods of new protection for their media. The availability of DeCSS on the website also increases the Internet transmission of copied content across the globe. These acts could be deemed to offer or provide circumvention devices to the public that infringe the anti-trafficking provisions of the DMCA. Therefore, the Court's injunction would prohibit the defendants from posting DeCSS or making the link to this programme accessible on a web site to prevent future damage to copyright holders.⁴⁸⁵

The Application of the DMCA's Access Right and Impacts on Fair Uses

The DMCA is one of the domestic laws that provides the most effective protection for access right, since it prohibits either the circumvention of access controls or the manufacturing, and offering of devices and services that remove access controls. Although the WCT does not clearly require the member states to protect access rights or access control technologies, the Congress of the US has independently justified

⁴⁸² De Werra (n 334) 21-23.

⁴⁸³ *Blizzard Entm't, Inc. v. Bossland GMBH*, CASE NO. 8:16-cv-01236-DOC-KES (C.D. Cal. Mar. 31, 2017).

⁴⁸⁴ Casetext Part of Thomson Reuters, '*Blizzard Entm't, Inc. v. Bossland GMBH*' (Casetext, 31 March 2017) <https://casetext.com/case/blizzard-entmt-inc-v-gmbh/> accessed 15 September 2022.

⁴⁸⁵ *Universal City Studios, Inc. v. Corley*, 273 F.3d 429 (2d Cir. 2001); See also Casetext part of Thomson Reuters, '*Universal City Studios, Inc. v. Corley*' <<https://casetext.com/case/universal-city-studios-inc-v-corley>> accessed 29 July 2023.

that these provisions are likely to be the best mechanism to protect copyright material in the digital era.⁴⁸⁶ According to the Congress's determination, the exploitation of electronic works is definitely different from those containing physical copies. In the analogue world, where the user has to purchase the books or sound recording, they pay the price for unlimited reading or listening. For digital works, by contrast, there is price discrimination; the payment could be set based on the number of times that the consumer experiences the work. It is important to protect the access right of the copyright holder to ensure that the consumer who paid a lower price for limited access could not circumvent access control technologies to acquire limitless viewings without paying the compensation.⁴⁸⁷ With this aspect, it is arguable that traditional categories of exclusive rights afforded by copyright could not resolve the problems concerning the circumvention for unauthorised access. The control on access is unlikely to be overprotected, and it would be recognised as one of the exclusive rights granted by copyright legislation. The prohibition on bypassing access controls might become the most important regulation used to preclude digital copyright infringement.⁴⁸⁸ For these reasons, the DMCA provides the greatest protection to access rights by prohibiting the direct act of circumvention on access controls and also bans the manufacturing, distribution, or importation of devices that are designed to defeat access controls. The anti-trafficking provision aims to regulate those who accommodate the process of violation against access-controls.⁴⁸⁹ It could be said that the DMCA seems to provide a higher safeguard for access right than the other rights, such as reproduction right or communication right, because it outlaws only the trafficking of necessary tools circumventing use controls and leaves some freedom to the user to deactivate use-control technologies for engaging in non-infringing purposes.⁴⁹⁰ However, the fair use applicable to anti-circumvention rules remains limited, as the DMCA stringently provides the protections to access-control measures. Despite the fact that the DMCA contains a separate approach between access and right controls, a single access-control technology might control both access and reproduction, because the other act and exercising of fair use could not be done without gaining the initial access.⁴⁹¹

The court in the US explained that the anti-circumvention rule under the DMCA provides protection to access-control mechanisms against circumvention and prohibits trafficking of circumvention devices used to control access-controls. These lead to the right to control over the ability of the user to enter or make

⁴⁸⁶ Ginsburg, 'Copyright Legislation for the Digital Millennium' (n 179) 142.

⁴⁸⁷ *ibid* 142.

⁴⁸⁸ *ibid* 144-148.

⁴⁸⁹ Conroy (n 195) 100-101.

⁴⁹⁰ Gasaway (n 11) 280-282.

⁴⁹¹ *ibid* 288.

other uses of works. This right is independent of reproduction rights and communication rights. It is arguable that the court recognised the access controls created by the DMCA in favour of the copyright holders.⁴⁹² Even though the DMCA protects any measures that effectively control "access" to the content, this law did not define the word "access". These might lead to an overbroad interpretation and implementation of any act that makes the work perceptible. 1201(a) legally protects any measure that regulates a user's ability to comprehend a work, while prohibiting technologies that defeat access control unless they serve other commercially significant purposes.⁴⁹³

In terms of limitations to the access right, the anti-circumvention rules of the DMCA separately protect access control from traditional exclusive rights under § 106 of the copyright law. Hence, the new right of access established by this legislation is not subject to fair use provisions or other traditional privileges; only the specific limitation provided by Section 1201 could be applied to this provision.⁴⁹⁴ In this aspect, individuals who circumvent access-control technologies would remain liable even though their post-circumvention purposes fall within the scope of traditional fair use. For instance, a person who bypasses access control measures by making a parody of the protected work is exempt from copyright infringement, but he or she may be liable under anti-circumvention rules for his or her act of access control circumvention.⁴⁹⁵ As a result, fair use does not extend to DMCA access rights, meaning these traditional exceptions become applicable only once the copyright holder has granted access.⁴⁹⁶ It could be said that the prohibition on circumventing access control under the DMCA offers greater protection than those provided by copyright law; these would effectively safeguard the interests of the copyright holder.⁴⁹⁷ In addition to the listed exceptions, there is a rulemaking proceeding held by the Librarian of Congress to determine the impact of anti-circumvention rules. This official procedure would regularly monitor whether lawful users are adversely affected by this legislation in terms of engaging with the copyright works. The classes of works identified by the Librarian would be exempted from circumvention liability. With this aspect, a merely narrow list of limitations and rulemaking proceedings could apply to the access-controls protection, but the fair use privileges are not relevant to this provision, and the traditional copyright

⁴⁹² *Lexmark International Inc v Static Control Components Inc*, 387 F.3d 522 (6th Cir. 2004); See also Casetext Part of Thomson Reuters, 'Lexmark Intern. v. Static Control Components' <<https://casetext.com/case/lexmark-intern-v-static-control-components>> accessed 19 March 2023.

⁴⁹³ Reese (n 234) 627-628.

⁴⁹⁴ *ibid* 637-639.

⁴⁹⁵ *ibid* 652-656.

⁴⁹⁶ Gasaway (n 11) 288.

⁴⁹⁷ Reese (n 234) 622-627.

exception could not be used to defend against access right under the DMCA.⁴⁹⁸ This narrow list of limitations raises concerns about the balance between protecting copyright holders and allowing legitimate uses, such as research and education, under fair use or other exceptions.

Strengths of the DMCA on Effectively Preventing Online Copyright Infringement

Due to the implementation of anti-circumvention provisions under the DMCA, a number of substantial benefits have been contributed to society. Ginsburg pointed out that the prohibition on circumvention has provided several advantages to the public by promoting the improvement of innovative and creative works. It also encourages new business models for delivering e-books, online journals, and other copyright materials to users.⁴⁹⁹ In addition, it is arguable that the DMCA grants greater protection for individual authors. This provision could reassure that unpermitted users are unable to access and exploit the protected works freely without any payment. In this regard, the copyright holder may rely on technological measures and relevant laws to secure economic profits in return for the dissemination of their works.⁵⁰⁰ In other words, the reinforcement of legal protection for technological measures may generate an incentive for new authors and businesses to create further copyright works. These result in an increased quality of materials available to the public and enhance the opportunity for the public to access a variety of works.⁵⁰¹ She also observed that there is little evidence to support the argument that TPMs prevent non-infringing uses. The flexibility of this provision is considered a legal mechanism that allows legitimate users to access more copyrighted works at a variety of prices. The innovation of digital technologies might deliver the work to the public in more convenient ways.⁵⁰²

Problems of the DMCA and its Adverse Effects on the Availability of Digital Knowledge

In terms of the adverse effects of the DMCA, there are some ongoing debates about its harmful impacts on users. There are critical concerns about access control expressed by the academic communities in the US. These institutions raised potential problems regarding the emergence of a "pay-per-use" society and a "super-distribution regime" under which copyright holders would be able to charge fees for every single

⁴⁹⁸ Ginsburg, 'Essay: From Having Copies to Experiencing Works: The Development of an Access Right in US Copyright Law' (n 197) 12-17.

⁴⁹⁹ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 36-37.

⁵⁰⁰ *ibid* 36-37.

⁵⁰¹ *ibid* 36-37.

⁵⁰² *ibid* 36-37.

access and copy of electronic materials. They were also concerned that digital protection under the DMCA would result in unfair restrictions on audience activities as well as access times.⁵⁰³ Furthermore, offline production would probably be replaced by online presentation; the technological measure and the DMCA are likely to become the primary obstacles to making information available to the public.⁵⁰⁴ Generally, the copyright holders might obtain greater protection, which empowers them to lock up the digital works. Payments are required in order to view or copy the protected content. Moreover, there is high potential that the DMCA creates an anti-competitive environment. The copyright holders have monopolies to control and protect all their copyrighted works; they are able to set the price as high as they want for the password or permission to access technically protected materials.⁵⁰⁵ Thus, it is arguable that the anti-circumvention of access-control measures and the anti-trafficking circumvention devices might lead to a pay-per-use society.⁵⁰⁶

In terms of post-purchase control, Niva Elkin-Koren identified that the technological mechanisms and anti-circumvention rules under the DMCA are increasingly employed to limit the use and re-distribution of materials disseminated in digital format. These might result in restrictions on access to works for merely paying users; they also prohibit certain usages of digital files, which might include backup, saving, annotating, and printing a particular copy. This approach might grant the right to post-purchase control, which allows the copyright holder to restrict the use of works even after consumers have purchased them.⁵⁰⁷ The consumers are legally prohibited from hacking technical measures to use copies that they have already purchased. Moreover, the DMCA outlaws circumvention tools that might further eliminate the opportunities for users to deactivate technical measures installed to limit the functionality of their purchased materials. It is arguable that post-purchase control has not been previously entitled under traditional copyright law.⁵⁰⁸

For additional impact, technological measures are frequently used to restrict the market for copyright materials by locking the works to be played with specific software, devices, and services. It is arguable that copyright holders often employ TPM anti-competitive strategies.⁵⁰⁹ Elkin-Koren also raised a number of

⁵⁰³ Samartzi (n 62) 158-161.

⁵⁰⁴ *ibid* 158-161.

⁵⁰⁵ Hinze (n 386) 803-804.

⁵⁰⁶ De Werra (n 334) 14.

⁵⁰⁷ Niva Elkin-Koren, 'Making Room for Consumers under the DMCA' (2007) 22 *Berkeley Technology Law Journal* 1125-1128.

⁵⁰⁸ *ibid* 1125-1128.

⁵⁰⁹ Koberidze (n 15) 224-226.

clear examples of post-purchase control enabled by technical mechanisms and the DMCA. The region coding is often used to preclude the use of a purchased DVD from outside of its region. Therefore, the DVD purchased in the United States could not be played on a computer set in another region. Likewise, music encoded with technological measures may be confined to playback on a specific music player. The gamers might be prevented from playing purchased materials in different regions or on different game consoles.⁵¹⁰ Thus, consumers are frequently locked into a certain hardware device, and it seems to be too difficult for consumers to convert their purchased material to be playable with different devices, which might lead to the loss of their initial investment. Furthermore, technological measures are regularly installed to prevent the duplication, modification, and re-dissemination of various kinds of digital works, particularly software and textbooks. This mechanism also limits consumers' ability to freely experience their purchased works. For instance, the e-books distributed on Adobe's Acrobat eBook platform are protected by encryption. This programme seems to effectively limit the amount of work that could be reproduced or to prevent any text change.⁵¹¹ In general, the ability of users to enjoy their copies of works legally purchased from the copyright holders is typically overridden by technical measures and the DMCA.

The further issue of the DMCA is the ability to access the public domain. It could be said that this law does not contain any provision in connection with non-copyrightable works or the public domain; it does not provide a clear provision that affirmatively permits the act of circumvention or the distribution of circumvention tools. In this context, technological measures are potentially used to prevent access to the public domain or the works for which the copyright protection term has expired. These seem to be significant obstacles for the public to access knowledge.⁵¹² Access controls may enable copyright holders to preclude the user from accessing public domain content and also diminish users' ability to apprehend and interact with digital works. It is undeniable that exposure to knowledge is necessary for the development of new creations. These approaches might overrule the opportunity for educational, cultural, and social improvement.⁵¹³

⁵¹⁰ Elkin-Koren (n 507) 1125-1126.

⁵¹¹ *ibid* 1125-1126.

⁵¹² Hinze (n 386) 800-801.

⁵¹³ Jane C Ginsburg, 'Copyright and Control over New Technologies of Dissemination' (2001) 101 Colum. L. Rev. 1635-1636.

2.2.4 The UK CDPA TPMs: Balancing Online Copyright Protection with Access to Knowledge

The UK is one of the member states of the WIPO Copyright Treaty and the European Union, so it is important for the UK to amend domestic legislation in order to comply with international standards. For this reason, the UK revised the Copyright, Designs, and Patents Act 2003 (hereafter called the CDPA) to implement anti-circumvention rules mandated by the EUCD into its national law. Sections 296ZA–296ZD were then enacted to deal with the anti-circumvention provisions.⁵¹⁴ It is interesting to note that although the DMCA and the CDPA have been enacted to regulate copyright infringement in the digital era, there are several differences between these domestic laws. For this reason, the major approach in relation to TPMs countenanced by the CDPA will also be examined and analysed hereafter.

Legal Terms for Defining the Subject of Protection

Section 296ZF provides a definition of technological measure as any technology, tool, or component that is primarily designed, in the normal course of its operation, to effectively safeguard copyright material. In addition, this provision also explains the “effective” technological measures as those employed by the copyright holder to control access to their works, or protection processes such as scrambling and encryption. This definition covers a copy-control measure that can achieve the objective or intended protection.⁵¹⁵ Hence, it is arguable that this provision expands legal protection to either technology used to control access or those used to prevent reproduction.⁵¹⁶ The right of access control is also established in the UK, which allows copyright holders to use effective technical measures to prevent users from accessing digital content. With respect to the meaning of the CDPA, the copyright holders are granted the power to restrict access to and copy their copyright works.

Prohibited Act of Circumvention and the Link between TPMs and Copyright Protection

Similar to the EU directive, the CDPA inhibits circumvention of either access control or use control measures. Section 296ZA provides legal protection against individual acts of circumvention of technological measures that satisfy the following conditions:

⁵¹⁴ P Vantsiouri, ‘A Legislation in Bits and Pieces: The Overlapping Anti-Circumvention Provisions of the Information Society Directive, the Software Directive and the Conditional Access Directive, and Their Implementation in the United Kingdom’ (2012) 34 European Intellectual Property Review: A Monthly Review: A Journal concerning the Management of Technology, Copyrights and Trade Names 587-588.

⁵¹⁵ Section 296ZF of Copyright, Designs and Patents Act 1988.

⁵¹⁶ Jia Wang, ‘Anti-Circumvention Rules in the Information Network Environment in the US, UK and China: A Comparative Study’ (2008) 3 J. Int’l Com. L. & Tech. 55-56.

1. This provision protects copyright works other than computer programmes.
2. Copies of works are protected by effective technological measures.
3. A person would be liable only when he or she circumvented the technological measures with knowledge or had reasonable grounds to know that he or she was violating the measures.⁵¹⁷

Based on these conditions required by the CDPA, this approach clearly identifies the scope of protection that it safeguards solely copyright works.⁵¹⁸ According to the “modchips” case, Nintendo introduced ETMs into its games to protect copyrighted works, except computer programs. In this case, the ETMs were used to control the duplication and usage of graphics and other works. The judge concluded that the defendants had imported and offered the accused devices, which enabled the Nintendo DS to play illegal games by bypassing the ETMs. The copyright protection for computer programmes on the Nintendo DS and other works had been implemented through technological measures. The defendants' products had specific components that were designed solely to bypass the technological measure. These would fall within the prohibition under the CDPA.⁵¹⁹ Therefore, non-copyright content or content in the public domain would not be covered. If the technical devices are applied to the public domain, people are reassured that they are able to bypass or destroy the said measure without any legal liability.

Moreover, the CDPA also offers some space for people to claim against the prohibition of circumvention rules by issuing the precise provision that the direct act of circumvention is not strict liability. With this respect, the sole fact of destroying or violating technological measures is not sufficient to be guilty; the intention is required in order to be penalised by law. If the technological measures are unintentionally removed or the act of circumvention is carried out by accident, the circumventor might not be legally liable.⁵²⁰ In sum, the CDPA prohibits the direct act of circumventing by providing protection to copyright works, and the act must be conducted with intention. The following cases represent the link between TPMs under the CDPA and copyright protection. In the case of *Neil Stanley Higgs v. The Queen*, Higgs carried out a business that sold “modchips” and pirate games. This business installed a modchip into the game consoles of consumers to play pirate games. The prosecution claimed that Higgs supplied devices used to violate

⁵¹⁷ Section 296 ZA of Copyright, Designs and Patents Act 1988.

⁵¹⁸ Section 296 ZA of Copyright, Designs and Patents Act 1988.

⁵¹⁹ PLC IPIT & Communications, ‘High Court upholds Nintendo claim in “modchips” case’ (Thomson Reuters Practical Law, 28 July 2010) <[https://uk.practicallaw.thomsonreuters.com/4-502-9176?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/4-502-9176?transitionType=Default&contextData=(sc.Default)&firstPage=true)> accessed 19 April 2022.

⁵²⁰ Wang, ‘Anti-Circumvention Rules in the Information Network Environment in the US, UK and China: A Comparative Study’ (n 516) 56-57.

effective technological measures. The prosecution case did not claim that the acts would lead to infringement of copyright. The accused was found not guilty in this case because it cannot be proved that bypassing technological measures involved a violation of any copyright. The anti-circumvention provision does not impose responsibility until this is proven.⁵²¹

Based on the case *Gilham v. The Queen*, the court held that to place liability under Section 296ZB (c)(i) of the CDPA, it is necessary to prove the following factual basis to demonstrate the offence committed to games: (1) the game is a copyright work; (2) playing a pirated DVD on a game console involves duplicating a copyright work; (3) the copying is of a substantial portion or the entirety of a copyright work; (4) the game consoles and/or authentic DVDs (copies of the copyright materials or licenced copies of works or works made with the permission of the copyright holder) incorporate effective technological measures as defined in Section 296ZF to safeguard copyright contents; (5) in the course of a business, the accused supplied, sold, or rented a component, device, or product that was primarily designed, manufactured, or adapted to enable the bypassing of those technological measures. It should be noted that the intention of the accused, who has no responsibility for the design, manufacturing, or adaptation of the product, device, or component, has no effect on this issue. His or her intention is inconsequential.⁵²² From the interpretation of the court, it could be concluded that the CDPA establishes the connection between TPMs and copyright legislation. The parties are required to prove infringement of copyright in order to convince the court to impose liability under anti-circumvention rules on the defendant.

Prohibition on Preparatory Activities with the Clear and Fair Scope of Ban

Turning to the provision on the preparatory act, Section 296ZB bans the trafficking of tools that facilitate the circumvention of effective technological measures. The person who commits any of the following activities in relation to services and devices that are primarily designed for the purpose of circumventing effective technological measures might be criminally liable:

1. manufactures the circumvention devices for sale or hire.
2. imports circumvention devices other than for personal or domestic use.

⁵²¹ Neil Stanley Higgs v. The Queen, [2008] EWCA Crim.1324; See also Arathi Ashok, 'Technological Protection Measures and Copyright Exceptions: The Rights of the Common Man in the Developed World' [2011] Available at SSRN 2437370 109-110.

⁵²² The Queen V. Christopher Paul Gilham , [2010] ECDR 5, [2009] EWCA Crim. 2293; See also Casemine, 'The Queen V. Gilham' < <https://www.casemine.com/judgement/uk/5b46f2072c94e0775e7f0cc5>> accessed 31 July 2022.

3. sales, lets for hire, offers or renders for hire or sale, advertises or promotes for sale, possesses or disseminates in the course of business, or distributes other than in the course of business that might affect the copyright holder prejudicially.⁵²³

According to the prohibition on the trafficking of circumvention devices and devices, the CDPA precisely limits the scope of obligation only against the technical devices that are primarily designed or produced for enabling the circumvention of effective measures. It means that the term “primarily designed” can be considered an immunity for manufacturers or distributors of devices and services. They could defend that their tools or services are produced for a lawful purpose, but the same product can also be exploited for violations of technological measures.⁵²⁴ Likewise, from the wording of this section, it does not prohibit the non-commercial production, and the importation of circumvention devices for domestic and private use would not be prohibited. It also allows non-commercial distribution of circumvention devices on a small scale if it does not negatively affect the copyright holder.⁵²⁵ Other than Section 296ZB, the criteria for circumvention devices and services are recited by Section 296ZD (1), which is modelled on and resembles Section 6.2 of the EU directive. However, Section 296ZD (1)(a) also specifies that this regulation applies to effective technological measures protecting copyright works.⁵²⁶ Therefore, it can be said that this provision provides enough freedom for the business of technical devices; they are unlikely to be entirely removed from the domestic market. There are some opportunities for lawful users to access the information and enjoy their rights because necessary devices might remain on the market in order to be used for permitted purposes.

As can be seen in the case of Sony v. Ball, decided by the High Court of England & Wales, this judgement confirmed that the CDPA does not legally prohibit circumvention where the devices of circumvention are solely employed to conduct non-infringing uses. In this case, Sony is the claimant who designs and produces game consoles as well as computer games that are protected by copyright law. The exclusive rights belong to Sony. The significant characteristics of these creations are that Sony’s games could be played on the Sony-produced consoles. These products embody regional codes that could be connected to the signals of

⁵²³ Section 296ZB of the Copyright, Designs and Patents Act in 2003.

⁵²⁴ Aashit Shah, ‘UK’s Implementation of the Anti-Circumvention Provisions of the EU Copyright Directive: An Analysis’ (2002) 2 Duke L. & Tech. Rev. 8-10.

⁵²⁵ Ian Brown, ‘Introduction to: Implementing the EU Copyright Directive’ [2003] Cambridge: Foundation for Information Policy Research 124.

⁵²⁶ Section 296 ZD of the Copyright, Designs and Patents Act in 2003.

European televisions, but they were not recognised by signals of different regions.⁵²⁷ The defendants have manufactured and sold the Messiah 2 chip, which is fitted with a console. This chip makes the console believe that the CD or DVD of the game embodies the necessary codes. As a result, the consoles could play authentic games, unauthorised games, and those manufactured to play on consoles functioning in different regions. In this situation, Sony claimed that the defendant violated CDPA Sections 296, 296ZA, ZD, and ZF. However, the defendant asserted that Messiah 2 chips were only sold for lawful backup copies of licenced games. The defendant did not violate Sony's rights because he lacked the intention or reasonable ground to know that the Messiah 2 chip would be used to create illicit copies or engage in game play that violated copyright. The defendant appears unable to predict how his tools will be used following their export.⁵²⁸ Sony argued that the CDPA prohibits those who manufacture or sell circumvention devices in the belief, or having reasonable grounds to know, that their devices might be used to overcome the copy control regardless of whether or not the use of the device results in copyright infringement.⁵²⁹ The court rejected the argument of the claimant; the court interpreted that the act principally prohibits the trafficking of devices used to remove copy control that facilitate copyright infringement. In this aspect, it is important to avoid harm to all merchants; the CDPA required knowledge on the part of traders in order to be found guilty. The merchants would only be penalised when they knew or had reasonable grounds to know that their devices would be misused for infringement activities.⁵³⁰ It is obvious that the CDPA is interpreted in a way that harmonises copyright infringement, TPMs, and the requirement of knowledge. There is an ultimate relationship between the anti-circumvention rules and the copyright exceptions; it would leave some space for circumvention tools available in the market to assist the legislative consumers in engaging with the digital works.⁵³¹

2.2.5 Indian TPMs and Reflecting Minimal Approach

Due to rapid technological advancements, the Indian copyright law was amended in 2012 to deal with copyright infringement in a digital environment influenced by internet systems and computer technologies. The TPMs were enforced to make them compatible with the minimum standards required by the WCT. However, before India revised domestic law to implement the anti-circumvention provisions, there was

⁵²⁷ *Kabusbiki Kaisha Sony Computer Entertainment Inc. v Gaynor David Ball and others* [2004] EWHC 1738 (Ch) 19 July 2004.

⁵²⁸ *Ibid.*

⁵²⁹ *Ibid.*

⁵³⁰ *ibid*; see also Samartzi (n 62) 189-192.

⁵³¹ Samartzi (n 62) 189-192.

widespread discussion that the US model was excessively stringent. India should not adopt the DMCA provisions for legal amendment because the strong protection of technological measures might not be suitable for the cultural, educational, and social needs of India, where accessing knowledge is important for national development. Furthermore, India has gained a number of reports and experiences from other countries concerning the misuse of technologies, together with the anti-circumvention regulations to exclude public rights under the traditional copyright regime.⁵³² Hence, Indian lawmakers refused to follow the DMCA and applied a minimalistic approach. During the process of legal enactment, the legislators arranged a meeting with various stakeholders to share their experiences and expectations concerning the anti-circumvention rules. These interested parties included representatives from the music, film, publishing, and news broadcasting industries. Additionally, the group of authors, lyricists, internet service providers, and visually impaired people mainly participated in the legislative journey to ensure that anti-circumvention provisions would not harm fair access to digital works. The Indian policymakers also considered the experiences of other jurisdictions in developing such laws to protect the larger public interest and prevent legal abuse by copyright holders.⁵³³ This section would discuss the legal models and evaluate the strengths and weaknesses of the Indian Copyright Act 2012 (Amendment) as follows:

Prohibited Act of Circumvention and its Difficulties on Copyright Protection in the Digital Era

The Indian anti-circumvention rules were enacted in Section 65(A). This provision preserved the fundamental principle of copyright law by prohibiting people who deactivate an effective technological measure used for the purpose of protecting any of the rights conferred by the Copyright Act. The people who intentionally circumvent the technical devices for copyright infringing purposes shall be punished by imprisonment for up to two years and would be liable to a fine.⁵³⁴ From the language of this section, there is a clear connection between anti-circumvention rules and copyright protection. The laws recognise technological measures employed to safeguard the rights of copyright holders over works.⁵³⁵ It is clear that the application of anti-circumvention laws is limited to rights granted under the Indian Copyright Act. They protect only digital materials covered by copyright provisions. The laws prohibit the circumvention of technological measures only when such actions lead to copyright infringement. This means that Indian law permits the user to defeat an effective technological measure if the underlying material does not fall within

⁵³² Unni (n 405) 338-343.

⁵³³ *ibid* 338-343.

⁵³⁴ Article 65A of The Copyright (Amendment) Act, 2012 of India.

⁵³⁵ Ragavi Ramesh, 'Balancing Protection and Access in Digital Locks: Analysing Recent Amendments in Indian Copyright Law' (2014) 3 Nat'l LU Delhi Stud. LJ 93.

the scope of copyright law. These would ensure that public domain or non-copyrightable works are available for users.⁵³⁶ With regard to the type of TPMs, technological measures in India are only protected if they are used for the purpose of safeguarding any rights provided by the Copyright Act. However, it is important to note that the exclusive rights under copyright law include merely the right to copy, adapt, and communicate the works. The access right is not related to traditional copyright protection. Therefore, Indian anti-circumvention rules may be interpreted to specifically protect use-controls or technologies applied to restrict reproduction, modification, and dissemination of the works to the public. These laws might not cover access-controls or technologies employed to prevent access to the content.⁵³⁷ In other words, only the acts that are considered infringements will fall under the scope of Indian anti-circumvention rules. Access is not copyright infringement, especially for educational and personal uses. The technologies used to control access are consequently excluded from the legal protection provided to technological measures. Likewise, to outlaw circumvention, technological measures have to be applied to safeguard solely the rights recognised by the Copyright Act. Access would not be restricted, and the circumvention of access controls might not be prohibited.⁵³⁸

Another essential element of liability under Indian law is the infringer's intention. The DMCA has placed strict liability on circumventors without requiring any intention on the part of the infringer.⁵³⁹ In contrast, Indian law requires knowledge of the person who circumvents the technological measure. By adding the intention criterion, the law requires the desire and knowledge of the doer to violate the copyright.⁵⁴⁰ It only forbids circumventing technological measures when doing so is conducted with knowledge and intent to violate copyright. This, in a way, limits the application of the provision; it outlaws circumvention only when the accused desires to violate copyright. The mere bypassing of a technological measure will not constitute an offence, and it is permissible to deactivate such devices to use them for fair use. However, it is important to note that the burden of proof is placed on the copyright holder to demonstrate the intention of the accused to violate use-controls for copyright infringement.⁵⁴¹

⁵³⁶ Unni (n 405) 339-340..

⁵³⁷ Sahil Chaudry, 'The Indian Copyright (Amendment) Act of 2012 and American Digital Music Exports: Why the United States Should Make Stricter Anti-Circumvention Laws in India an American Diplomatic Priority' (2013) 20 UCLA Ent. L. Rev. 182-185.

⁵³⁸ Ramesh (n 535) 99-100.

⁵³⁹ Unni (n 405) 339-340.

⁵⁴⁰ Barooah (n 121) 588-589.

⁵⁴¹ Verma (n 365) 24-25.

Although Indian law provides protection for "effective technological measures," there is an absence of definition for the significant terms "technological measures," "effective," or "circumvention." This amendment does not clarify the definition or guideline for interpretation of the types of measures that would fall under its purview.⁵⁴² However, Ragavi Ramesh argued that the word "effective" might be construed in two ways: (1) by encompassing technologies that may be circumvented by everyone regardless of intent, as long as it results in an infringement; or (2) by limiting interpretation to technologies that cannot be bypassed by ordinary people and would require specialised knowledge to create circumvention devices or technical skill to use them. Ragavi Ramesh also pointed out that the latter explanation seems to cause difficulty in determining whether a person has the knowledge and skills to violate an effective technological measure. This is because any user may become a "hacker" if they use the proper software or devices, which may not have been created by the hackers themselves and do not require technical knowledge.⁵⁴³ It appears that the Indian legislators attempt to leave this provision to be technology-neutral, which entitles the court to interpret and make a proper judgement after taking all relevant facts, issues, and circumstances into account. Therefore, these laws cover only the effective technological measures used to protect rights under copyright law. Those who circumvent technological measures with the intention to infringe any rights under the Indian Copyright Act will be subject to criminal liability.⁵⁴⁴ Several terms remain undefined to enable the court to implement them based on relevant contexts.

The Lack of Prohibition on Preparatory Activities

There is the absence of anti-trafficking circumvention devices in preparatory acts under Indian law. It does not contain a prohibition on manufacturing, importing, offering, or distributing the services or technologies used for circumvention.⁵⁴⁵

Strengths and Challenges of TPMs under the Indian Copyright Act

As discussed prior, there are two types of technological measures, which include access-control and use-control technologies. The act did not distinguish between these types of technological measures; it did not specify the nature of the technological measures protected by Indian law. These seem to be legal gaps that

⁵⁴² Chaudry (n 537) 185.

⁵⁴³ Ramesh (n 535) 102-103.

⁵⁴⁴ Unni (n 405) 339-340.

⁵⁴⁵ Verma (n 365) 26-27.

lead to ambiguity.⁵⁴⁶ The Indian Copyright Act (2012) amendment did not mention access-control mechanisms. In contrast, Section 65A prohibits individuals from violating effective technological measures used to secure any of the rights granted by this act. The provision's language makes it abundantly apparent that the protection is limited to rights that have been explicitly provided under the Indian Copyright Act of 1957. It covers the exclusive right to copy, adapt, and communicate the works to the public; the right to control access seems to be irrelevant. Therefore, the Indian anti-circumvention rules may protect only use-control technologies; access-controls are potentially excluded from this provision.⁵⁴⁷

Generally, Section 65A(1) places criminal liability on the person who circumvents technical devices used to protect copyright works and prevent copyright infringement. The intention to infringe by the circumventor is required to be penalised. The access right seems to be irrelevant to these regimes. The technological measures employed to prevent access may not fall within the ambit of legal protection, and hackers who circumvent the access controls are unlikely to be criminalised.⁵⁴⁸ Since access controls are not adequately addressed in the law, streaming materials on electronic devices is unlikely to be classified as circumvention under these Sections; Indian laws are unlikely to prohibit users from circumventing access-control measures for unlimited viewing of films on all electronic devices.⁵⁴⁹ The Indian anti-circumvention rules are likely to be a double-edged sword. The provisions benefit the users because they are able to circumvent access-control devices to engage with online materials for legitimate purposes without incurring penalties. The fair use would be preserved. These ensure that the exclusive rights of the copyright holder remain untouched.⁵⁵⁰ On the other side, Section 65A may be interpreted to not provide legal protection against unauthorised access. These laws are likely to exclude the access right, which is the most effective protection for copyright holders.⁵⁵¹ Access control provisions are essential in terms of reinforcing the anti-circumvention rules because the ability to access is a prerequisite for other activities. The users are unable to comprehend and employ the works unless the works are accessible. In contrast, if the users have free access to the works, the copying and redistribution of works through the internet system could be done very easily.⁵⁵² In the absence of the prohibition on circumvention of access control, the anti-circumvention

⁵⁴⁶ *ibid* 26-27.

⁵⁴⁷ Chaudry (n 537) 182-185.

⁵⁴⁸ *ibid* 182-185.

⁵⁴⁹ Ramesh (n 535) 95.

⁵⁵⁰ Singh (n 117) 8.

⁵⁵¹ Chaudry (n 537) 175.

⁵⁵² Conroy (n 195) 239-240.

rules of India would become ineffective, and the problem of copyright infringement in the digital environment would be unsolved.

Additionally, Indian anti-circumvention regulations exhibit several critical deficiencies. The primary deficiency is the absence of comprehensive information. The provisions were roughly drafted, potentially missing the significance of details and clarification. The term "technological measure" is not defined in Section 65A, which is the most significant word in this provision. Failing to define this term causes considerable ambiguity and uncertainty regarding what qualifies as a "technological measure" and what objects this section intends to protect. The usage of the phrase "effective" without any definition seems to enhance the uncertainty of the technological measure.⁵⁵³ Moreover, because the word "circumvention" is undefined, there is ambiguity concerning illegal activities. This clarification is crucial to prevent unwarranted criminal liabilities for individuals who may engage in activities interpreted as circumvention. The legal gaps might affect enforcement. Even though Indian policymakers aim to leave an undefined word for the court to interpret this provision based on the balancing of interests between copyright industries and the public, the issue of the proper balance between copyright protection and access to information in developing countries has not been effectively addressed. These might create uncertainty in the interpretation and implementation of anti-circumvention rules.⁵⁵⁴ In this aspect, Sahil Chaudry has asserted that the Indian anti-circumvention rules remain ineffective in protecting copyright holders. This amendment leaves various significant terms to be defined by India's court based on the larger public interest in accessing information rather than the adequate protection provided to copyright holders.⁵⁵⁵

Furthermore, Section 65A prohibits individuals from defeating technological measures used to protect any right under copyright law, and the circumvention has to be done with the intention to infringe copyright works in order to be held liable. This provision requires proof of the desire or intention of copyright infringement. It seems to be really difficult for the copyright holder to find the evidence and carry on the burden of proof. This problem is exacerbated by Section 65A, which limits the remedy to only criminal liability. According to Indian criminal law, the burden of proof is typically imposed on the prosecutor.⁵⁵⁶ It is a challenge for the copyright holder to prove the intention or desire of the violator or to demonstrate that the act of circumvention was carried out with the intention of infringing copyright. It causes the

⁵⁵³ Verma (n 365) 26-27.

⁵⁵⁴ Ramesh (n 535) 92-96.

⁵⁵⁵ Chaudry (n 537) 182-185.

⁵⁵⁶ *ibid* 182-185.

provisions to be abused and leaves a legal gap for the violators to evade responsibility.⁵⁵⁷ The requirement of intention and the burden of proof could be significant barriers against invoking actions of circumvention based on this regulation; these would definitely limit convictions. A large number of cases would not be fairly resolved, and the litigation might be a difficult and slow solution for the copyright holder. These would adversely affect the copyright industry in India. In short, the burden of proof placed on copyright holders is the obstacle to prosecution, and the illegal circumvention remains unsolved.⁵⁵⁸

In terms of the circumvention devices, it does not contain any legal prohibition on distributing the circumvention technologies. The Indian Copyright Act did not stipulate regulations or prohibitions on the manufacture, import, or distribution of technology, tools, products, or services to deactivate technological measures.⁵⁵⁹ The circumvention service or distribution of devices is not forbidden. This means that an individual who employs a circumvention tool to use works will be held legally liable, but the person who creates the software for infringing the copyright would not encounter any punishment under these regulations. It is important to note that the majority of individuals are unable to violate technological measures without the assistance of expertise or software. The prohibition on trafficking devices could reduce the violation of technological measures and copyright infringement. This approach is necessary for the anti-circumvention rules. This issue might be the major problem with Indian laws, as regulations might be ineffective without the prohibition on devices.⁵⁶⁰ The lack of provisions banning the trafficking of circumvention devices is one of the considerable weaknesses of Section 65A.⁵⁶¹

Empirical evidence indicates that the circumvention devices and services facilitate the breach of technological measures and copyright infringement. For example, IPTV piracy is the illegal streaming of TV channels and on-demand content over controlled networks where the quality of the service is the same as that offered by authorised IPTV providers. The illegal streaming will include films, TV shows and live sports and will likely mimic official IPTV services while avoiding official subscription channels. The main reason for digital copyright infringement is IPTV trafficking. Some users have bought certain software apps, hardware and set-top boxes to circumvent authorised IPTV providers. It gains income from selling ads, charging subscription fees or a business-to-business model with resellers.⁵⁶² These services may provide content to

⁵⁵⁷ Verma (n 365) 26-27.

⁵⁵⁸ Chaudry (n 537) 182-185.

⁵⁵⁹ Verma (n 365) 26-27.

⁵⁶⁰ Ramesh (n 535) 102-105.

⁵⁶¹ Verma (n 365) 26-27.

⁵⁶² Bornas-Cayuela and Wajsman (n 85) 10-12.

a number of devices, including TVs. Pirates may also use innovative techniques to prevent detection, resist or rapidly recover from any actions taken against their services. IPTV piracy causes significant financial harm, including the reduction of income to content creators and service suppliers. The operation for anti-piracy is expensive. Wide illegal streaming directly lowers people's consumption of legal broadcasts, which has a direct effect on subscription and advertising revenue, as well as the loss of income for media companies and content creators.⁵⁶³ Although empirical study on trafficking devices is mostly from a European context, it highlights a regulation deficiency that is also relevant in Asia. Without effective anti-trafficking laws, TPMs are practically ineffective in preventing the distribution of circumvention devices and services, as well as economic harm to copyright holders. The circumvention services and devices might be widely available to facilitate unlawful circumvention of technological measures, which may lead to digital copyright infringement. Such trafficking, however, is expressly allowed by Section 65A(2)(a), which permits third parties to offer the circumvention devices to the users to violate technological measures for non-infringing purposes.⁵⁶⁴ This might result in the widespread distribution of circumvention devices in the domestic market, which will be discussed in greater detail in Chapter 6.

Furthermore, Indian law only stipulates criminal liability, or imprisonment for two years. It excludes civil liability, which is contradictory to the interests of the copyright holders. Circumvention and copyright infringement would normally result in financial loss to the content provider or copyright holder. Civil liability could compensate them and reduce economic harm in copyrighted industries.⁵⁶⁵ With this aspect, Sahil Chaudry suggested that civil remedies should be added to Indian anti-circumvention rules, such as injunctions; this judicial process would provide easier and faster solutions.⁵⁶⁶ The provisions would be more in line with WCT/WPPT if civil liability were included.⁵⁶⁷ Dipinn Verma argued that despite criminal liability effectively discouraging such behaviour, the absence of civil liability deprives the copyright holders of the opportunity to obtain monetary compensation. Additionally, it may not comply with society's expectations to establish the penalty of imprisonment for an initial instance of personal use devoid of commercial intent.⁵⁶⁸ Furthermore, there is some argument that criminal sanctions are typically reserved for circumstances that cause severe societal damage. Although some circumventions of technological

⁵⁶³ *ibid* 10-12.

⁵⁶⁴ Chaudry (n 537) 182-185.

⁵⁶⁵ Verma (n 365) 24-29.

⁵⁶⁶ Chaudry (n 537) 182-185.

⁵⁶⁷ Ramesh (n 535) 92-96.

⁵⁶⁸ Verma (n 365) 26-27.

measures may occur on a substantial and commercial level, others may pertain to individual use or not-for-profit activities. Placing criminal penalties on non-commercial infringing acts can be considered an unfair punishment. The criminal sanctions might be unreasonable for users who engage in non-commercial or private infringing activity. It may discourage lawful or non-piracy-related use of materials. The imposition of only criminal penalties might exceed copyright protection, and the exceptions may be overruled.⁵⁶⁹ Therefore, the current Indian anti-circumvention rules lack provisions concerning civil responsibilities or payment to address the financial damage to copyright holders. The criminal responsibilities might be disproportionate for the circumvention that was done on a non-commercial scale of infringement. As an access right is unclear, both the copyright infringement and the intention of the circumventor are required to fall within the scope of this legal prohibition. The amendment also silences significant definitions and the prohibition of trafficking circumvention devices. These issues make the TPMs in India impractical. It is important for the Indian Copyright Act 2012 amendment to be revised to define legal terms. The precise definition would minimise ambiguity and facilitate the court's interpretation of these provisions. The civil liability should be added; a person who circumvents technological measures should be placed under civil responsibility. Criminal liability does not arise until serious harm or repeated infringing activity occurs. This will compensate the copyright holder and encourage the participation of stakeholders, which will speed up the settlement of cases.⁵⁷⁰

2.3 Strengths from Global Frameworks to Reform Thai TPMs

Based on an evaluative investigation of anti-circumvention rules across jurisdictions, the thesis would recommend the appropriate legal models for law reforms to address several challenges on the scope of protection and the boundary of prohibitions. These include recommendations on legal definitions, prohibitions on direct acts of circumvention, and the provision of anti-trafficking circumvention devices.

2.3.1 Fixing Legal Vagueness with Legal Terms and Prohibition

To solve the problem concerning the vague definition under Thai law, this thesis suggests adopting UK law to revise the legal definition of technological measure under Section 4 of the Thai Copyright Act. This modification would clarify the nature of effective technological measures that fall under the purview of anti-circumvention rules. Hence, the word “technological measure” should be defined as any effective

⁵⁶⁹ Barooah (n 121) 596-598.

⁵⁷⁰ Verma (n 365) 26-29.

technology or device that is designed or produced, in the normal course of its operation, to control access to copyright work or prevent copyright infringement, such as scrambling or encryption. This definition precisely identifies the type of technological measure recognised by the regulation, which includes access-controls and use-controls. Additionally, this model preserves the connection between copyright protection and anti-circumvention rules, which cover only technologies protecting copyright work. The technologies used with public domain and non-copyright materials are not relevant to the anti-circumvention rules of Thailand. Thai people are able to circumvent technological measures to engage with the public domain. This provision would limit the scope of anti-circumvention rules to not exceed copyright protection. Moreover, the suggested definition also provides the extent of technological measures by considering the original function and primary purpose of technologies rather than all devices that might be used with digital works. This could prevent excessive interpretation by covering all devices used by the copyright holder. Therefore, this provision protects only devices that are produced or designed to protect copyright works. The protection excludes devices created for other purposes or those that have a side effect on hindering access to the works. The suggestion also includes a sample of technological measures according to international standards to contribute to a better understanding of this legal term.

Moreover, the anti-circumvention regulation in Thailand should clarify the issue concerning the efficiency of technological measures protected by law. The definition of “effective” should be clearly inserted and identified to resolve the problem of the nature of technological measures. The combination of the explanations provided by the DMCA of the US and the CDPA of the UK may be a good sample for Thailand to adopt the effectiveness criteria. In this instance, the word “effective” should be defined as the technical devices or processes that can prevent copyright infringement or control access to a work. These measures require specific information, treatment, or processes provided by the copyright holder to gain access to the copyrighted work. The device or measure must achieve the objective of restricting access to or use of copyright works as intended by the copyright holder. This model could determine the performance and functions of specific technological measures that the law protects. The devices should have a certain level of ability to resist circumvention and protect the copyright works. The outdated technologies or those devices that might be bypassed easily would not be protected by the anti-circumvention rules of Thailand. The new definition of “effective” and “technological measure” enables Thai people to know the nature of technological measures that the laws protect. These explanations provide more details to enable users to understand the technologies or devices that the law aims to safeguard. It seems simpler to know whether their activities are lawful or not and raise awareness about their behaviour that may result in legal liability. It

would create certainty in interpretation and enforcement in Thailand. The suggested definitions would deliver guidelines to stakeholders, practitioners, relevant administrative agencies, and the courts in determining whether measures are protected under the anti-circumvention provision.

The thesis strongly agrees to provide protection to access-control measures against circumvention. This provision establishes an access right for the copyright holder to control viewing, reading, and listening to the works, which seem to be very important in the digital era. By prohibiting circumvention of access-control measures, copyright holders can effectively manage user access and pricing. They are able to restrict the number of users, the type of device used to play the works, and limit the time of access to the works; these would effectively protect the financial interests of copyright holders.⁵⁷¹ These foster new business models that allow users in Thailand to engage with a variety of knowledge at a variety of prices based on their needs to access digital materials. The protection against circumvention of access-controls should be unchanged. Nonetheless, the thesis has demonstrated that the significant word “circumvention” remains problematic; the definition is very general without detail. It is incomprehensible for all interested parties. The study also argues that the prohibition on circumvention remains silent on the intention of the violator; this law may be interpreted to penalise innocent people or those who accidentally violate technological measures. Hence, to address this ambiguity, this thesis would recommend revising Section 53/4 by adding the intention of circumvention to specify the boundary of prohibition. The word "circumvention" of the Thai Copyright Act could be defined similarly to the U.S. and UK. It is arguable that the DMCA of US provides a clear explanation and illustration concerning the word "circumvention." Additionally, the UK law offers clearer definitions and requirements regarding the intention or knowledge of circumvention. Incorporating these characteristics into Thai law could enhance clarity and fairness. In this context, circumvention of a technological measure should refer to any action taken to deactivate, bypass, avoid, remove, destroy, or otherwise tamper with an access-control measure; this includes decrypting an encrypted material and descrambling a scrambled material. A person circumvents access-control measures with intention or with reasonable grounds to know, and he or she is pursuing that objective. These could be deemed violations of the anti-circumvention rules.” The suggested definition of “circumvention” would illustrate the forms of action that are banned by these laws. The laws place legal liability only on those who intentionally or knowingly circumvent access-control measures. The requirement of knowledge or reasonable ground to know the act of circumvention would reduce the

⁵⁷¹ Gasaway (n 11) 270.

severely restrictive nature of the current version of the anti-circumvention law in Thailand. In this aspect, a person who circumvents technological measures through negligence would not be punished; gross negligence, bad faith, or intention on the part of the circumventor is required for liability. This definition would ensure that innocent people or those who accidentally deactivate access controls would not be penalised. The law shall place liability on the circumventor who intentionally deactivates access control to engage with copyright works.

Based on the experiences learned from the EUCD and the DMCA of the US, the EUCD protects technologies preventing actions concerning works or other content that are not authorised by the owner of any copyright, any copyright-related right, or the sui generis right specified in Chapter III of Directive 96/9/EC. Likewise, the DMCA prohibits the circumvention of technologies without the authority of the copyright holder. The thesis asserts to not insert the words “circumvention without authority of the copyright holder” into the definition of circumventions under the Thai Copyright Act. These words might make the provision confusing and may be interpreted to allow users to circumvent access control only when they gain the permission of copyright holders. As anti-circumvention laws are relatively new in Thailand, there is a risk that this legal model could be misused to mainly rely on the permission of the copyright holder and obstruct circumvention for non-infringing purposes, such as accessing works under exceptions or dealing with ineffective technologies. In general, the prohibition on circumvention without the authority of the copyright holder might create misunderstandings among all stakeholders to forbid the users from circumventing access controls, even though their actions are taken to exercise the exceptions or the technological measures are not covered by anti-circumvention rules, such as ineffective technologies or those used to safeguard the public domain. The thesis also argues that the scope of protection and prohibition should comply with the laws rather than mainly rely on the permission of the copyright holder. The suggested model would ensure that the legal protection provided to copyright holders is in line with copyright law and other jurisdictions without endangering non-infringing uses. The users will be able to access knowledge based on their rights provided by the exceptions, regardless of the authority of the copyright owner.

The study agrees to preserve the model of current anti-circumvention rules by protecting only technological measures used to control access to copyright works. The laws exclude the technological measures employed to prevent copyright infringement or use-controls from legal protection because the person who violates use-controls to copy, adapt, or communicate the works without authorisation is already liable for copyright infringement. It seems meaningless to place liability on anti-circumvention rules

for the same activity. These laws would resolve overlapping between anti-circumvention rules and the copyright regime and leave some freedom for users to violate use controls to engage with the materials for lawful purposes under traditional copyright law.

2.3.2 Suggestion for Preparatory Activities to Balance TPMs and Knowledge Access

The study strongly supports current anti-circumvention rules in terms of adding a prohibition on manufacturing, importing, selling, and distributing the devices and services used for circumvention. This provision has imposed liability on those who enable others to destroy the technological measures to access and use the works. This provision could effectively reinforce the anti-circumvention rules, as the majority of Thai people do not have the technical skills to deactivate technological measures without the necessary devices or services. It could be said that the Copyright Act 2022 (amendment) has provided an international protective standard for TPMs and the interests of copyright holders. Although this section only bans the distribution and business of devices that have the primary aim of circumventing technological measures, the language of this provision is very broad. This provision may be excessively implemented to remove all necessary devices from the Thai market. This provision may preclude Thai people from accessing knowledge due to digital lock-up and a lack of circumvention tools. The study found that the anti-trafficking provisions of the UK contain more comprehensible wording and provide a clearer scope of prohibition. It forbids the manufacturing and disseminating of circumvention devices for commercial and illegal purposes and leaves some space for personal and domestic uses. These characteristics may be a proper model for Thailand, where the technical knowledge is limited to a specific small group of people. Adopting the UK's approach could ensure that necessary devices remain accessible for legitimate personal study and educational purposes, accommodating Thailand's current technical limitations and promoting a more balanced implementation of anti-circumvention measures. Therefore, this thesis contends that Section 53/6 should be modified as “a person violates anti-circumvention rules if he or she:

1. Produces for hire, sells, or imports devices other than for personal or domestic use,
2. Sales, rentals, offers, or renderings for rental or sale; promotions or advertisements for sales; possessions or distributions in the course of business; or
3. Disseminates in the course of business that adversely affects the copyright holder; any component, tool, or product that is primarily adapted, designed, or manufactured to circumvent technological measures.

According to this suggested model, it precisely limits the scope of prohibition by banning the manufacturing, import, and distribution of circumvention devices for commercial purposes. This model of anti-trafficking rules allows users to create and import necessary devices for personal study and domestic use. It permits the non-profit distribution of circumvention devices on a modest scale, as long as it does not harm the copyright holder. This provision ensures that the necessary devices are not completely removed from the domestic market; they remain on the market for permitted purposes. Legitimate users could obtain tools to exercise their rights. As a consequence, skilled users may create circumventions for personal use, such as non-profit research, comments, and criticism. The professor or staff of educational institutions could create circumvention tools for educational uses. However, to prevent the widespread dissemination and abuse of circumvention devices, this approach would be applied in restrictive circumstances when the works are inaccessible by other methods, such as the absence of reasonable licensing schemes, which will be discussed in the recommendation of exceptions.

Conclusion

The WCT only required the member states to provide adequate protection for technological measures. This treaty did not contain any detail on the scope of protection, which might leave some freedom for members to exercise discretion in implementing these provisions in accordance with domestic contexts. The EU directive, the DMCA of the US, the CDPA of the UK, and Thai law provide a high level of protection by prohibiting both the act of circumvention and the trafficking of circumvention devices. For the prohibition on acts of circumvention, the EU Directive and UK legislation protect either access controls or copy controls. Thai laws, influenced by the DMCA, only prohibit the circumvention of access control, allowing users to bypass the right controls for non-infringing purposes. The development of anti-circumvention rules in Thailand demonstrates the attempt of the Thai parliament to reinforce these regulations. It is arguable that the level of protection provided by the Thai Copyright Act exceeds the WCT. However, there is ambiguity in the key terms “effective technological measure” and “circumvention,” which affects the scope of legal protection and prohibition. Therefore, the thesis proposes applying these terms from the DMCA and UK law to anti-circumvention rules in Thailand because they define the function and operations of effective technological measures. In addition, the DMCA also provides examples of the word “circumvention,” which is considered an illegal action. The adoption of DMCA and UK law to amend Thai law would clarify the legal wording and create certainty in interpretation and enforcement. In addition, the EU Directive and UK law require the intent of the doer to violate technological measures for liability. Therefore, Thailand should also adopt this requirement to reduce the severity of the law. It is important to note that Thailand, India, and

the UK provide a clear scope of protection and that these provisions cover merely technological measures used with copyright materials. Consequently, the public domain remains available to users.

For anti-trafficking circumvention devices, the EUCD, US, UK, and Thailand provide the same level of protection by banning the manufacturing and distribution of equipment used to violate access-control and use-control measures. However, Thailand should follow UK law and allow the making or importing of devices that bypass technological measures for personal or home use. This way, the necessary tools remain in Thailand to deactivate technological measures to gain access to copyrighted works for lawful purposes. However, Indian laws are likely to apply a minimal approach by prohibiting only the act of circumvention. The protection of access controls and anti-trafficking devices does not exist in Indian law.

Chapter 3

The Global Trends of Exceptions to TPMs: Driver to Accessibility

Introduction

It is argued that the exceptions enable the flow of knowledge by allowing the users to access and use copyrighted works in specific circumstances. As previously discussed, the stringent anti-circumvention rules may impede the accessibility of digital materials. It is necessary to establish the appropriate exceptions to limit the scope of legal liability or reduce the adverse impacts of non-infringing uses. This thesis claims that the list of exceptions to anti-circumvention rules is similar to that of the DMCA, which is very specific and narrow. They are insufficient to prevent the adverse impacts on the exchange of knowledge and educational development in Thailand.

Even though the WCT aims to address infringement in the digital environment, the additional purpose of the treaty is to promote a balance of interest between creators and the public by promoting the availability of education, research, and information in societies. This treaty allows the member states to have discretion to design exceptions to TPMs. This makes the scope and application of exceptions diverse across member nations, reflecting the varying effectiveness in protecting the user's right to access knowledge and drawing the balance of interest between the interest of the copyright holder and user rights. Therefore, this chapter will investigate and compare the exceptions existing in Thailand and other jurisdictions to represent the global trend of exceptions, as well as how different nations apply and interpret the exception and what this means for knowledge access. This would lead to a new model of exceptions for Thailand to enhance education without unreasonably endangering the interests of copyright holders.

3.1 New Exceptions in Thailand: A Step Forward or Struggle Outcome

Based on a wide range of debates involving the impacts of anti-circumvention laws, it cannot be denied that the exceptions to these laws play significant roles in preserving the public interest by reducing the cost of education and research. The reasonable price of materials on convenience platforms would foster academic learning and creativity, which is especially important for developing countries.⁵⁷² The exceptions

⁵⁷² Wang (n 19) 144-147.

allow non-infringing users to engage with the works for educational purposes and in non-profit libraries. Therefore, to promote educational development, effective protection for copyright holders should be developed alongside appropriate exceptions to encourage better access to quality learning content and enrich creative activities. However, the exceptions to the direct act of circumvention and the preparatory act under the current version of Thai copyright law seem to be very narrow; they are unlikely to prevent the adverse impact on society as critically evaluated hereafter.

3.1.1 New Exceptions to Prohibition of Circumvention and Accessibility Changes

According to the latest version of Thailand's Anti-Circumvention Rules, updated in 2022, the prohibition on direct acts of circumvention is subject to seven specific limitations. First, an act on a copyright work that is exempt from copyright infringement as prescribed by the Minister in the Government Gazette, Section 53/5 (1).⁵⁷³ Second, the analysing elements of a computer programme (section 53/5 (2)) allow the circumvention that has been done to achieve interoperability with the other computer programme.⁵⁷⁴ Third, there is an exception for research purposes (Section 53/5(3)), which exempts a person from legal liability when analysing and identifying vulnerabilities and flaws in encryption technologies. However, the researcher must lawfully obtain the copyright work and make a good faith effort to gain permission from the copyright holder.⁵⁷⁵ Fourth, the exception on examining the security of a computer (section 53/5 (4)), which allows the act of circumvention for the sole purpose of testing or repairing the security of a computer network or computer system as long as the authorisation has been provided by the owner of such a computer, computer network, or computer system.⁵⁷⁶ Fifth, the exception for personal privacy (section 53/5 (5)), which provides that the users are able to circumvent technological measures in order to terminate its operation on disseminating or collecting personally identifiable information about the internet activities of the users.⁵⁷⁷ Sixth, the exception for governmental activities (section 53/5 (6)), which states that the direct act of circumvention is allowed as long as such activities have been conducted by legally authorised officers for the execution of law, for the purpose of national defence, for maintaining national security, and for other similar aims.⁵⁷⁸ Finally, the exception for non-profit educational institutions, libraries, archives, and public sound and video broadcasting organisations (Section 53/5(7)) permits these

⁵⁷³ Section 53/5 (1) of Copyright Act 2537(1994) amended by Section 11 of Copyright Act (NO.5), B.E. 2565 (2022).

⁵⁷⁴ Section 53/5 (2) of Copyright Act 2537(1994) amended by Section 7 of Copyright Act (NO.2), B.E. 2558 (2015).

⁵⁷⁵ Section 53/5 (3), *ibid.*

⁵⁷⁶ Section 53/5 (4), *ibid.*

⁵⁷⁷ Section 53/5 (5), *ibid.*

⁵⁷⁸ Section 53/5 (6), *ibid.*

bodies to circumvent technological measures to access copyright works that are not available on other platforms.⁵⁷⁹

From the language of this provision, there is the most remarkable amendment to Section 53/5 (1). The Thai Parliament considered the previous version of this section too broad because it allowed all exceptions under traditional copyright law to apply against anti-circumvention provisions. Therefore, the provisions on non-infringement use under the former version are repealed and replaced by the Copyright Act (No 5) B.E. 2565 (2022). The amendment to 53/5(1) allows only acts on copyright works that do not infringe copyright protection, with these exceptions being announced in the government gazette by the minister of commerce.⁵⁸⁰ The legislators also provided further detail for this amendment, as the new Section 53/5(1) is an exception to the violation of technological measures only for acts prescribed by the Minister. By issuing the secondary law in this section, the Department of Intellectual Property will organise a hearing from the interested parties, such as the copyright owner, the user, and the general public, to jointly set exceptions that are absolutely necessary.⁵⁸¹ According to this explanation, the fair use provision cannot apply to anti-circumvention regulation; only the minister-identified activities would be exempted from legal liability. Hence, after the amendment was officially promulgated, the exceptions to traditional copyright law will not be relevant to TPMs. These regimes are subject only to those exceptions contained in Sections 53/5, 53/7, and 53/8 of the Copyright Act and the Ministry of Commerce's Announcement, which are independent of fair use or copyright exceptions. Although access to or use of the copyright works might be for non-infringing purposes, the circumvention of technologies used for access control may still be prohibited. For example, if a person bypasses the technologies used to protect the literary work for the purpose of fair use, such as private use, but such personal usage is not listed in exceptions of TPMs, his/her act of circumvention is unlikely to be permitted. Therefore, the Copyright Act 2022 amended Section 53/5(1) to narrow the exceptions to the anti-circumvention rules. Fair use provisions are excluded, and the users could exercise only the privileges prescribed in Sections 53/5, 53/7, and 53/8 of the Copyright Act and the Ministry of Commerce's Announcement.

⁵⁷⁹ Section 53/5 (7), *ibid.*

⁵⁸⁰ Section 53/5 (1) of Copyright Act 2537(1994) amended by Section 11 of Copyright Act (NO.5), B.E. 2565 (2022).

⁵⁸¹ Department of Intellectual Property, 'Summary of the results of the hearing on the draft Copyright Act that has been considered by the Council of State (6th Committee)' 4 August 2020.

Analysis of New Exceptions to the Act of Circumvention

In theory, digital technology facilitates access to knowledge for developing countries, which encourages research and educational development. It enables people in underdeveloped nations to gain access to knowledge, innovation, and culture at all times and everywhere in the world. Information technologies allow researchers, students, and educational staff in developing countries to engage with similar digital books, journals, and online databases as those in developed nations. These result in the global reinforcement of freedom of expression, the free flow of information, educational rights, and rights to development. In reality, these fundamental rights might be delayed by an unaffordable licensing scheme and technological measures. These methods are typically used to secure digital materials and ensure the royalty fee for usage. The developing countries may be precluded from accessing online educational resources because the majority of individual users of educational institutions in developing nations could not afford to access and use databases.⁵⁸² Presently, Thailand remains a developing country; the ability to access and use creative works is likely to be important for social and educational development. However, the too-specific scope of the exceptions relating to anti-circumvention law would minimise the ability to access knowledge and cause serious danger to research and academic activities. The narrow exceptions, along with imposing various conditions, might not satisfy educational needs. It is arguable that the ability to access knowledge directly relies on exemptions. However, the amendment excludes the application of the copyright exception from the anti-circumvention rules. The fair use provision under traditional copyright law can no longer be applied to claims against technological circumvention. Thai people might be deprived of their ability to use protected works; they are unable to rely on fair use provisions. In this vein, users are legally prohibited from destroying controlling access devices, regardless of whether or not such an act has been done for non-infringing purposes. Thus, it is arguable that this model of exceptions may restrict the opportunity for users to access and make use of copyright materials in many different ways. Instead of fair use, Section 53/5(1) provides authority to the Minister of Commerce to issue additional exceptions in the form of ministerial regulation. The process of enactment and exceptions will be critically reflected in the next chapter.

⁵⁸² Patricia Akester, *The New Challenges of Striking the Right Balance between Copyright Protection and Access to Knowledge, Information and Culture* (Sweet & Maxwell 2010) 375-379.

On the basis of Section 53/5 (2) – (6) defined above, the new version of Thai anti-circumvention rules contains the same common exceptions as those existing in the former version, which include the exceptions for interoperability, encryption research, security testing, privacy protection, and law enforcement. These provisions are intended to ensure that TPMs do not unnecessarily impede lawful activities, especially those pertaining to public administration, access, innovation, and security. However, these exceptions are too rigid and narrow; they restrict the application of limitations for individual circumventions in terms of computer program research and governmental acts. The major difficulty with these exceptions is the requirement of “acquiring permission from copyright holders to engage with their works.” These conditions result in a delay in research and discourage interdisciplinary study. It seems difficult to contact multiple copyright holders who occasionally do not respond to gain permission to access the works. The exceptions might be impractical, time-consuming, and expensive. Additionally, these narrow exemptions do not cover all legitimate use and access to the protected content under the fair use provision.⁵⁸³ These conditions aim to ensure that the permitted activities do not interfere with the normal exploitation of works and harm the interest of copyright holders. Nonetheless, the potential challenges arise that the overly specific exceptions might exclude non-infringing users from engaging with the copyright works if such usage does not fall within the scope of the listed exceptions. This approach seems to increase the level of protection in favour of the copyright holders. The users' rights, however, would not be adequately protected in practice because they are likely to be overruled and unable to enjoy the privileges provided by traditional copyright law.

Further from the six exceptions and their potential impacts mentioned prior, another exception that seems to have a powerful influence on the development of Thailand is those for non-profit academic institutions (section 53/5 (7)). This exception provides some free space for non-profit educational institutions, libraries, and national archives to circumvent technological measures used by copyright holders in order to access the digital materials.⁵⁸⁴ This exception would promote the role of educational institutions to enhance the exchange of knowledge and enable libraries or archives to fulfil their roles in preserving the works and making the material available for educational purposes. It is undeniable that Thailand remains a developing country, and the opportunity to access and use creative knowledge is very important for academic enhancement as well as national improvement. This exception is likely to be stipulated to facilitate non-profit libraries, universities, and other educational organisations to engage with copyright works. While the

⁵⁸³ Ronan Deazley, ‘Taking Forward the Gowers Review of Intellectual Property: Second Stage Consultation on Copyright Exceptions’, *Submission on behalf of the Intellectual Property Foresight Forum*. Glasgow: U of Glasgow (2010) 27, 74.

⁵⁸⁴ Section 53/5 (7) of Copyright Act 2537(1994).

DMCA of the US stipulates that circumvention could be accomplished only for making a determination on purchasing or subscribing to the access, Thai law did not contain this condition, which allowed the non-profit educational institution to circumvent technological measures for non-infringing use without any legal liability. However, this approach has several difficulties and conditions. The first challenge is that the direct act of circumvention can be done only when copyright work cannot be accessed in other ways.⁵⁸⁵ This exception allows academic organisations to deactivate access control technologies only if the copyright work is not available in another format. In general, the exceptions do not permit the non-profit educational organisation to freely obtain the materials in the most convenient way, but they do require the academic institutes to first make an effort to find the work existing in alternative forms that are not subject to technological measures. And they are entitled to circumvent technological measures only in the case that the other formats of work are no longer available. These conditions cause a huge burden for non-profit libraries and other educational institutes to primarily rely on copies of work existing in less convenient or old-fashioned forms (such as paper-based or hard copies) rather than in an electronic way. The use of copyright material in the old version might be very expensive, an inconvenience, and time-consuming.⁵⁸⁶

In addition, there is ambiguity in terms of the legal definitions of education, archives, and libraries; further detail concerning the level or type of education was not provided. The educational activities permitted by this provision remain unclear as to whether or not the preparation for teaching and other learning activities are covered by these exceptions. Without guidelines for interpretation and implementation, the lecturer, teacher, and even the student might be at risk of being penalised when they circumvent technological measures to engage with the learning content. In this regard, it seems meaningful to interpret this exception to cover all levels of non-profit educational institutions, which include schools, universities, other educational organisations, adult education, and distance learning. This privilege should be provided to a wide range of non-commercial teaching activities, including in-classroom instruction, preparation for lectures, students' personal study, and learning activities taken as part of class. Generally, teachers should be permitted to access and copy limited portions of materials published online, such as digital music or movies that could be recorded for educational purposes. However, to prevent excessive reproduction and misuse for piracy, the CMOs, public libraries or other agencies may govern this engagement by the eligibility

⁵⁸⁵ Section 53/5 (7), *ibid.*

⁵⁸⁶ Akester (n 12) 63-64.

of the user and purpose of use; these relevant organisations could additionally determine the amount of work provided under these privileges.⁵⁸⁷

In terms of technological interaction, the library and educational exception under the current Copyright Act can only be applied with the anti-circumvention obligation, but it cannot be used as a defence to a claim against the prohibition on preparatory activities. Thus, non-profit libraries or academic institutions are completely prohibited from producing or providing any technical tools or services used to circumvent a technological measure. With this regard, the interesting question arises: without any aid from devices and services necessary for circumvention, it is likely to be very difficult for non-profit educational organisations and libraries themselves to access academic databases by circumventing the technological measures.⁵⁸⁸ Especially the libraries and academies in developing countries like Thailand, which are lacking in staff with the technical skills to decrypt the technological devices used to protect the works, teachers, researchers, and students might be definitely excluded from the digital environment. The current exemption seems to be really limited in practice. In brief, it could be argued that the scope of limitation in connection to educational purposes under the fair use provision is likely to be narrowed down by the exception of anti-circumvention rules. Because the educational exceptions under traditional copyright law are replaced by a narrower scope of exceptions in relation to TPMs and cannot be applied to claims against anti-circumvention rules, the library and educational institutions can no longer exercise their rights under the broader scope of fair use provisions. Additionally, the provision of TPMs under the new draft has the possibility of strictly regulating access to information and knowledge essential for educational development. This impact could become a significant obstacle to the policies promoting creativity and academic research in Thailand.

The issue of research exceptions necessitates a different analysis because it plays key roles in creativity, innovation and the free flow of information. Nonetheless, the provision for the research did not exist in the list of exceptions to anti-circumvention rules in the Copyright Act of Thailand. Although there is not an explicit recognition and codified stand-alone research exception in the Act, the explanatory guidance of the IP Department supports the existence of such research exceptions. There are research-related uses in secondary law, which is the implementation of section 53/5(1), that allow the minister of commerce to introduce additional exceptions in the form of the ministry's announcement covered in Chapter 4. Research

⁵⁸⁷ Wang (n 19) 207-209.

⁵⁸⁸ Ashok (n 521) 113-114.

exceptions are established by clause 5 of the ministry announcement issued under the administrative procedure framework, rather than being explicitly stated as an independent exception at the primary legislation level.⁵⁸⁹ The absence of a clearly defined research exception evidences a greater priority to the copyright holder than to the accessibility of material for the exchange of knowledge. It additionally reveals that there are limited national doctrinal sources discussing the research exception as a separate legal category, which leads to an unclear legal concept, scope and relative status of research exceptions under the Copyright Act of Thailand. The lack of an adequate and clear scope for this privilege creates the uncertainty of the exceptions. The student or individual researcher might fear the legal liability to exercise their privileges and consequently exclude digital information, especially when this exception is not explicitly stated at the level of primary law but is instead represented in secondary legislation. Because of this, the existing framework is reducing the effectiveness of research activities in the digital age.

Therefore, it is arguable that the exceptions to anti-circumvention rules are narrow and detailed. The users are allowed to circumvent technological measures to access knowledge in narrowly limited situations, with conditions intended to safeguard the copyright holder's legitimate interests. The amendment precludes fair use or copyright exceptions from anti-circumvention rules. The narrow scope and excessively specific list of exceptions, combined with the absence of a traditional fair use, may empower copyright holders to lock up the digital works. It may not be enough to prevent an adverse impact on accessing creative information. If this new draft continues, non-infringing users will be overridden and probably precluded from the digital world. In such an aspect, there is a high probability that the public is impeded from accessing academic materials and copyright works; this approach might hinder the educational development in Thailand.

3.1.2 Insertion Exceptions to Preparatory Activities and Effectiveness

Aside from the new emerging anti-trafficking provision in Thailand, the parliament also made an effort to specify the boundary of enforcement by providing overly few sets of exceptions regarding preparatory activities. According to the new version of Thailand's copyright legislation, two limitations listed in Section 53/7 only apply to anti-trafficking devices used to protect the exclusive rights of copyright holders. It stated that the act on manufacturing and distribution of services and devices used to violate the technological measures and make such post-access control technologies ineffective shall, in the following cases, not be

⁵⁸⁹ Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <https://fb.watch/s2W8qya_Vw/> accessed 9 September 2022.

considered a circumvention of technological measures: firstly, to analyse the necessary components of a computer programme for use with other computer programmes.⁵⁹⁰ Secondly, for enabling the governmental officers to implement the law and other necessary action to protect the country, national security, or similar purposes.⁵⁹¹ Therefore, in the context of these two specific circumstances, this section allows the distribution of devices used to circumvent post-access control technologies. The argued technologies are installed by copyright holders to prevent duplication and other forms of copyright infringement. Furthermore, the additional exceptions prescribed in Section 53/8 are the limitations on the anti-trafficking of services, products, or equipment used to violate the control-access measures. In the following cases, it shall not be considered an infringement of technological measures, firstly, to analyse the necessary components of a computer programme for use with other computer programmes.⁵⁹² Secondly, it allows the distribution of services and tools used to circumvent technological measures solely for the benefit of research, analysis, and finding the defects of encryption technology. However, the doer must acquire the copyrighted work or copy in a lawful manner and have made good faith efforts to obtain permission from the copyright owner.⁵⁹³ Thirdly, it is the exception for the specific purpose of testing, examining, or modifying computer security systems, computer systems, or a computer network with the permission of the computer owner, computer systems, or computer networks.⁵⁹⁴ Finally, this approach permits the trafficking of circumvention devices, which allow the official with legal authority to enforce the laws, take necessary action to protect the country, ensure national security, or perform other similar purposes.⁵⁹⁵ That said, it could be noted that this section is dealing with control-access measures. If technologies are employed by copyright holders to control accessibility, the manufacturing and providing of services or tools used to violate such technological measures are permitted in certain circumstances.

Analysis of Exceptions to Preparatory Activities under Sections 53/7 and 53/8

As can be seen from the specific exceptions relating to preparatory activities explored above, the Copyright Act has established a specific list of limitations that authorise the trafficking of circumvention tools in a particular situation. These exceptions involve encryption research, reverse engineering, and governmental activities. These provisions' main goal is to enable necessary devices to be available to circumvent

⁵⁹⁰ Section 53/7 (1) of Copyright Act 2537(1994).

⁵⁹¹ Section 53/7 (2), *ibid.*

⁵⁹² Section 53/8 (1), *ibid.*

⁵⁹³ Section 53/8 (2), *ibid.*

⁵⁹⁴ Section 53/8 (3), *ibid.*

⁵⁹⁵ Section 53/8 (4), *ibid.*

technological measures to facilitate public administration, cybersecurity, and innovation. Their goal is to ensure that TPMs do not interfere with legitimate technological development or the operation of administrative organisations. It is noteworthy that Sections 53/7 and 53/8 allow the distribution of the equipment, enabling the circumvention of technological measures in excessively limited circumstances. The permitted activities are excessively narrower than copyright exceptions. The circumvention devices may no longer be available for non-infringing uses. The users may not have the necessary devices to circumvent use controls to engage with the digital works under copyright exceptions. This makes the law meaningless in practice. Similar to the exceptions for direct act of circumvention, those applied to preparatory activities impose stringent restrictions, such as those regarding lawful acquisition of the work, prior good-faith attempts to acquire approval, or authorisation from relevant stakeholders. These combined requirements result in a strict framework that could be challenging to implement in practical situations. The existing exceptions are unlikely to be able to resolve the harmful impact of anti-circumvention regulation.

For TPMs' interaction, although Section 53/5 legally allows for circumvention in some situations, its practical effectiveness is severely limited. It is important to note that some essential exceptions only apply to direct acts of circumvention; they do not apply to anti-trafficking devices, especially the library and educational exceptions which are focused on by this thesis. The list of exceptions applied to preparatory activities seems to be narrower than those issued for the direct act of circumvention and fair use provisions. Due to the rigid exemptions for the preparatory act, most activities relating to manufacturing a product or offering a service for technical circumvention are considered unlawful acts, and all of the libraries and academic organisations in Thailand are prohibited from engaging with circumvention devices and services. This may increase some level of legal protection for copyright owners and create the severe danger of digital lockup in the network environment. The serious difficulty might be that, without any assistance from the services and devices used for circumvention, libraries and educational institutes in developing countries cannot access copyright materials. More specifically, in the context of Thailand, most relevant organisations remain lacking in people or services that have adequate technological and decryption knowledge to hack the technological measures by themselves. It would be very challenging for academic institutes and researchers themselves to bypass technological measures. Hence, Thailand is likely to be unable to improve its national educational system under the anti-circumvention rule and the existing exceptions, as acts in connection with the manufacture or providing of circumvention services are mostly banned. There is a high potential that digital works available for academic sectors and other non-infringing

uses may be impossible if devices to circumvent technological measures cannot be obtained. The exceptions to anti-trafficking rules will be impractical, particularly at the stage of implementation.

With regard to three-step test compliance, these exceptions are designed to serve the technical innovation and public interest in very specific circumstances. They include the requirement on authorisation or limits for authorised access to protect the interest of the copyright holder and ensure that the trafficking of circumvention devices does not harm the usage of the works by copyright holders. They comply with the three-step test. Therefore, it is undeniable that anti-devices rules can provide more effective protection against copyright infringement, but in the absence of proper exceptions, the copyright holders could potentially gain over legal protection. In addition, due to the fact that circumvention devices cannot be legally acquired, public libraries and educational development would be overridden in practice. Thus, anti-trafficking might create serious challenges to the balance between the interests of the public and copyright holders. Because of the complexities and challenges posed by the new anti-circumvention rules, it is necessary for Thailand to take another step to revise and reform these provisions by studying and analysing the best practices that address the problem surrounding digital copyright legislation from other countries. The legal mechanism and solutions might be adapted to prevent or at least decrease the legal difficulties and adverse impacts of the TPMs on non-infringing uses under exception and fair use provisions, and at the same time enable the exceptions of anti-circumvention rules to develop together with the other appropriate measures to maintain the balance of interest between copyright holders and the public.

3.2 TPM Exceptions in Other Jurisdictions; Global Knowledge Access Paths

Due to several problems embodied in the exceptions to anti-circumvention rules under the Thai Copyright Act, it is important to investigate the legal models from other jurisdictions to gain experience and learn about the proper list of exceptions. Therefore, the exceptions to the direct act of circumvention and the preparatory act under the WCT, the E.U. Directive, the DMCA of the US, the CDPA of the UK, and the Indian Copyright Act will be critically evaluated hereafter.

3.2.1. The WCT's Challenges on Designing Proper Exceptions

The WCT does not contain any special limitations on anti-circumvention provisions. The treaty does not reduce or include any exception to the anti-circumvention provisions; it only generally repeats the three-step test of the Berne Convention.⁵⁹⁶ Likewise, TRIPS has the objective in mutual benefits of right's holder

⁵⁹⁶ Article 10 of The WIPO Copyright Treaty.

and user's interest by promote effective protection and implement of intellectual property law to enhance technological development. TRIPS also promote the technological transfer and distribution of knowledge for social welfare.⁵⁹⁷ In this aspect, there are ongoing arguments about the exceptions under the WCT in order to maintain the balance between the copyright holder and the public. The WCT allows the contracting party to apply copyright exceptions to the national anti-circumvention rules to reduce the adverse impact on accessing knowledge. Hinze emphasised that the lack of connection between TPMs and existing fair use under national copyright law may overrule non-infringing uses. If there is no obligation requiring the copyright holder to supply necessary devices or other effective mechanisms to facilitate existing domestic exceptions, the privileges become non-existent. As a result, the fair use provisions are potentially precluded in the digital world. The challenge concerning access to knowledge for legitimate purposes is left to national legislators to determine specific exemptions that accommodate the exercise of limitations with respect to digital works.⁵⁹⁸ However, it is important to note that the fifth paragraph of the WCT's preamble requires the member states to recognise the need to preserve a balance between the larger public and the rights of authors, particularly in terms of access to information, education, and research, as contained in the Berne Convention.⁵⁹⁹ Therefore, this treaty has the main aim of maintaining a balance that has already existed under the Berne Convention.⁶⁰⁰

According to the WCT, the three-step test is applicable to the new economic rights that exist in the online world, especially the rights of renting, distributing, and making the content accessible to the public.⁶⁰¹ Rosati noted that the Berne Convention was upheld and enhanced by the WCT, which also maintains the fundamental principle of making the work available to the public in the digital era.⁶⁰² Samartzi asserted that the copyright law and exceptions have basically involved the balance of interest between the

(1) Contracting Parties may, in their national legislation, provide for limitations of or exceptions to the rights granted to authors of literary and artistic works under this Treaty in certain special cases that do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the author.

(2) Contracting Parties shall, when applying the Berne Convention, confine any limitations of or exceptions to rights provided for therein to certain special cases that do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the author.⁸

⁵⁹⁷ Article 7 of Agreement on Trade-Related Aspects of Intellectual Property Rights.

⁵⁹⁸ Hinze (n 386) 792-815.

⁵⁹⁹ The WIPO Copyright Treaty, preamble.

⁶⁰⁰ Samartzi (n 62) 70 -77.

⁶⁰¹ Tanya Aplin and Lionel AF Bently, 'Displacing the Dominance of the Three-Step Test: The Role of Global, Mandatory Fair Use' [2018] *Comparative Aspects of Limitations and Exceptions in Copyright Law* (CUP, 2018)., University of Cambridge Faculty of Law Research Paper 15.

⁶⁰² Eleonora Rosati, 'When Does a Communication to the Public under EU Copyright Law Need to Be to a "New Public"?' (2020) 6.

competing parties. The legal policies of fair use are confined to the offline world, but these mechanisms should be adapted and enforced against the regulation on TPMs. In doing so, the existing balance under the Berne Convention would be maintained in an online environment, and the users' interests in accessing and using digital copyright works might continue to be taken into account.⁶⁰³ Okediji suggested that Article 10 of the WCT explicitly permitted the member states to devise new exceptions necessary for the digital environment. The countries are entitled to construct exceptions accommodating access to digital contents that might not have been previously recognised under the traditional copyright legislation. The states should take positive steps against an expansion of rights in favour of the copyright holder in order to maintain public interest in the domestic system.⁶⁰⁴ Based on these arguments concerning proper exceptions, the overboard TPMs as well as the absence of a precise connection between anti-circumvention provisions and copyright infringement would make exceptions under traditional copyright law unenforceable. It is necessary to recite specific exceptions to the national anti-circumvention rules in order to ensure fair balance and meet the policy goals of each country.⁶⁰⁵ The broad language of WCT may aim to provide some freedom for members to decide the exceptions to anti-circumvention rules in accordance with their contexts.

3.2.2 The E.U. Directive Exceptions, Are Options Sufficient for Access?

The E.U. directive seeks to maintain the balance between the interests of the copyright holder and the public by providing exceptions and limitations under Article 5 and establishing the provision of appropriate measures that allow member states to design their own mechanisms in order to facilitate non-infringement uses under particular exceptions under Article 6.4.⁶⁰⁶ The list of exceptions provided under Article 5 of the directive is optional; the member states are not required to regulate all of these exceptions to national law; they are able to have discretion to enact all of them or some of them at the domestic level according to their social needs.⁶⁰⁷ However, it is important to note that not all limitations will be treated equally; there are three types of limitations characterised by the primary objective and the contribution to society.⁶⁰⁸ The first category of limitation concerns social interest and public policy. This first group includes photocopying (article 5.2(a)); reproduction or use by libraries, educational institutions, or museums without any

⁶⁰³ Samartzi (n 62) 70 -77.

⁶⁰⁴ Okediji (n 5) 25-27.

⁶⁰⁵ Hinze (n 386) 792.

⁶⁰⁶ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁶⁰⁷ Dusollier (n 418) 473-474.

⁶⁰⁸ Fernández-Molina (n 394) 53-59.

commercial purpose (article 5.2(c)); ephemeral recordings by broadcasting organisations (article 5.2(d)); reproductions of broadcasts by social establishments without any commercial purposes, such as hospitals or prisons (article 5.2(e)); use for teaching or scientific research (article 5.3(a)); uses for people with a disability (article 5.3(b)); and use for public security or administrative bodies, parliamentary, or judicial proceedings (Article 5.3(e)).⁶⁰⁹ If the exceptions are selectively established in domestic legislation, member states have to ensure that the users can exercise their privileges.⁶¹⁰ The countries are obliged to effectively enforce such exceptions, by encouraging the interested parties to negotiate and issue acceptable voluntary agreements.⁶¹¹ In case the absence of a voluntary measure or the copyright holder fails to make the protected materials available to the users, the member states are obliged by Article 6.4 to intervene in order to take any appropriate measure that facilitates the users to exercise their rights and make the valuable works accessible among legitimate consumers.⁶¹² In short, if the works are protected by technological measures that create difficulty for users under the first group of limitations to exercise their rights, the member states are obliged to adopt the appropriate measures that help the users access information.

The second category of limitation is private copying. It is undeniable that this type of exception remains problematic in terms of implementation and enforcement at the domestic level. The regulation of reproduction for private use is significantly diverse in different nations because there are some arguments that the exception of private copying might reduce the effectiveness of anti-circumvention provisions. This approach may provide over-privileged in favour of consumers. Thus, the member states enjoy the freedom to exercise discretion on whether they would implement any measures to facilitate the exception of private reproduction provided by Article 5.2(b).⁶¹³ Karapapa highlighted that private or non-commercial uses remain an ongoing debate because this exception is not mandatory under the EU directive. It was not well established among the domestic legislators in terms of the scope and legal concept of private copying. The user recognised that they have the freedom to make private copies under the exceptions, while the copyright holders' efforts to technically and contractually restrict the private copying. The conceptual boundaries of acceptable private copying, especially the private and non-commercial nature of the use,

⁶⁰⁹ Section 5.2 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁶¹⁰ Basler (n 270) 13-16.

⁶¹¹ De Werra (n 334) 29-30.

⁶¹² Dusollier (n 418) 470-475.

⁶¹³ Fernández-Molina (n 394) 56-59.

cannot be interpreted properly and are typically unclear in the digital context. This conflict has been enhanced with the recent development of digital technology and the internet. The extent of user freedom is being questioned since the appropriate exception of private copying is being challenged and the legal nature of this exception is uncertain. It is important to note that private use is related to user freedom through the exhaustion concept; it should be maintained under privacy considerations. Karapapa argued the legal nature of private copying should be interpreted as a valued privilege that should be enforceable against technical restrictions; the justification for a private copying exception remains unchanged in the digital world.⁶¹⁴ On the basis of this exception, member states are able to intervene on the condition that the private copying is restricted by technological measure and the copyright holder has not provided any means available for personal use. This reproduction for private use has to be done without direct or indirect commercial purpose, and fair compensation should be paid in order to prevent the economic loss of the copyright holder.⁶¹⁵ In addition, the case of *ACI Adam v. Stichting de ThuisKopie* explained the scope and application of Article 5(2)(b), this exception excludes making copies from illegal sources; only the work gained from lawful sources falls within the privileges of reproduction for private use.⁶¹⁶ Article 6.4, paragraph 2, additionally allowed the right holders to adopt adequate measures regarding the number of copies.⁶¹⁷ Therefore, the member states are not obliged to take appropriate measures to protect the interests of private users; it remains their discretion to decide whether to make personal reproduction possible under the second category of exception.

Finally, the third category of exception exists in Article 5 of the directive but is not included in Article 6.4. The Member States are not permitted to take any appropriate measure, and the copyright holder is not obliged to enable the legitimate user to exercise their right under the third group of exceptions.⁶¹⁸ Therefore, it should be noted that the provision of facilitating users to engage with digital works does not

⁶¹⁴ Stavroula Karapapa, *Private Copying* (Routledge 2012) 1.

⁶¹⁵ Article 5.2, Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁶¹⁶ *ACI Adam BV and Others v Stichting de ThuisKopie, Stichting Onderhandeligen ThuisKopie vergoeding*, Case C-435/12 (2014); See also CURIA, 'JUDGMENT OF THE COURT (Fourth Chamber) 10 April 2014 *ACI Adam BV and Others v Stichting de ThuisKopie, Stichting Onderhandeligen ThuisKopie vergoeding*' (InfoCuria Case-law, 10 April 2014) < <https://curia.europa.eu/juris/document/document.jsf?text=&docid=150786&pageIndex=0&doclang=EN>> accessed 15 May 2022.

⁶¹⁷ Article 6.4, Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

⁶¹⁸ Fernández-Molina (n 394) 56-59.

cover all of the exceptions under the directive and national legislation. The voluntary measures and appropriate measures will be discussed in greater detail in the following chapter.

Discussion on Exceptions under the EU Directive

The EU directive contains a list of limitations to the reproduction right without any additional exceptions that could be enacted by Member States to guarantee access to the knowledge of the users. This is likely to be a negative development for the users because their ability to access the information is potentially overruled by overboard anti-circumvention protection.⁶¹⁹ The act of circumvention is prohibited even for non-infringing uses, and the users would usually be required to pay remuneration to the copyright holder in exchange for engaging with the works, irrespective of whether or not such an act is allowed by copyright exceptions. It could be said that digital works become a product rather than an educational or cultural object, whose diffusion is critical to the evolution and improvement of living standards.⁶²⁰ In terms of the balance between the legal protection of technological measures and the public interest under the EU directive, the laws prohibit any acts done without authorisation from "the right holder of any copyright. This model may be interpreted to mainly rely on the permission of the right holder. Lucie Guibault and colleagues claimed that Article 6 of this legislation fails to establish a connection between the actions of circumvention and copyright infringement. In other words, removing the technological measure might be unlawful, regardless of whether or not the purpose of the circumvention falls within the scope of the copyright exception.⁶²¹ The copyright exceptions became irrelevant with the anti-circumvention provision; the beneficiaries mostly rely on a certain level of individual authorisation.⁶²²

Additionally, the EUCD is likely to expand the scope of protection in favour of copyright holders; these provisions establish a new sui generis law that prevents the circumvention of access control technologies, regardless of whether these controls are employed to protect their exclusive rights.⁶²³ These access controls might be excessively exploited to impede the lawful exercises that exceed the exclusive rights of copyright holders; this could be called "paracopyright." As a result, copyright holders are currently able to expand their control over non-infringing and legitimate uses of their materials. This protection against

⁶¹⁹ Samartzi (n 62) 192-195.

⁶²⁰ *ibid* 192-195.

⁶²¹ Lucie Guibault, Guido Westkamp and Thomas Rieber-Mohn, 'Study on the Implementation and Effect in Member States' Laws of Directive 2001/29/EC on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society' [2007] Report to the European Commission, DG Internal Market, February 2012 100-101.

⁶²² Samartzi (n 62) 192-195.

⁶²³ *ibid* 172.

circumvention appears to be extended far beyond those recognised by copyright law and the criteria of the WIPO Treaties.⁶²⁴ It is arguable that this regulation overlooks the fact that acts of circumvention may be carried out for legitimate purposes, and the non-infringing user might be precluded from accessing digital works.⁶²⁵ Additionally, Guibault also critically asserted that the technological measure might be installed for purposes other than copyright protection, such as protecting the market share of the copyright holder. The lock-in technologies would prevent consumers from competing by locking them into specific vendors or manufacturers' device-content-ecosystems.⁶²⁶ This provision might mainly provide legal protection to technology developers' and content disseminators' business models, which leads to monopolies and less ability for users to affordably purchase content. Therefore, the main imbalance between the copyright holder and the public is restricting the exercise of certain copyright exceptions, making the work available on-demand under contractual terms, and the emergence of monopolies in the digital world.⁶²⁷

3.2.3 The DMCA Restrictive Exceptions: Should Thailand Follow?

Pursuant to the DMCA, it contains seven limitations to the anti-circumvention rules; these specific exceptions are established in sections 1201(d) to (j), which include the exception for non-profit libraries and educational organisations (section 1201(d));⁶²⁸ the exception for preventing minors from accessing certain content on the internet (section 1201(h));⁶²⁹ and the exception of personal privacy, which allows the users to deactivate access control technologies when the measures disseminate or collect the personally identifying information of online users (section 1201(i));⁶³⁰ the exception for governmental or administrative activities (section 1201(e));⁶³¹ the exception for reverse engineering or creating interoperable computer programmes (section 1201(f));⁶³² the exception for encryption research to identify and analyse the flaws of encryption technologies (section 1201(g));⁶³³ and the exception for security testing of a computer or computer system (section 1201(j)).⁶³⁴ It is arguable that the DMCA provides an excessively

⁶²⁴ *ibid* 172.

⁶²⁵ Guibault, Westkamp and Rieber-Mohn (n 621) 100-101.

⁶²⁶ *ibid* 100-101.

⁶²⁷ *ibid* 100-101.

⁶²⁸ Section 1201(d) of the Digital Millennium Copyright Act.

⁶²⁹ Section 1201(h), *ibid*.

⁶³⁰ Section 1201(i), *ibid*.

⁶³¹ Section 1201(e), *ibid*.

⁶³² Section 1201(f), *ibid*.

⁶³³ Section 1201(g), *ibid*.

⁶³⁴ section 1201(j), *ibid*.

narrow and rigid list of exceptions. It seems to be insufficient to accommodate non-infringing users to use or access copyright works and overrule educational uses and technological innovation.⁶³⁵

Legal Issues Concerning Relationship between TPMs under the DMCA and Fair Use

Although, during the process of enactment, members of Congress raised their concern that the DMCA might have an adverse impact in connection with the accessibility and availability of copyright works for non-infringing users.⁶³⁶ For this reason, the DMCA introduced Section 1201(c)(1), which could be considered a legal mechanism aimed at preserving fair use provisions. This section provides a clear provision that nothing in the anti-circumvention rule shall affect lawful rights, remedies, or exceptions to copyright infringement, including the provision of fair use.⁶³⁷ Theoretically, the DMCA does not prohibit consumers who circumvent copy control technologies for non-infringing purposes. These approaches are likely to confirm that the users could enjoy their rights with the exception of copyright laws.⁶³⁸ However, there is a lack of clear provisions under the DMCA that allow the users to circumvent technological measures to exercise any activities permitted by the fair use doctrine. This act did not establish any provisions to implement the fair use of anti-circumvention rules.⁶³⁹ It should be kept in mind that Section 1201(c)(1) seems to be meaningless in practice because the necessary circumvention devices are banned by the DMCA, and fair use might not be applied to defence against the anti-trafficking device. In this context, it seems to be a real challenge for non-technically skilled users to gain access to or copy the protected material without the necessary circumvention tools available to facilitate these activities.⁶⁴⁰

With regard to the case laws, the court explained that fair use would no longer reassure the right of the user in a digital environment to enjoy contents on the most convenient platform, and technological measures could interfere with the capability of the user to access and engage with online works under the doctrine of fair use.⁶⁴¹ Based on *Universal City Studios v. Corley*, the court confirmed that fair use provisions are not rejected by the DMCA, but fair use is not interpreted to guarantee the users access to copyright works for reproduction content by the most convenient technique or preferred method and in the original

⁶³⁵ Hinze (n 386) 798-799.

⁶³⁶ *ibid* 798-799.

⁶³⁷ Section 1201(c)(1) of the Digital Millennium Copyright Act of 1998.

⁶³⁸ Hinze (n 386) 798-804.

⁶³⁹ Ashok (n 521) 111-113.

⁶⁴⁰ Hinze (n 386) 798-802.

⁶⁴¹ *United States v. Elcom Ltd.*, 203 F. Supp. 2d 1111 (N.D. Cal. 2002).

format.⁶⁴² Moreover, many judgements have identified that anti-circumvention rules under the DMCA are independent of copyright infringement. The courts focused solely on whether or not effective access-control measures had been deactivated. The reasons or objectives of hackers are unlikely to be considered, including whether they circumvent technological measures to engage with the works for fair use purposes. Consequently, if a doer bypasses access-control devices to exercise their rights covered by copyright exceptions, the legal liability under the DMCA would be placed on circumventors, but they would not be liable for copyright infringement.⁶⁴³ Due to a number of difficulties, some litigants have stated that the fair use provision is the basic principle of copyright legislation; it is constitutionally mandated to create a balance between the copyright holder and the public. Therefore, the U.S. Congress would not be entitled to eliminate fair use defences that could be applied against the prohibition of circumvention.⁶⁴⁴

Evaluative Reflection on the DMCA's Exceptions and its Impact on Educational Use

It is arguable that the DMCA introduces a specific list of exceptions that are likely to be much narrower than those contained in copyright legislation. These excessive prohibitions against circumvention, together with the narrow exceptions, might create a digital lock-up and enable the copyright holder to preclude the fair user from accessing copyright works.⁶⁴⁵ In the language of exceptions on research, the privileges are limited to reverse engineering and encryption technology, but the exceptions do not cover other fields of research. Ashok pointed out that the exceptions are established with strict wording. They are subject to specific conditions and detailed criteria. The legislative language is unlikely to maintain the connection between circumvention of technological measures and copyright infringement. As a result, these exceptions could be applied in very limited situations and exclude a wide range of non-infringing activities from the anti-circumvention rules.⁶⁴⁶

In terms of the exceptions to reverse engineering, these three categories of activity are excluded from liability for TPMs. First, it allows anyone to deactivate access control measures to examine and analyse components for making independent computer programmes work or interoperate with other programmes, and the elements have not been available to them. The second exception permits a person to invent and

⁶⁴² Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001).

⁶⁴³ Ashok (n 521) 111-113.

⁶⁴⁴ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 34-35.

⁶⁴⁵ Besek (n 7) 467-469.

⁶⁴⁶ Ashok (n 521) 121, 132-135.

use hacking devices to achieve interoperability; this act has to be conducted without copyright infringement. Additionally, the information learned from these permitted activities or devices could be shared with others solely to achieve interoperability. It is important to note that interoperability under the DMCA refers to the capacity of computer programmes to share or exchange information and to use the information that has been transferred.⁶⁴⁷

With regard to the Exception for Encryption Research, this provision does not exempt all areas of research from legal liability. Rather than a wide range of academic fields, it affords privilege only for encryption research, which was defined as any investigation into the weaknesses, vulnerabilities, and flaws of encryption software to enhance the development of this technology. Additionally, the DMCA also provides a definition of encryption technology as scrambling and descrambling of content by employing algorithms or mathematical formulas. The further condition of this exception is the qualification of the person who engages in encryption research, which is narrowly restricted to those who are experts in the field of encryption. There is a requirement that an eligible person study, train, work with, or have experience in encryption technology in order to fall within the scope of the exception. Moreover, it permits someone to violate a technological measure placed on a copy of published materials in good faith.⁶⁴⁸ There are several factors that have to be taken into account when determining whether someone conducts encryption research with good faith. These include the manner in which the results of research are used, whether the information gained from research contributes to the advancement of encryption technology instead of facilitating copyright infringement, and whether the research's findings are communicated to the copyright owner.⁶⁴⁹ This provision is also subject to the requirement that the person legally got the encrypted copy of work; the circumvention or manufacturing or using circumvention devices are necessary to achieve encryption research; the person made a good faith attempt to acquire permission prior to the circumvention; and the activities do not infringe copyright law or violate other laws in relation to privacy and security.⁶⁵⁰

Gasaway claimed that the DMCA provide only shopping right to non-profit libraries and educational institutions, these bodies are able to access works for the purpose of good faith in deciding whether or not to pay for the materials. This exception is likely to be limited and narrowed; the libraries and educational

⁶⁴⁷ Section 1201 (f) of the Digital Millennium Copyright Act of 1998.

⁶⁴⁸ Section 1201(g) (3) (B), *ibid.*

⁶⁴⁹ Ashok (n 521) 118-120.

⁶⁵⁰ Section 1201(g) (3) of the Digital Millennium Copyright Act of 1998.

institutions would be exempted from legal liability solely where they meet these two conditions: (1) the bodies are allowed to access it for a limited period of time to make a determination about purchasing access, and (2) the access is not exploited for commercial purposes. Additionally, this approach would be applied only to the direct act of circumvention, but since the anti-trafficking devices did not contain this limitation, it could be said that this privilege is the shopping right for these bodies. This exemption seems practically useless because publishers or content providers normally allow libraries and educational organisations to gain access to the works under very restrictive conditions.⁶⁵¹ These bodies could actually access and use the material to make a decision whether or not to make a payment to obtain the work; these conditions would include limitations on the person who is able to use the work during the period of testing and the length of time that the use is available. In this context, the libraries and educational institutions do not have to circumvent the technological measures to get the same access that they could gain without the risk of legal liability.⁶⁵² Due to these rigid limitations of the anti-circumvention rule, the fair use provision is no longer applied to these prohibitions. Thus, this provision might be abused to block access to copyright content, and non-infringing users are likely to be overridden regardless of whether or not such a utility falls within the scope of an exception under traditional copyright laws.⁶⁵³

3.2.4 The CDPA Exceptions and Educational Privilege Preservation Strategy

Even though Section 296ZA bans the circumvention of technological measures, this prohibition does not apply if someone circumvents effective technological measures for the purpose of cryptographic research, unless doing so or disclosing information resulting from that research negatively impacts the rights of the copyright holder. The CDPA also provides specific exceptions to the prohibition on services and devices designed to violate effective technological measures. These exemptions include any action conducted by or on behalf of any intelligence services or law enforcement institutions for the interest of the nation's safety, for the purpose of detecting or deterring crime, carrying out a prosecution, or investigating an offence.⁶⁵⁴

In addition to these exceptions, the UK government considers the importance of academic development, the exchange of knowledge, and freedom of expression. Section 296ZE of the CDPA establishes administrative mechanisms to enable the users to engage with the works and implement the exceptions

⁶⁵¹ Gasaway (n 11) 286-288.

⁶⁵² *ibid* 286-288.

⁶⁵³ Fernández-Molina (n 394) 49-52.

⁶⁵⁴ Section 296ZA of Copyright, Designs and Patents Act 1988

under copyright legislation.⁶⁵⁵ This measure covers a wide range of exemptions to encounter the changing of technologies by covering parody, libraries, and archives, as well as educational use. These privileges are implemented in the UK anti-circumvention rules in order to enhance flexibility and balance in the intellectual property system by allowing the user to access copyright material in a manner that does not endanger the interests of copyright holders.⁶⁵⁶ Moreover, the government recognises that technological measures could overrule permitted activities under copyright limitations, and lawful users are unable to access information due to the use of an effective technological measure, and these privileges should be respected by content creators and technology.⁶⁵⁷ Consequently, the legislators established a significant link between anti-circumvention provisions and copyright infringement; the technological measures would be protected only when they were used to protect the copyright content. The exceptions specified by traditional copyright legislation would be considered the privileges of the users, and these exceptions are implemented through the complaint process. The permitted acts applicable to anti-circumvention rules under the CDPA include private study and research (section 29), copies for text and data analysis in order to conduct non-commercial research (section 29A), the privilege for disabled persons to make copies of materials for personal use (section 31A), the exception for authorised bodies to make and supply accessible copies (section 31B), and the exception for authorised bodies to make and supply intermediate copies (section 31BA). The CDPA also recognises the importance of academic development by containing the exception for educational establishments involving illustration for instruction (section 32), making records by educational institutions of broadcasts (section 35), and the exception for educational institutions to reproduce and use the extracts of works (section 36).⁶⁵⁸

In addition, there is a list of privileges in favour of libraries to fulfil their job; these would include the reproduction by librarians to supply single copies to other libraries (section 41), the reproduction by librarians for replacement copies of works (section 42), the reproduction by librarians for single copies of published materials (section 42A), and the reproduction by librarians or archivists for single copies of unpublished materials (section 43). In terms of public policies and other purposes, the CDPA allows to make copies of work required as a condition of export (section 44), the exception for parliamentary and judicial

⁶⁵⁵ Ashok (n 521) 106-108.

⁶⁵⁶ Akester (n 12) 26-28.

⁶⁵⁷ *ibid* 26-28.

⁶⁵⁸ Intellectual Property Office, 'Guidance on the technological protection measures (TPMs) complaints process' (GOV.UK) < <https://www.gov.uk/government/publications/technological-protection-measures-tpms-complaints-process/guidance-on-the-technological-protection-measures-tpms-complaints-process>> accessed 9 February 2023.

proceedings (section 45), the exception for royal commissions and statutory inquiries (section 46), the material open for inspection by the public or on the official register (section 47), the material communicated to the Crown taking part in public business (section 48), the public records (section 49), and any acts that have been done under statutory authority (section 50). The CDPA also provides an exception in relation to the entertainment sector, which includes recordings of folksongs (section 61), incidental recording for broadcast purposes (section 68), recording for purposes of control of broadcasts and supervision (section 69), recording for time-shifting purposes (section 70), the exception for photographs of broadcasts (section 71), and recording of broadcasts for archival purposes (section 75).⁶⁵⁹ Finally, Section 296ZEA of the CDPA provides a remedy where technological measures prevent personal copying. This provision applies if the copyright holder uses technological measures to prevent a person from making copies of copyright material for personal use or limit the quantity of personal copies that might be made.⁶⁶⁰ In this context, it could be said that the complaint process enforces a wider range of exceptions to anti-circumvention legislation than those existing in the DMCA. These limitations are likely to prevent the adverse effect of non-infringing use; public policies and users would be more effectively protected. This mechanism will be discussed in greater detail in the next chapter.

3.2.5 Indian TPMs' Wide Exceptions: Assessing Digital Age Appropriacy

The Indian legislators considered that the WCT contains broad wording on the type of protection for technological measures. The Member States are able to determine the scope of legal protection provided to technical devices. Moreover, the treaties also recognise the importance of accessing digital knowledge to properly maintain the balance between the interests of copyright holders and the public by offering some flexibility for countries to design appropriate exceptions to anti-circumvention rules. These privileges might include private research and non-profit educational purposes based on their domestic contexts.⁶⁶¹ In this regard, Section 65A(2)(a) states that the anti-circumvention rules shall not prevent any person from conducting anything for a purpose not expressly prohibited by the Copyright Act.⁶⁶² Generally, fair dealing or copyright exceptions under Section 52 of the Indian Copyright Act, 1957, could be applied to anti-circumvention rules. The law allows users to circumvent technological measures to engage with the works

⁶⁵⁹ Intellectual Property Office 'Guidance on the technological protection measures (TPMs) complaints process' (GOV.UK) < <https://www.gov.uk/government/publications/technological-protection-measures-tpms-complaints-process/guidance-on-the-technological-protection-measures-tpms-complaints-process>> accessed 9 February 2023.

⁶⁶⁰ Section 296ZEA of Copyright, Designs and Patents Act 1988.

⁶⁶¹ Unni (n 405) 336-340.

⁶⁶² Section 65A(2)(a) of the Copyright (Amendment) Act, 2012 of India.

for fair dealing purposes. Therefore, the users are not subject to penalty under Section 65A if their acts of circumvention of technological measures fall within the ambit of fair dealing or do not lead to copyright infringement.⁶⁶³ It is arguable that this amendment has taken advantage of the WIPO's flexibility by allowing all exceptions under traditional copyright law to apply to the prohibition on circumvention.⁶⁶⁴

According to Section 52 of the Indian Copyright Act, using certain classes of works is not considered infringement, which include the reproduction of literary, musical, dramatic, artistic, and musical materials for fair use. The exception allows the duplication of works for private use that cover research, review, and criticism. Additionally, this Act permits the copying of underlying works for reporting news or recent events, for legislative and judicial procedures, for the purpose of instruction, teaching, and education, as well as for libraries.⁶⁶⁵ As these exceptions are applied to Indian anti-circumvention rules, users are able to use all categories of works available online for purposes of research, education, reviews, and criticism.⁶⁶⁶ Disabled people can transform digital works into accessible formats; these include the exemption for non-profit libraries to preserve materials and duplication of electronic content for judicial purposes.⁶⁶⁷ An effective technological measure may be bypassed for any of the aforementioned purposes; the legislation does not impose legal liability on hackers who circumvent technological measures under the Indian copyright exception. Therefore, fair dealing provisions are applicable to TPMs and will continue to exist in the digital era.⁶⁶⁸ These would maintain the ability to access information, expand research, and engage in academic activities.⁶⁶⁹

In addition to fair dealing, the specific list of exceptions to the Indian circumvention rules is similar to those existing in the DMCA of the US, as follows: the exemption for doing anything for carrying out encryption research with the requirement that the researcher or programmer lawfully gained the encrypted copy; conducting a lawful investigation; testing the security of a computer network or computer system with the permission of its owner; doing anything to violate technical devices aimed at surveillance or identification

⁶⁶³ Verma (n 365) 25-26.

⁶⁶⁴ Unni (n 405) 340-343.

⁶⁶⁵ Ramesh (n 535) 97-98.

⁶⁶⁶ *ibid* 97-98.

⁶⁶⁷ Verma (n 365) 25-26.

⁶⁶⁸ Ashok (n 521) 130-132.

⁶⁶⁹ Unni (n 405) 340-343.

of a user; and for national security. Incidental and temporary storage of a material in electronic transmission is covered by fair dealing.⁶⁷⁰

Strengths of Exceptions of Indian TPMs

Implementing stringent laws against the circumvention of technological measures could undoubtedly reduce piracy; however, developing nations lack the resources. They are unable to afford their citizens access to knowledge that is protected by technological measures and anti-circumvention systems to the same extent as developed nations. Therefore, the exceptions to the anti-circumvention rules of India are wider than those of other jurisdictions; these allow the application of a full list of fair dealings with the provision. The expansion of fair dealing under Section 52 to apply to anti-circumvention rules could preserve users' privilege to access the works. This provision ensures that Sections 65A and 65B remain within the purview of copyright protection and exceptions by permitting a fundamental connection between circumvention and infringement.⁶⁷¹ In addition, fair dealing clauses did not set a maximum number of copies and did not grant any rights to copyright holders to misuse licencing or set usage conditions. For the Indian Copyright Act 2012 (Amendment), access to digital content falling under the exceptions outlined in Section 52 is prioritised over a number of the copyright holder's rights. It is arguable that the Indian TPMs are considered the most effective model because they were designed to follow the copyright policy and ensure access to knowledge.⁶⁷²

Venugopal K. Unni argued that India has implemented the TPMs in a manner that complies with local conditions. The national policymakers attempt to revise domestic copyright laws to address copyright infringement in the digital age and tailor them to specific educational and cultural needs. The Indian version of anti-circumvention rules has consisted of both international standards and local factors. In this point of view, the fair dealing provisions are well- established to maintain the balance of interest between the copyright holder and the public. The protection of technical devices should not undermine long-standing principles of fair dealing. In this aspect, the application of fair dealing provisions in Indian TPMs could preserve this balance by allowing access to digital works and improving education. The Indian government has effectively exploited the limited flexibilities available in the WCT to prevent a digital lockup and a pay-

⁶⁷⁰ Verma (n 365) 25-26.

⁶⁷¹ Ramesh (n 535) 84, 104-105.

⁶⁷² *ibid* 104-105.

per-access society. The Indian anti-circumvention rules were designed to preserve the larger public interests.⁶⁷³

Problems of Exceptions under Indian TPMs

Nonetheless, there are some difficulties concerning the application of technological measures. The Indian laws did not contain provisions that prevent copyright holders from misusing technological measures to hinder non-infringing use. Copyright holders may place limitations on consumers' ability to utilise materials and media that they have lawfully purchased, disrupting the theory of "first sale" and impeding the enforcement of fair dealing. Although circumvention is permitted in these specific cases, there is a lack of prescribed methods of circumvention that non-specialists can employ to exercise their privileges. This means that non-infringing users may have legitimate rights to access content, but they are unable to violate the technological measure to gain access to it in practice. The clear example is the exception for disabled people: TPMs obstruct the utilisation of content allowed within the scope of Section 52. This hinders those who "modify, duplicate, or distribute copies of copyright work in a form that is accessible to individuals with disabilities." It can have a negative impact on customers and organisations that make copies of copyright work into comprehensible formats for people with disabilities.⁶⁷⁴ Although Section 52 of the law permits a number of exceptions, there is no legal requirement encouraging copyright holders to use technological measures in a manner that enables the user to exercise those exceptions. In this case, even though a blind person has the legal right to use assistive software or transform the works, the digital locks that have been applied to the content prevent them from actually accessing the information. Those installing technological measures are not required to supply circumvention means or accessible versions of materials to people who seek to access the works under fair dealing principles. The Amendments do not resolve this contradiction between excessive TPMs and individuals' legal rights to access the works. This can be addressed by imposing penalties on the actions of copyright holders that impede or limit fair dealing. It is important to place the duty on copyright holders to make the works available for non-infringing uses. This solution could safeguard the legal rights of users.⁶⁷⁵

Furthermore, Section 65A(2)(a) states that nothing in sub-section (1) hinders any individual from performing anything for a purpose not explicitly forbidden by this Act. There is concern that this legal model

⁶⁷³ Unni (n 405) 339-342.

⁶⁷⁴ Ramesh (n 535) 104-105.

⁶⁷⁵ *ibid* 100-102.

seems unnecessary and uncertain because Section 65A already prohibits circumvention that causes an infringement. Additionally, because it did not directly refer to Section 52, or fair dealing, the application of this section might be practically denied. It will be challenging to apply the anti-circumvention rules because this approach might be potentially interpreted to ban any activities permitted by Section 52. Hence, Ragavi Ramesh suggested that this provision has to be revised to specifically mention the exceptions under Section 52 of the anti-circumvention rules to ensure that fair dealing remains preserved in the digital environment.⁶⁷⁶

3.3 How Can Thailand Reform Exceptions for Educational Access?

As Thailand is a member of WIPO, it is important to revise the law to comply with the objective and balancing principle established in Article 7 and 8 of TRIPS. The exceptions to TPMs should remain consistent with the WCT. However, the WCT does not include or prohibit the application of the copyright exceptions to the TPMs. The member states could allow the user to circumvent the technological measure to exploit the public domain and engage in copyright privileges. Consequently, the national legislation could establish exceptions in accordance with their social, cultural, and educational contexts. Domestic legislators and policymakers are left some freedom to determine how to regulate the act of circumvention and restrict the distribution of circumvention devices by maintaining a fair balance of interest between the copyright holder and the public.⁶⁷⁷ To rebalance the interests of all parties and enhance national development in the digital era, this legislation has to be improved to take into account not only the interests of copyright holders but also the opportunity for users to access knowledge available online. It is important to grant wider exceptions ensuring academic activities and other public policies, such as those of non-profit libraries, educational institutions, teachers, lecturers, researchers, and students. These privileges encourage the free flow of knowledge in accordance with Thai society's academic development needs. Hence, the thesis suggests amending the exceptions in relation to educational uses of the anti-circumvention rules as follows:

3.3.1 Exceptions to Prohibition of Circumvention in light of Other Jurisdictions' Strengths

This section has demonstrated that the exceptions to anti-circumvention rules in Thailand follow the DMCA. However, the idea of “one size fits all” TPMs may not be suitable for all nations across the globe.⁶⁷⁸ A

⁶⁷⁶ *ibid* 102-105.

⁶⁷⁷ Akester (n 12) 121.

⁶⁷⁸ Ramesh (n 535) 88-91.

particular jurisdiction shouldn't have a direct influence on Thai law; instead, the legislation should take into account the local contexts. Especially in developing countries, they have limited ability to afford online resources or databases, and licensing and technological infrastructure remain underdeveloped. According to the study, Article 11 of the WCT does not have any obligation requiring the contracting state to afford legal protection against circumventions involving acts permitted by legislation. Therefore, if the user defeats a technological measure to access the works or make a copy for a permitted purpose such as educational or private use under a national copyright exception without permission from the copyright holder, Contracting Parties are not required by this treaty to provide legal protection and remedies against such technical circumvention.⁶⁷⁹

Suggestion to Insert the Exceptions for Personal Use or Private Study

Based on the study, an EU directive allows the members to apply the exception for personal use. This privilege could be established alongside the requirement for fair compensation and allow the right holder to take any measure to control the number of duplications. The UK anti-circumvention rules implement this exception by allowing the user to enter into a complaint procedure. This exemption should be adapted by Thailand based on the domestic context to foster self-study, the free flow of knowledge and creative activities. However, to prevent economic damage to copyright holders, this exception should be revised to eliminate the overly broad scope of application. This provision should permit merely the private use of materials for study, non-profit research, and other educational purposes, but the use of materials for personal recreation or self-entertainment should be prohibited because it seems to be of little benefit to society.⁶⁸⁰ The exception of private use and research should not be applied when the work is reasonably accessible through specific institutions, such as CMOs, and other methods. The reasonably accessible refer to either territory or price. This condition would require the users to make an effort to seek the works from the copyright holder or an affordable licensing scheme and also encourage the copyright holder to enter into CMOs. The CMOs would collect compensation for the copyright holders. The exception for personal use would ensure that private study or non-commercial research is not excluded from the digital age and that users may gain access to knowledge at an affordable price.

⁶⁷⁹ Akester (n 12) 121.

⁶⁸⁰ Wang (n 19) 196-197.

Suggestion to Amend the Exception for Non-Profit Educational Institutions

The current exceptions under Section 53/6(7) include educational institutes, libraries, archives, and video broadcasting organisations; the study suggests separating the exception for educational institutions from other establishments. This section seems to be improperly enacted because educational institutions and libraries perform different tasks. Hence, the study recommends revising 53/5(7) to permit the circumvention performed by educational institutes for non-profit purposes to gain access to copyright works that are not reasonably accessible by other methods. This provision enables educational organisations to circumvent technological measures to access all types of works, such as film, audio materials, and literary works. The exempted activities may cover teaching, illustration for instruction, preparing for teaching, making records by educational institutions of broadcasts, and copying and using the extracts of works for educational purposes without profit. Additionally, this model aims to cover all levels of non-profit educational bodies, which include kindergarten, elementary school, secondary/high school, technical college, and university. It also exempts professors, teachers, and staff of educational institutions to ensure that they would not be liable as long as the circumvention was done for educational purposes. Similar to the suggested model for private study, the educational exception would apply only when the work is not reasonably accessible. Reasonable accessibility includes both territorial and price considerations. This approach would promote educational activities and preserve the interest of copyright holders by encouraging the establishment of CMOs to issue blanket licences for educational bodies to access a wide range of works at a reasonable price. In this aspect, educational exceptions should be amended and enforced instead of relying on Section 5 of the Ministry of Commerce's announcement, which is overlapping and narrow. The details of the ministerial proceeding will be discussed in the chapter.

Suggestion to Amend the Exception for Non-profit Libraries

Because the role of libraries is to preserve valuable work and make knowledge accessible for lawful users, which is one of the most important public policies. The thesis also proposes adding a new exception in relation to libraries to the anti-circumvention rules of the Copyright Act. It is important to separately insert exceptions for libraries under the Copyright Act to entirely cover Section 34 of the Thai Copyright Act. The libraries should be allowed to circumvent technological measures for making copies for preservation, replacement, and supplying copies of work to other libraries where these materials become unavailable in the market. The librarians are permitted to violate technological measures to supply copyrighted works for

study or research.⁶⁸¹ Likewise, the provision should exempt either the librarian or other staff of the library to realise the purpose of these exceptions. The act should mandate the librarian to make the works available within the location and internet system of the library to prevent the redissemination of work that might affect the interests of the copyright holder. This exception should cover archives, museums, the National Film Archive, Museum Siam, and public sound and video broadcasting organisations to enable them to preserve and manage Thai cultural heritage. However, the thesis does not agree to include the condition to require the libraries to seek accessible works through other methods because they may be bound by the licencing that impedes the reproduction of works. The libraries are consequently unable to copy the materials for preservation and replacement. This suggested provision is preferable to relying on exceptions for the library under Ministry's Announcement, which is narrow in terms of the scope of works and permitted activities.

3.3.2 Suggestion to Enhance Exceptions of Preparatory Activities

It is arguable that the anti-circumvention laws, especially the anti-trafficking circumvention devices in Thailand, are not well developed. The stringent prohibition and restrictive exceptions borrowed from other jurisdictions may impede the access to and use of copyrighted works. Thai users might not gain circumvention technologies to access the educational and research materials due to overprotective anti-circumvention legislation. These would deter educational development rather than enable the knowledge available to non-infringing users at a reasonable cost. As a result, it seems difficult for Thailand and other developing countries to improve their social and academic standards through the use of electronic learning materials.⁶⁸² In this regard, the explanation of “illicit devices” under the case *Football Association Premier League Ltd v. Murphy* provides the guidance on the scope of anti-trafficking of circumvention device provision. The court interpreted that the concept of an “illicit device” does not include decoding devices that are lawfully produced and sold with the right holder's authorisation, even if such devices are employed outside of the permitted territory or in violation of contractual conditions. The court also emphasises that the anti-trafficking circumvention devices do not

⁶⁸¹ Department of Intellectual Property, ‘Results of the hearing on the draft announcement of the Ministry of Commerce on actions that should not be considered violations of technological measures according to Section 53/5 (1) via the website of the Department of Intellectual Property (www.ipthailand.go.th) between June 20 and July 4, 2022’.

⁶⁸² Akester (n 582) 5-7.

include those for private use.⁶⁸³ It is arguable that this provision should not be established and interpreted to provide overboard protection for technological measures and copyright holders,

Therefore, the thesis argues that the suggested exceptions for private studies, non-commercial research, educational institutions, and libraries should apply to anti-trafficking circumvention devices under the Copyright Act of Thailand. In other words, the prohibition on individual circumvention and the provision of anti-trafficking circumvention devices should be subject to the same exceptions. Due to this model, skilled users may create and use circumvention technologies for private and non-commercial research. The professor and staff could produce circumvention devices and distribute them within the institutions; these would facilitate their access to works embodied in technological measures for teaching and instruction. Likewise, the librarian and staff should be allowed to create the necessary tools to access digital works to fulfil their roles in terms of preservation, replacement, interlibrary loan, and providing copies of works for private and non-commercial study. However, the same conditions should be applied to exceptions for private use and educational institutions; they are exempted from anti-trafficking circumvention provisions solely when the works are not reasonably accessible by other methods and in the absence of CMOs. The thesis suggests adding additional conditions to require libraries and educational institutions to implement security systems to prevent the dissemination of circumvention devices outside the organisations. Regulations to control the misuse of circumvention devices should be established, and users should be forbidden to disseminate circumvention devices to others. The libraries and educational staff should be held liable if they distribute tools without authority. The compensation should be set for the copyright holder in the case that circumvention devices are disseminated to others rather than the permitted communities. Furthermore, the DIP should introduce a registration system for circumvention devices. The creator or distributor should be required to provide their personal information, purpose of use, and details of the circumvention devices that they produce. This establishment would ensure that the circumvention devices would not be misused for unlawful activities. These solutions may secure the interest of the copyright holder and prevent the misuse of circumvention devices.

Conclusion

The exceptions to anti-circumvention rules allow users to violate technological measures for specific purposes. The ability to access knowledge depends on the level of exceptions. EU directive and established

⁶⁸³ Football Association Premier League Ltd and Others v QC Leisure and Others (C-403/08) and Karen Murphy v Media Protection Services Ltd (C-429/08).

a wider exception than the DMCA of the US, which includes private study, teaching, research, comment, criticism, and the privilege for disabled people. There are exceptions for libraries, educational institutions, and other authorised bodies to circumvent technological measures for the preservation, replacement, and supply of works. The UK applied these exceptions through the complaint process. The thesis has demonstrated that Thai law follows the exceptions under the DMCA, which encompass the privileges for reverse engineering, encryption research, testing the security of computer systems, enforcing laws, and national security. These exceptions are very narrow. The library and educational institutions' exceptions are restrictive and detailed. The significant problem is that the exception for library and educational use could not be applied to anti-trafficking circumvention devices provision. These seem to be inconsistent with the Thai context, where the appropriate limitations of TPMs and the ability to access information are needed to improve the educational system and living standards. In contrast, India applies the full list of fair use to anti-circumvention rules. Based on a literature review, this thesis argues that the full list of fair use in traditional copyright law is not suitable for the digital world, the copying and dissemination of works might be uncontrolled on the internet. Only some copyright exemptions are important for anti-circumvention rules. Therefore, the exceptions under the EU directive and the UK law should be used as guidelines to suggest the list of exceptions for Thailand. The thesis contends to insert exceptions for private study, educational institutions, and libraries to anti-circumvention rules. The same exceptions should be applied to both prohibitions on individual acts of circumvention and anti-trafficking devices, introducing new privileges that foster non-profit research and enable the non-profit library and educational organisation to preserve the copyright works and fulfil their other roles. These suggested models remain in line with the minimum standard set by the WCT. It is hoped that the suggested exceptions will suffice to permit educators to gain the necessary devices and circumvent technological measures to exercise their privileges without any legal liability. The recommended policy could subsidise the educational communities in Thailand and other developing nations by enabling them to access learning materials at a convenient platform and at an affordable price.

Chapter 4

Voluntary and Other Appropriate Measures Across Jurisdictions for Enforcing Exceptions

Introduction

This chapter explores the mechanism for determining and implementing exceptions to TPMs. It is argued that the specific list of exceptions is inadequate to prevent negative impacts on non-infringing uses, especially educational and research uses. The knowledge accessibility in the digital era also relies on other appropriate measures to facilitate non-infringing uses under the exceptions. This chapter would evaluate the new ministerial proceeding enacting additional exceptions to anti-circumvention rules in Thailand. This mechanism was established by the Copyright Act Amendment (No. 5) of 2022. The study claims that this proceeding is not well organised and that a number of difficulties exist in terms of procedural processes and exceptions designed by the new administrative proceeding. To address this claim, the comparative analysis of administrative mechanisms will be conducted, which includes the U.S. triennial rulemaking proceeding to determine additional exceptions, the complaint process of the UK allowing governmental authority to intervene if the user cannot exercise their right under the exception, and the third-party approach of India enabling the user to access the works. By comparing these procedures, this chapter will reflect the practical operation of these administrative mechanisms in designing exceptions. The effectiveness in enabling legal flexibility and making knowledge accessible will be evaluated to gain practical solutions for Thai law, ensuring a fair balance between legislative protection and technological measures and accessing knowledge.

4.1 Thai Administrative Measure Establishing Exceptions and Reflecting US DMCA Influences

With the recent revision of TPMs in Thailand, the parliament established a new provision on administrative rulemaking proceeding that had not existed in Thai copyright legislation before. This regulation authorises the minister of commerce to provide an exception for a certain class of copyright works from the prohibition on direct acts of circumvention. With regard to the Thai Parliament meeting report, the Copyright Act Amendment 2022 requires the minister to prescribe an exception to the violation of technological measures. By issuing the secondary law in this approach, the DIP has the responsibility to organise a hearing from the interested parties, such as the copyright owner, the user, and the general

public, to jointly set exceptions that are absolutely necessary.⁶⁸⁴ This mechanism allows a government body (DIP and the Ministry of Commerce) to establish additional exceptions to anti-circumvention rules. It is arguable that enacting or revising the secondary law seems to be faster and less complex than amending the Copyright Act. This flexible scheme could revise the law based on the rapid development of technology and the copyright market. This provision is likely to be unique because it allows the minister of commerce to play a key role in adjusting the law, but the legal concepts of this approach seem to follow the provision of rulemaking proceeding under the DMCA of the US. As this procedure is really new in Thailand, it is important to investigate the process of administrative mechanism in greater detail. The study would help to identify the strengths of this mechanism and preserve the benefit of designing additional exceptions to anti-circumvention rules. The issues of this provision would be critically reflected to find the solution to the existing problem by using the experiences learned from the US rulemaking proceeding and other mechanisms from jurisdictions.

4.1.1 Investigating Explore the New Ministry of Commerce Announcement Drafting Process

The Copyright Act (NO.5), B.E. 2565 (2022), allows the Ministry of Commerce to introduce a secondary law for establishing the exceptions to anti-circumvention rules. The Ministry of Commerce officially promulgated the first announcement for August 2022, allowing certain groups of users to violate technological measures for specific purposes without facing any legal liability.

(1) Drafting the Announcement

The DIP took into account the practices of foreign laws when drafting the Ministry of Commerce's announcement regarding conduct that is not considered unlawful circumvention of technical measures. These jurisdictions include the United States and Singapore. Thailand applied the legal models from these countries. Then, the DIP consults with representatives of disabled people, the offices of the Council of State, and copyright experts. Moreover, the Ministry of Commerce considered the opinions of the extraordinary committee that designed the copyright act amendment. The ideas of the senate or member of parliament are taken into account during the process of drafting the administrative exceptions.⁶⁸⁵

⁶⁸⁴ Department of Intellectual Property, 'Summary of the results of the hearing on the draft Copyright Act that has been considered by the Council of State (6th Committee)' 4 August 2020.

⁶⁸⁵ Legal Affairs Office, Department of Intellectual Property, 'Enactment the Ministry of Commerce's announcement on actions that should not be considered violations of technological measures according to Section 53/5 (1)' September 2022.

(2) Hearing Process

After designing the draft ministry's announcement, the DIP held a hearing by notifying the proposal on the website in order to allow the public to share their comments through the online platform. This stage lasted for two weeks. Additionally, the DIP also organised the meeting via electronic media to enable interested parties to exchange knowledge and comments concerning the draft of the ministry's announcement. There were more than sixty attendees, including representatives of copyright holders, organisations for disabled people, universities, law firms, and government agencies. The majority of participants agreed with the proposal of the Ministry of Commerce's announcement, and they provided additional feedback to revise the proposal based on social needs. During the hearing, the Department of Intellectual Property clarified the draft and answered a variety of questions raised by the participants. Many opinions from stakeholders are adopted to improve the Ministry of Commerce's announcement.⁶⁸⁶

(3) Issuing of the Ministry of Commerce's Announcement

The DIP compiled and finalised the results of the hearing to amend the draft of the Ministry of Commerce's announcement. The revised draft was then forwarded to the Minister of Commerce for consideration. Finally, the Minister approved and signed the announcement of the Ministry of Commerce to establish the administrative exceptions to anti-circumvention rules. Any activity permitted by this secondary law is no longer considered illegal for violating technical measures. This announcement was promulgated in the Thai Government Gazette on August 19, 2022, and entered into force on August 23, 2022.⁶⁸⁷

(4) Revision of the Ministry of Commerce's Announcement

In the future, the exceptions to anti-circumvention rules may be revised or improved based on the rapid change in situations. The interested parties are able to seek further exceptions or propose the amendment by submitting the relevant information and evidence to the DIP. After receiving the proposal from stakeholders, the DIP will conduct a hearing to carefully consider the opinions of all interested parties and introduce effective exceptions. The additional exception may be introduced through the Ministry of Commerce's announcement to permit the user to circumvent technological measures for specific purposes.

⁶⁸⁶ *ibid.*

⁶⁸⁷ *ibid.*

These would make the law flexible and compatible with social, educational, economic, and technological development.⁶⁸⁸

4.1.2 Challenges and Difficulties in Administrative Proceeding

In the context of Thailand, there are some limitations regarding the implementation of this provision that affect the legal and practical effectiveness. These challenges would be reflected in different stages of the ministerial procedure as followed.

The first shortcoming is the substantive limited scope of application. Due to the fact that the Ministry of Commerce's announcement is able to introduce only the exception of direct acts of circumvention, a similar procedure does not exist in the anti-trafficking devices provision. So, it can be assumed that this administrative procedure can be organised to facilitate non-infringing use under the prohibition against access- control circumvention, but it cannot be applied to the prohibition on devices and services. In this context, professors or librarians in Thailand may have the technical ability to create circumvention devices, but they cannot disseminate such devices in their institution because the distribution of circumvention devices and services remains prohibited. The exceptions concerning libraries and educational institutions are not applied to anti-trafficking devices; these make professors or librarians at risk of being legally liable for their creations and distributions. This issue makes the exceptions impractical because the beneficiaries do not have the means to circumvent access-control measures to exercise their privileges and engage with digital materials.

Furthermore, there is unclear procedures and a lack of an effective operational system. It is important to note that the new draft is the first piece of law that introduces this provision in Thailand. It is likely to be a very new procedure, and either administrative bodies or individuals remain unfamiliar with it. The unresolvable problem with this new administrative mechanism is the lack of further detail on process, time frame, and public engagement. With the first introduction of this provision, the new draft only mandates the DIP to be the main administrative body to carry out the public hearing. Numerous uncertainties remained regarding how Section 53/5(1) would be implemented and how this governmental mechanism would operate in practice. It should be kept in mind that a law could be effectively enacted when there is fresh and reliable data from all interested parties. The major stakeholders properly participate during the process of drafting the regulations; their experiences, facts, and evidence absent are well presented in

⁶⁸⁸ *ibid.*

terms of the impacts of anti-circumvention rules and the hindrance to access to digital information. However, Section 53/5(1) remains absent of some practical guidelines in relation to the system and procedure for public hearings; there is also a lack of a precise process and mechanism for receiving complaints from interested parties about the effect of the anti-circumvention law. Furthermore, this law does not specify the frequency or regularity of hearings. Even though the DIP allows the public to propose the additional exception by proving the facts and evidence to the department, there is no template or guideline on the required elements in the proposal for the stakeholder to follow. These seem to make it difficult for the public to engage with this procedure.

Beyond the previously discussed issue, there is an additional significant challenge related to the limited participation of stakeholders. The interested parties do not understand this administrative procedure, which affects procedural accessibility. The public hearing mechanism remains incomprehensible to the overwhelming majority of people in Thailand. The language of the new law does not make the hearing procedure or the process of filing a complaint as comprehensible as they should be. It cannot help copyright holders, licensees, non-infringing users, their representatives, or the public understand the system, nor can it enable them to know about the actions that they need to take in order to express their complaints concerning the adverse impact of TPMs.

In terms of ineffective institutional design, the DIP has legislative responsibility to decide the exceptions to anti-circumvention rules, which were initially established in 2022. However, the administrative mechanisms in Thailand are not well structured. There is a lack of procedural guidance for all parties to propose the exceptions and participate in the process of legal formulation. This complexity makes the governmental procedure difficult to understand and prevents the public from sharing their opinions and expectations. There is a lack of measures to regularly assess the impact of anti-circumvention rules. These result in uncertainty in the legislative process and a lack of effective public comment and public hearing phases.

The problems of this procedure lead to negative outcomes. This mechanism has promulgated a very narrow scope of exemptions, and a small number of works are currently granted to the public to exercise their privileges under this ministry's announcement. Based on the current exceptions established by the Ministry's announcement, most of them are modelled by the US rulemaking proceeding. The exceptions from the Ministry's announcement might not comply with social needs; they also cause economic and educational inefficiency due to the absence of creativity and the free flow of knowledge. These narrow exceptions are not compatible with copyright's goals; they are limited in terms of the class of works, the

purpose of use, and the type of user. The exceptions permit specific groups of users to access the copyright works in restricted manners. They contain a number of conditions for legally acquiring copies of works and a security system.

Therefore, reform is required due to structural consequences. It is obvious that the administrative procedure for enacting exceptions in Thailand is in a very early stage of development, and there are a number of legal gaps that make this provision ineffective. Without any clear guidelines for interpretation and enforcement, as well as a lack of other appropriate measures, the economic profits of copyright holders are likely to be unsecured, and Thai people are potentially excluded from accessing digital information regardless of the final use of copyright works. For these reasons, this approach remains impracticable in Thailand; systematic detail and explanation are required for effective enforcement. For doing these, this provision is highly influenced by the DMCA of the US, and the challenges encountered by Thailand are similar to the beginning stage of rulemaking proceedings faced by the US. It would be very useful to study and analyse the DMCA in greater detail to learn the solutions and gain guidelines for interpretation and implementation for the Thai copyright system in the future. The process should be more efficient and user-friendly to enable understanding and facilitate greater participation in the administrative process.

Rigid Exceptions as a Result of Ineffective Ministry Procedure

The implementation of Section 53/5(1) results in six exceptions in addition to the Copyright Act, which were officially introduced in August 2022. These exceptions are established in the form of a Ministry of Commerce's announcement; there is currently only one announcement. This secondary law provides the list of exceptions as follows:

- (1) The exception for disabled people to engage with audio-visual or motion pictures,
- (2) The exception for disabled people to engage with literary works,
- (3) The exception for organisations that are authorised or certified by the Ministry of Commerce to enable disabled people to engage with audio-visual or motion pictures,
- (4) The exception for organisations that are authorised or certified by the Ministry of Commerce to enable disabled people to engage with literary works,
- (5) The exception for educational use to engage with audio-visual or motion pictures,
- (6) The exception for libraries to engage with audio-visual or motion pictures.

However, it is important to note that these exceptions are enforced alongside detailed criteria in the succeeding components.

Section 1 of the Ministry of Commerce's announcement introduces the privilege for disabled people to access audio-visuals or motion pictures. It allows the circumvention of technological measures used to control access to enable persons with disabilities to engage with these classes of work. The actions shall not be considered a violation of technological measures under the following conditions: The circumvention is conducted by a disabled person who is unable to access the copyrighted work due to a disability. The circumvention is conducted to add captions or audio descriptions to make the copyright work accessible to disabled people according to their needs and the nature of their disability. There is the absence of works in accessible format for disabled people in the marketplace when reasonable efforts have been made to obtain them.⁶⁸⁹

Section 2 of the Ministry of Commerce's announcement is an exception for disabled people to circumvent access-control measures to access literary works. This privilege is subject to copyright exemption. It shall not be considered a violation of technological measures in the following conditions: the circumvention is conducted by a disabled person who cannot access the copyrighted work due to a physical disability; the bypassing is carried out to the works embodied in technological measures that hinder read-aloud function, screen reader function, or other assistive technologies; and the circumventor has the sole purpose of enabling people with disabilities to access copyright works according to their nature of disabilities and needs. Furthermore, the relevant organisations are permitted to circumvent technological measures to facilitate disabled people's access to literary works.

Section 3 of the announcement exempts organisations that are authorised or recognised by the Ministry of Commerce; these institutions are not prohibited from circumventing technological measures to enable disabled people to access motion picture and audio-visual materials. There is an additional requirement for the organisations; they are mandated to have systems or measures preventing people (other than people with disabilities) from accessing the work. The other criteria existing in the exception for disabled individuals are similarly applied to these relevant institutions

⁶⁸⁹ Ministry of Commerce's Announcement on actions that should not be considered violations of technological measures according to Section 53/5 (1).

Section 4 of the announcement applies to merely organisations that are authorised or certified by the Ministry of Commerce, but these organisations are required to have systems or measures to prevent people (other than people with disabilities) from accessing the work. These institutions are required to follow other conditions established in the exception for individuals with disabilities to access literary materials.⁶⁹⁰

Generally, these exceptions allow disabled people to violate technological measures for study, personal use, or for the benefit of family members. The circumvention has to be done by disabled people, which might include those with impairments in vision, hearing, learning, movement, or other abnormalities. The announcement's major goal is to enable disabled people to gain equal access to information as the general public. It is important to note that the exception adopts Section 32/4 in terms of the group of users, but there is a limitation on the class of work that is limited to motion picture, audio-visual, and literary works. The exceptions allow disabled people and relevant institutions to deactivate technological measures used in these categories of work. The announcement seems to be significantly narrower than copyright exception or fair use, as the administrative exceptions do not cover all types of copyright materials. The disabled are not permitted to bypass access controls to access other classes of copyright works rather than motion picture, audio-visual, and literary works.⁶⁹¹

Section 5 of the Ministry of Commerce's announcement is the exception for educational purposes; there is an exception for circumvention of technological measures used to control access to audio-visual materials or motion pictures under the copyright exemption. It shall not be considered a violation of technological measures if the deactivation is done by a student, researcher, teacher, professor, or educational institution. This action is conducted to reasonably use an excerpt of works for teaching or research. The circumventors have reasonable grounds to know that there are no other methods for obtaining the content with the proper level of quality necessary for use. The circumventing access-control measure is the only way to gain access to adequate quality audio-visual materials or motion pictures for permitted uses. Moreover, educational institutions are required to set systems or measures to prevent people (other than students, researchers, teachers, professors, or educational institutions) from accessing such work.⁶⁹²

⁶⁹⁰ *ibid.*

⁶⁹¹ Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <https://fb.watch/s2W8qya_Vw/> accessed 9 September 2022.

⁶⁹² Ministry of Commerce's Announcement on actions that should not be considered violations of technological measures according to Section 53/5 (1).

Section 6 of the Ministry of Commerce's announcement introduces the library's use exception; access-control measures could be circumvented to gain access to audio-visual materials or motion pictures under copyright exemptions. The librarian conducts this circumvention to preserve or replace damaged or deteriorated work. The librarian undertakes these actions for the benefit of the library. The additional conditions are that copies of audio-visual materials or motion pictures are not available on the market, and the librarians have to make a reasonable effort to acquire the works. The copies of works shall not be publicly disseminated or used, the works should be available only in the library or online through the electronic system of the library. The systems or measures are taken to prevent people other than members or those who use library services from obtaining such materials.⁶⁹³ It is important to note that the condition required by the Ministry's announcement is the unavailability of work and the effort of librarians to obtain the works. The libraries could claim this privilege only when they cannot obtain copies of works in any other form after making a reasonable effort to gain the works or when such material is not reasonably available in the market. The word "reasonably available" might refer to both territorial and monetary meaning. If the aforementioned conditions are not met, or if the institutions seek a profit from the work, the library or educational organisation would be deemed a violator of technological measures, and they would be legally liable. All of these requirements are applied to beneficiaries.⁶⁹⁴

To prevent harm to the copyright holder's interest, the announcement stipulates that the exception will be applied only when the circumventer violates technological measures to access the works without commercial purpose, such as non-profit education. The additional condition is that they have legally acquired the copyright work or bought a copy of the copyright work from the market.⁶⁹⁵

4.1.3 Analysis of Exceptions and Impacts on Access to the Knowledge

The Ministry's announcement offers six exceptions, including those that apply to people with disabilities, but they are outside the purview of this study. Thus, the exceptions that apply to libraries and educational institutions are the main emphasis of this section. A common feature of these exceptions is that they are introduced through secondary legislation, which is easier and faster in terms of legal enactment. The provision could be revised to be compatible with the rapid development of technologies and the copyright market. Additionally, these exceptions are permanent and remain enforceable (not temporary), unless

⁶⁹³ *ibid.*

⁶⁹⁴ Ashok (n 521) 114.

⁶⁹⁵ Ministry of Commerce's Announcement on actions that should not be considered violations of technological measures according to Section 53/5 (1).

there are legal repeals or other changing circumstances. It could reduce the burden on governmental procedures. Therefore, providing legislative authority for the DIP and the Ministry of Commerce may increase flexibility in the regulatory framework. Compared to the rulemaking proceeding in the US, the exceptions under the Ministry of Commerce's announcement in Thailand are basically wider than those existing in the US. The announcement mainly relied on the works classified by the copyright act; it exempted the categories of materials such as literary works, films, or audio materials rather than specific sets of them. Moreover, the exceptions under the Ministry's announcement have provided sufficient protection against economic harm for copyright holders by establishing conditions for beneficiaries to follow before exercising the exceptions. The announcement permits only non-profit activities, and the doers are required to lawfully obtain the materials or copies of works. The conditions ensure that the exceptions neither conflict with the usual utilisation of materials by copyright holders nor unreasonably endanger their exclusive rights. It is arguable that these requirements are consistent with the exceptions under traditional copyright protection.⁶⁹⁶

Similar to the exceptions under the Copyright Act, accessing the public domain or merging the public domain with copyrighted works is an unresolved issue. Although Thai law only protects technological measures used to secure copyrighted works, the ministerial regulation lacks exceptions or any guidelines for interpreting or resolving this issue. It remains unclear whether or not the users are able to circumvent technological measures to access copyright-expired works that are repackaged with copyright materials. This vagueness would cause an unnecessary risk to users who bypass access controls to enjoy public domain or non-copyright materials because the law might be interpreted to place liability on such circumventors. This issue impedes the opportunity for people to access these works. It is important for relevant institutions to implement the law or develop clearer guidelines for handling cases involving the repackaging of the public domain with copyright materials and access controls. Additionally, there are several limitations embodied in the administrative exceptions, which will be further analysed in this section.

For the exceptions for educational uses, this exception derives from Section 32, Paragraph 2 (1), (6), and (7), which provide exceptions for educational and research uses. Student, researchers, professors, or educational institutions are allowed to circumvent technological measures to access the audiovisual works

⁶⁹⁶ Department of Intellectual Property, 'Results of the hearing on the draft announcement of the Ministry of Commerce on actions that should not be considered violations of technological measures according to Section 53/5 (1) via the website of the Department of Intellectual Property (www.ipthailand.go.th) between June 20 and July 4, 2022'.

and motion pictures for research or study without profit. The announcement also exempts the circumvention of access controls to reproduce and modify the digital work for teaching in the classroom and to duplicate, adapt a portion of the work, or summarise the materials for distribution or sale to students. These activities have to be conducted by professors or educational institutions for non-commercial purposes.⁶⁹⁷ This Ministry's announcement exception reflects the policy objective on enhancing access to knowledge and promoting educational development in digital era. Nonetheless, this provision reflects the overlap between Section 53/5(7) of Copyright Act and ministerial regulation. This announcement does not establish any new privileges for the educational sector. The educational exception under Section 53/5(7) is likely to be wider than those existing in the Ministry's Announcement because Section 53/5(7) did not specify the class of works that the educational bodies shall access. However, the Ministry's announcement restricts the educational exceptions to only audio-visual materials or films. Literary works, not included in the exceptions, appear to be the most significant sources of knowledge. These might prevent Thai people from accessing digital knowledge.

Additionally, there is uncertainty about the scope of the user; it seems unclear whether or not this privilege covers all levels of educational organisations or whether only colleges or universities are permitted to circumvent technological measures. Additionally, this provision is also silent on people who are allowed to conduct circumvention, whether or not it includes only professors or applies to staff or employees bypassing access controls on behalf of the university. These difficulties might create a risk for the staff or employee to be liable for their act of circumventing, even under the supervision of a college or university. As a result, most educational institutions may be afraid to enjoy their privileges, making this exception impractical. Rather than revising the ministry of commerce announcement, which may delay, these provisions should be construed and implemented in good practice. To ensure educational use, this exception should be interpreted to include teaching assistants, IT personnel, the admin, staff, and employees under the supervision of the university. Additionally, it should exempt liability for staff who support teaching in various ways, such as learning support staff or classroom assistants who assist the instructor, teacher, and children during lessons. The definition of educational establishments should be broadly interpreted to cover professors, teachers, and other support staff.⁶⁹⁸

⁶⁹⁷ Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <https://fb.watch/s2W8qya_Vw/> accessed 9 September 2022.

⁶⁹⁸ Deazley (n 583) 18-19.

In terms of TPMs interaction, the Ministry's announcement exception permits educational communities (film professors, student, researcher) to circumvent technological measures for educational purposes, but this provision does not cover anti-trafficking tools. The privilege might be unrealised, and the law might lead to an erroneous outcome. It seems difficult for professors, teachers, or university staff to lawfully acquire the necessary devices used to circumvent technological measures to exercise their privilege under the exceptions. As anti-trafficking rules are not currently well-structured and lack exceptions, the distributors of necessary software on the internet or those who provide circumvention tools even to teachers or professors might be at risk of being liable for this prohibition. Even though professors might discover or create software or tools used to circumvent, they are potentially subject to legal liability for sharing such devices among educational staff.⁶⁹⁹ Therefore, the Ministry's announcement establishes an exception for anti-circumvention rules in educational institutions (film study); this section is limited in scope. The academic organisation or film study professor might not be able to deactivate technological measures to engage with digital works because the necessary devices might be banned due to the anti-trafficking provision.

With regard to the exception for libraries, the Ministry's announcement exception enables librarians to violate technological measures to use audio-visual materials or motion pictures in libraries and their network services. Its main goal is to enable libraries to maintain access to cultural resources and information while preserving works that are at danger of deterioration or loss. It protects cultural heritages and promotes the long-term preservation of knowledge. The circumvention for using the work in libraries and online system reflects modernity and is consistent with the development of technology and culture because libraries are no longer restricted to physical locations. It is important to note that the majority of the works are currently available online; this provision would facilitate opportunities for wider users to learn and access knowledge. Although librarians play a crucial role in safeguarding works from potential damage for future generations, it seems to be a challenge to maintain electronic contents, which are extremely fragile, such as audio-visual media. Libraries typically use printing on paper for preservation work, as it offers greater durability compared to electronic data storage. Moreover, libraries in Thailand encounter several problems with electronic files; there are constant changes to files, players, or containers of works. With time and the evolution of technology, the files produced by obsolete technology might no longer be accessible, particularly the content that was embodied in CD-ROMs or thumb drives. The service

⁶⁹⁹ Aaron Perzanowski, 'Evolving Standards \& the Future of the DMCA Anticircumvention Rulemaking' (2007) 1 Journal of Internet Law 22-24.

life or shelf life of digital media is vulnerable. The libraries experience the high cost of storage, and there is a lack of funds to preserve electronic materials and outdated media.⁷⁰⁰ Due to these issues, it is essential for Thai libraries to circumvent technological measures to access and shift the format of work to preserve materials.

Similar to the educational exception, the privilege for librarians only applies to visual materials and motion pictures. Literary works are not covered by this announcement. The provision might hinder the library's ability to preserve valuable literary materials because they are not permitted to circumvent technological measures used to protect this class of works. The libraries are consequently unable to copy the electronic literary works, shifting the form of content to hard copies or other accessible formats. It is arguable that the exemptions for libraries and educational institutions are narrower than those provided for individuals with disabilities. Excluding literary materials limits the overall effectiveness of the exceptions and could impede academic growth and access to knowledge in Thailand. This restricted exception is likely to preclude the public and future generations from engaging with the major source of knowledge. It is important to allow libraries and archives to circumvent technological measures and reproduce all classes of works for preservation and educational purposes. The library should be permitted to make additional copies of works to shift the format of works in permanent collections. These practices would be useful to prevent the issues of wear and tear and out-of-date recorders or players. Shifting the format from digital version to hard copies or other preferred forms contributes to the long-term accessibility of works for educational and research purposes. It also led to greater preservation of Thailand's cultural heritage for future generations.⁷⁰¹ Nonetheless, it should be noted that numerous resources in libraries rely on licencing agreements or subscriptions; the libraries are required to pay royalty fees to subscribe and gain access to databases. This platform provides a username, password, or digital key to engage with materials embodied on the server, but the libraries do not obtain book or hardcopy materials through a purchase. The electronic works could be downloaded and read for a limited period, but the library does not possess the works after payment. Therefore, the libraries are not allowed to copy, preserve, or manage the works due to the licencing contract. The licensing scheme, reinforced by technological measures, becomes privileged over the exceptions for non-profit libraries and the users' right to access knowledge.⁷⁰²

⁷⁰⁰ Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <https://fb.watch/s2W8qya_Vw/> accessed 9 September 2022.

⁷⁰¹ Deazley (n 583) 36-39.

⁷⁰² Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <https://fb.watch/s2W8qya_Vw/> accessed 9 September 2022.

In Thailand, the librarians have suffered from damaged or deteriorating resources. It is important to request copies of work from other libraries to reproduce and preserve them (interlibrary loan). Compared to the exception for libraries under Section 34 of the Copyright Act, those provided by Ministry of Commerce's announcement seems to be narrower. Administrative exceptions allow the librarians to violate technological measures to engage with the works and use them within the library. The language of the announcement remains unclear for reproduction for use in another library. Additionally, the Ministry's 'announcement does not cover Section 34(2), which is the privilege for librarians to enable another person to access copyright works for study or research. It is questionable whether the administrative exceptions allow librarians to circumvent technological measures to duplicate works for interlibrary loan or make the work available for study and research. This exemption does not adequately ensure the role of the librarian in facilitating the user's engagement with information for educational purposes, as provided by the copyright exemption.⁷⁰³

The further difficulty is TPMs interaction; due to the ongoing advancement of technological measures, the technologies are constantly improved to effectively prevent hacking and accessing digital works. However, even though the announcement's exceptions apply to the prohibition on circumvention, the manufacturing and distribution of circumvention devices remain banned. In the absence of necessary devices, it is difficult for libraries to overcome the newly innovative access controls to engage with copyright materials. They could not preserve the work without the ability to access it. The library may be unable to fulfil its role of providing information services and preserving cultural or historical works.⁷⁰⁴

It could be concluded that technological measures and subscription agreements impede the utility and preservation of valuable materials, making it a challenge for libraries to secure the works and facilitate the user's access to knowledge. The public might be excluded from resources and cultural heritage.⁷⁰⁵ The exemptions are extremely detailed and are subject to numerous restrictions. These exceptions are also narrower than those provided by fair use provisions. They may be limited in their applications. The statutory

⁷⁰³ Department of Intellectual Property, 'Results of the hearing on the draft announcement of the Ministry of Commerce on actions that should not be considered violations of technological measures according to Section 53/5 (1) via the website of the Department of Intellectual Property (www.ipthailand.go.th) between June 20 and July 4, 2022'.

⁷⁰⁴ Department of Intellectual Property, 'DIP Seminar on Copyright Laws in digital era 2022' (9 September 2022) <https://fb.watch/s2W8qya_Vw/> accessed 9 September 2022.

⁷⁰⁵ *ibid.*

language of the Ministry's announcement might harm the free flow of knowledge and educational development. These would be incompatible with the copyright principle.

4.2 Relevant Measures under Other Jurisdictions: Examining the Effectiveness

Due to several challenges and complexities of administrative proceeding in Thailand, voluntary measures and other appropriate measures under other legislation will be examined and evaluated in order to be used as guidelines for future legal reformation in Thailand.

4.2.1 The EU Directive Voluntary and Appropriate Measures: Useful Guidelines for Members?

Article 6.4 of the EUCD tackles the issue of individuals who are eligible for specific exceptions stipulated in Article 5 being unable to exercise those privileges because the works are protected by technological measures.⁷⁰⁶ To facilitate the exceptions, The EU directive introduces voluntary measures that invite interested parties, including copyright holders, manufacturers, and users, to make an agreement to enable the beneficiaries to engage with the works under certain exemptions.⁷⁰⁷ This agreement has the main objective of ensuring that the users are able to exercise their legitimate rights, and it should be legally guaranteed by the domestic legislation. If such a voluntary arrangement cannot be reached, the member states are allowed to intervene by taking any appropriate measures to implement the exception or limitation approach provided in national law.⁷⁰⁸ In other words, in case the copyright holder fails to issue a voluntary measure, the concept of appropriate measure would be applied by member states to reassure that the copyright holders make the works available to benefit from users, which enhances the opportunity for the public to legally access the protected materials.⁷⁰⁹ As mentioned earlier, the voluntary measure and appropriate mechanism are not applied to all exceptions; only specific exceptions under Article 5 are relevant to these provisions, which include reprographic replicating; replicating by educational institutions, museums, and libraries; replicating of broadcast by non-profit social organisations; ephemeral recordings by broadcasting bodies; replicating for scientific research or teaching purposes; replicating for individuals with disabilities; replicating for public security or for parliamentary or judicial processes.⁷¹⁰

⁷⁰⁶ Gasser (n 4) 60.

⁷⁰⁷ *ibid* 75-80.

⁷⁰⁸ Fernández-Molina (n 394) 56-59.

⁷⁰⁹ *ibid* 56-59.

⁷¹⁰ Akester (n 12) 16.

For the voluntary measure, this approach has the main aim of harmonising the interests of copyright holders and beneficiaries, which would increase the opportunity for the user to interact with the protected works. Member States have adopted this mechanism in a variety of ways, depending on the status of limitations, the nature of technological measures, and the nature of works. The copyright holders are encouraged to take voluntary measures to assure the ability to access and use material by beneficiaries, but the Directive did not provide any detail regarding the types of voluntary measures that are necessary. It is mainly up to the copyright holders to determine how their legal responsibilities will be fulfilled.⁷¹¹ This may involve contractual agreements on self-help circumvention, the removal of technological measures, or the negotiation of agreements between interested parties.⁷¹² Moreover, it might be supplying a non-protected form of work or providing an encryption key to facilitate the user's bypass of the technological measure. The encryption key may also be placed with a third party so that privileged users could acquire it upon request in order to engage in protected work.⁷¹³ Another option is creating the technological measure in a way that legitimate uses or applications of privilege are possible. A further example of this is the publishing group Taylor and Francis, which allows users to browse material within 45 minutes before purchasing it, and users could download or print a book with a limit of five percent of the book. A similar extent is allowed by the UK Copyright Licencing Agency, which issues photocopying licences to reproduce the printed books, and the users are required to pay only a small fee.⁷¹⁴

In the absence of voluntary measures, the E.U. directive mandates the member states to take appropriate measures to privilege legitimate consumers and ensure that copyright holders make the materials available for non-infringement use.⁷¹⁵ However, since the directive is silent on either a practical mechanism or at least a relevant guideline to establish the appropriate measure, a confusing question arises as to whether measures should be implemented at the national level.⁷¹⁶ The enforcement of appropriate measures is diverse in different countries; there are three main legal frameworks adopted across European countries.⁷¹⁷ Firstly, the appropriate measure might be established by arbitration or mediation. If the copyright holders do not issue a voluntary agreement to privilege the beneficiaries of limitations, the legitimate users are entitled to require mediation. After that, the arbitration proceeding might be arranged by the member

⁷¹¹ Guibault, Westkamp and Rieber-Mohn (n 621) 104-113.

⁷¹² Samartzi (n 62) 263-268.

⁷¹³ Guibault, Westkamp and Rieber-Mohn (n 621) 107.

⁷¹⁴ *ibid* 107.

⁷¹⁵ Basler (n 270) 13-16.

⁷¹⁶ Fernández-Molina (n 394) 58-59.

⁷¹⁷ Gasser (n 4) 77-80.

states in order to reconcile the interested parties and enable users to access protected works.⁷¹⁸ Secondly, the appropriate measure might be implemented by the court procedure. In the event that disputes over technological measures arise, the users of exceptions are entitled to apply such arguments directly to the court. Then, the court might issue an order for injunctive relief or require interested parties to do or cease acting that is necessary to guarantee compliance with legislation.⁷¹⁹ A final set of nations have introduced an administrative procedure or executive authority to regulate the utility of technological measures.⁷²⁰ For example, the United Kingdom (UK) has established a special administrative authority to monitor and ensure the enforcement of copyright exceptions. In the case that a user cannot enjoy their right because such a permitted act is prevented by technological measures, the user may make a notice of complaint to the Secretary of State.⁷²¹ After the investigation, if the Secretary of State finds that the copyright holder failed to issue any agreement or voluntary measure relevant to the technologically protected work, The Secretary of State may have a direction to require the copyright holder to facilitate the beneficiaries.⁷²² However, based on Section 6.4, the appropriate mechanism is prohibited to apply to protected works that are available to the public under agreed-upon contractual conditions in such a manner that members of the public can access them from a location and at a time that they choose.⁷²³ Moreover, there is a lack of active obligation on the part of the copyright holders to allow users of the digital materials to benefit from the anti-circumvention exceptions. The directive merely contains provisions on appropriate measures to accommodate the user's enjoyment of the works, depending on the legal status of the exception under domestic legislation. The specific procedure would be mainly designed by the nations to resolve disputes between the beneficiaries and the rights holders.⁷²⁴

In addition to the appropriate measure set forth in Article 6.4, which aims to prevent the endangering of anti-circumvention rules, Article 12 of the EU directive mandates that every three years after its enforcement, the European Commission is required to submit a report involving the application of this regulation to the European Parliament, the Council, and the Economic and Social Committee.⁷²⁵ This report

⁷¹⁸ *ibid* 77-80.

⁷¹⁹ *ibid* 77-80.

⁷²⁰ Hinze (n 386) 810.

⁷²¹ Section 296ZE of the Copyright, Designs and Patent Act of 1988 of U.K., amended by Copyright and Related Rights Regulations of 2003.

⁷²² *ibid*.

⁷²³ Samartzi (n 62) 169-171.

⁷²⁴ *ibid* 239.

⁷²⁵ Article 12 of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

shall monitor whether the technological measures and right holders obtain sufficient legal protection as well as whether permitted acts under exception and limitation are being harmfully affected by the adaptation of effective technological measures. This provision also empowers the Commission to propose amendments to the Directive in the event that it is necessary to function the internal market.⁷²⁶ Article 12 of the EUCD mandates the Commission to regularly assess the adverse effects of lawful use. The Commission is entitled to propose legal reform mandating the providers and users of technological measures to develop and implement this technology in accordance with copyright exceptions.⁷²⁷

The Flaws of Voluntary Measure and Appropriate Measure under the EU Directive

It is arguable that there are a number of challenges with respect to domestic interpretation and implementation. The major difficulties of this approach are the lack of relevant detail with respect to the specific mechanism for applying these exceptions in practice and the lack of further explanation of the appropriate measures. The question then arises: what type of appropriate measure might the Member States adopt to ensure that non-infringing users are able to enjoy their rights and are not prohibited from accessing technologically protected works.⁷²⁸ In addition, the directive has failed to address the specific time frame within which Member States are required to issue appropriate measures when the user is unable to enjoy the protected works under the list of privileges.⁷²⁹ This ambitious approach leaves it up to national legislation to establish the appropriate measures that maintain exceptions and meet their social needs.

The following difficulty is the limited utility of appropriate measures under the directive, Article 6.4 allows the member states to intervene and help the users acquire the protected materials under a limited subset of exceptions under Article 5. In other words, this approach is neither applied to the full range of statutory limitations nor the traditional fair use provisions that exist in national copyright law.⁷³⁰ Article 6.4 fails to oblige the copyright holders to ensure that the non-infringing user would enjoy the mandatory limitation on incidental and transient reproduction under section 5(1) by obtaining the means to engage with the privilege.⁷³¹ With regard to the essential exception in connection to human rights and free speech, the

⁷²⁶ *ibid.*

⁷²⁷ Samartzi (n 62) 232.

⁷²⁸ Fernández-Molina (n 394) 56-59.

⁷²⁹ Akester (n 12) 17.

⁷³⁰ Hinze (n 386) 809.

⁷³¹ Samartzi (n 62) 173-174.

privileged acts of comment, criticism, parody, and news reporting are not identified in Article 6.4. These would allow the copyright holders to overrule the argued exceptions through the use of technological measures.⁷³² The mentioned appropriate measure can be applied only to the prohibition on the direct act of circumvention; the member states are not permitted to issue any measure to enable preparatory acts or the acts of manufacture, importation, or sale of necessary tools and services used for circumvention.⁷³³

Furthermore, from the language of the directive, it might be construed that the appropriate measure is not applied to all types of technological measures. This legal mechanism is only adopted against technologies used for copy control, not against those used for access control.⁷³⁴ Samartzi pointed out that the provision of appropriate measures is likely to be ineffective in real-life situations because this solution is applicable only to the right control measures, but it cannot be applied to those access-control measures. Therefore, the mechanism covered by Article 6.4 is relatively narrow because it excludes access controls. The appropriate measure against the right control seems useless without the ability to access knowledge.⁷³⁵ The member states are able to take appropriate measures in order to make copyrighted works available to the users once the mentioned beneficiaries obtain lawful access to the works, and the member states then facilitate their use and reproduction of the technologically protected works. The voluntary and appropriate measures under the EU Directive seem to be useful for merely a small group of users who have already been authorised to gain access; these approaches would then be applied in order to avoid copy controls.⁷³⁶ In most cases, access has not been freely gained; users are required to pay for accessing the work, and they are normally bound by relevant contractual obligations enforced by technological measures. These would arguably be the establishment of digital lock-up and a pay-per-view society in which copyright holders could charge consumers for every access to their online contents, regardless of whether the reason for access is lawful or for the enjoyment of copyright exceptions by non-infringing users.⁷³⁷ For this reason, it can be said that this directive strengthens the provision of TPMs in favour of the copyright holder and also provides

⁷³² *ibid* 173-174.

⁷³³ Basler (n 270) 16.

⁷³⁴ Article 6.4 Notwithstanding the legal protection provided for in paragraph 1, in the absence of voluntary measures taken by rightholders, including agreements between rightholders and other parties concerned, Member States shall take appropriate measures to ensure that rightholders make available to the beneficiary of an exception or limitation provided for in national law in accordance with Article 5(2)(a), (2)(c), (2)(d), (2)(e), (3)(a), (3)(b) or (3)(e) the means of benefiting from that exception or limitation, to the extent necessary to benefit from that exception or limitation and where that beneficiary has legal access to the protected work or subject-matter concerned.

⁷³⁵ Samartzi (n 62) 167-168.

⁷³⁶ *ibid* 193.

⁷³⁷ *ibid* 193.

legal protection for access control that never existed in the traditional copyright system. This regulation overrules non-infringement use by specifying the list of exceptions, and the online licence is used to restrict the exercise of exceptions. A number of conditions are placed on the users in order to access work; these make the exceptions impracticable in a digital environment.⁷³⁸ As a result, the opportunity for users to access and use the works would be potentially eliminated, and the exchange of culture and knowledge in a digital environment would be decreased.

Based on Article 6.4, the appropriate measure could not be established where the voluntary measure has taken place or the works are made available contractually agreed-upon terms in a way that allows members of the users to access them at a time and location of their own choosing. A number of experts have strongly criticised the fact that Article 6.4 encourages the copyright holders to restrict the application of exceptions by using contractual terms and interactive commercial relationships with the users. This basically means that lecturers who have to take some parts of an instructive movie for educational purposes cannot invoke "illustration for teaching" as a defence against the anti-circumvention protection.⁷³⁹ In that case, the only solution would be voluntary measures taken by the copyright holder to satisfy the teacher's demands. If this is not established voluntarily, the member state would be able to take the necessary measures to ensure that the lecturer obtains the works for teaching or educational purposes.⁷⁴⁰ However, it is important to note that the appropriate measures exercised by the member nations are unable to be introduced where the protected materials were digitally streamed with the conditional access service; they remain excessively dependent on the copyright holder and the contractual relationship.⁷⁴¹ The implementation of the EU directive generates serious problems for non-infringing users. The anti-circumvention provision prevents users from engaging with the copyright exemptions. The data gathered from students, researchers, and film lecturers demonstrated that the technological measures used to protect cinematographic works hinder the extraction of portions of such works for educational purposes.⁷⁴² It could be claimed that the adoption of the EU Directive and the anti-circumvention rules have caused a negative impact on the consumer in terms of enjoying privileges. The public interest seems to be undermined, which also distorts consumer expectations.

⁷³⁸ Fernández-Molina (n 394) 59.

⁷³⁹ Samartzi (n 62) 170-172.

⁷⁴⁰ *ibid* 170-172.

⁷⁴¹ *ibid* 170-172.

⁷⁴² Akester (n 12) 100-102.

The further challenge is the prohibition of circumvention by users; the directive solely encourages the issue of voluntary measures or allows interested parties to negotiate an acceptable agreement. In the event that such a voluntary measure or agreement cannot be reached, the member states are obliged to take any appropriate measure in order to make work available for the beneficiaries under a certain group of limitations. However, the EU Directive is silent on the right of users to deactivate technological measures for non-infringe use. This provision only introduces mechanisms that invite the copyright holders to facilitate the user's exercise of the exceptions.⁷⁴³ Additionally, the directive does not expressly mandate that contractual agreements limiting the lawful uses shall be regarded as null and void. This legislation, in particular, does not require Member States to adopt a contract interface in order to maintain the effectiveness of the users' privileges and to prevent the contractual undermining of copyright exceptions. It could be said that this provision seems to give priority to the contractual terms rather than the privilege of the user under the exceptions, which might affect the ability of the public to access knowledge.⁷⁴⁴ Therefore, the member states have to face significant challenges to implement this provision into domestic registration. The voluntary and appropriate measures have to be carefully designed to balance benefits between the copyright holder and the public by providing sufficient protection for technological measures and also preserving fair access to digital works in domestic legislation. Additionally, it is important for the member states to design specific legal frameworks to ensure that copyright exceptions cannot be contracted away.

4.2.2 The DMCA's Administrative Measure and Exploring its Good Practice for Thailand

In this part, the administrative process and the development over two decades of rulemaking proceeding will be examined in detail. The first part describes the official procedure for rulemaking mechanism under the DMCA and the modification of this process. Then, the standard of proof would be critically reviewed. It also emphasises a number of exemptions granted by the eight rounds of the rulemaking process to highlight some limitations of these administrative exceptions. After that, this part will identify the problems and examine the suggestions to make this measure accessible for all stakeholders. The procedure changes might improve the effectiveness of granting the proper exceptions to anti-circumvention rules. The lessons learned from these would be useful to address common issues arising in administrative rulemaking in Thailand.

⁷⁴³ *ibid* 16-17.

⁷⁴⁴ Samartzi (n 62) 180.

As the specific list of exceptions defined by the DMCA seems to be very narrow and rigid, it could not cover all non-infringing purposes mandated by traditional copyright law.⁷⁴⁵ Technological measures might consequently be used to block educational development and research by deterring personal study, scientific research, free speech, and other educational uses.⁷⁴⁶ In order to solve this significant challenge, the Congress originally introduced the Librarian of Congress to carry out a rulemaking proceeding every three years. This procedure is considered a fail-safe mechanism that is designed to minimise the endanger of digital lockup and the anti-competitive effect of the DMCA. It could be said that the rulemaking proceeding is the unique administrative procedure of the US created to determine a temporary exception for preserving the balance of interest between copyright holders, users, students, researchers, educational sectors, and other larger public.⁷⁴⁷

Rulemaking Process and Complexities on Public Engagement

There are three major institutions engaging in rulemaking procedures, which include the register (the Director of the Copyright Office), the librarian, and the National Telecommunications and Information Administration, operated by the Assistant Secretary of Commerce for Communications and Information (hereafter called "NTIA's Assistant Secretary").⁷⁴⁸ In every triennial rulemaking process, these administrative organisations would regularly provide exceptions to the prohibition on individual acts of circumvention. These allow the users to deactivate access-control measures to enjoy a particular class of works. In doing so, the Register basically has discussion and consultation with the NTIA's Assistant Secretary, and the recommendation concerning the adverse impact of technological measures would be provided to the Librarian. The suggestion would identify whether technological measures are likely to hinder the non-infringing user's access to a specific class of works or impair lawful uses of copyright materials over the next three years. Then, the librarian would declare the exemption for particular classes of contents to enable the user to remove access control measures for the next period of three years; this exception is typically decided based on the recommendation of the register.⁷⁴⁹ In general, there are five phases in the rulemaking procedure, which include the petition phase, the phase of public comment, the

⁷⁴⁵ Besek (n 7) 397-400.

⁷⁴⁶ Koberidze (n 15) 224-226.

⁷⁴⁷ *ibid* 228-234, 259-260.

⁷⁴⁸ Singh (n 16) 545-547.

⁷⁴⁹ Koberidze (n 15) 228-233.

phase of public hearings, the phase of post-hearing questions, the phase of recommendation, as well as the final rule.⁷⁵⁰

The first step of the rulemaking proceeding is the petition phase; the Copyright Office begins the procedure by publishing a Notice of Inquiry to enable the public to submit requests for exception. The advocates are allowed to submit their proposals (in writing) for requesting the exemptions.⁷⁵¹ Previously, proponents were required to present their proposal alongside relevant regulations and complete evidence to support their argument without any guidelines regarding the format or fundamental components of proposals from the Copyright Office. Late proposal submissions are accepted only in exceptional or unanticipated circumstances.⁷⁵² However, there are complexities arising in this stage because the format for proposals is not provided to parties. A detailed proposal supported by all relevant law and evidence is required. These are difficult for individuals to engage with the rulemaking process. Due to the fact that parties occasionally request the exception for several classes of works in prior rulemakings, these different proposals are merged into a single submission. The combination of proposals makes it difficult for the Copyright Office, interested parties, and the public to comprehend which proposed exceptions are based on which facts and evidence.⁷⁵³

The public comment phase would then be organised after the petition phase, which would allow all interested parties to make a recommendation on the proposed exception. After receiving the initial submissions, the Copyright Office would review the proposals and then publish them on the website. A Notice of Proposed Rulemaking would be officially introduced to explain the proposal and encourage all stakeholders to reveal their comments.⁷⁵⁴ There have previously been two rounds of public comments during rulemaking. Either supporters or opponents could submit a comment on the proposals in the first round. Then, all parties are allowed to reply in favour of and against the requested exceptions. These seem to make it confusing for commentators to follow the issues and arguments raised by their rivals.⁷⁵⁵

The third stage of rulemaking proceeding is the public hearing phase. The copyright office would basically invite all interested parties to have a discussion and share their opinions at the round table. The Notice of

⁷⁵⁰ *ibid* 247-249.

⁷⁵¹ Perzanowski (n 699) 6.

⁷⁵² Koberidze (n 15) 250-252.

⁷⁵³ *ibid* 251-254.

⁷⁵⁴ Singh (n 16) 546.

⁷⁵⁵ Koberidze (n 15) 252-254.

Public Hearings will be officially published by the copyright office after the public comment phase has ended. In this notice, the details of hearing procedures are properly explained, and the public is invited to make requests. The public hearings are held to enable evaluation and discussion concerning the expected exceptions.⁷⁵⁶ The participants have to send the requests to the Copyright Office in order to testify for supporting or against the proposed exception at a hearing. In the past, the public comment process was divided into two sessions. The technology hearing allows the witnesses to demonstrate how certain technologies relate to the proposals of exception. Then, the testimony of witnesses would be organised to clarify the legal issues and relevant facts. The participants have to answer the questions from representatives of NTIA and the Copyright Office in this session.⁷⁵⁷ It is arguable that this procedure would result in the development of a factual record for the proposal of an exception, and it would also shed light on the unsolved question embodied in the comments.⁷⁵⁸ While separating hearings for technology might allow for a detailed examination of the related technology and evidence. There is some difficulty in that a fragmented approach to considering legal, factual, and technological aspects can lead to problems in coordinating the legal and technological aspects.

After the public hearings procedure, the post-hearing questions phase would be launched to enable the copyright office to raise follow-up questions and allow the parties to reply to these issues. In this aspect, the follow-up questions are sent to the witnesses, and they have to respond along with additional comments. This phase could assist the Copyright Office in gaining explanations and solutions for any issues regarding the proposals. Additionally, either proponents or opponents are permitted to deliver any missing information to the proposed exceptions; these seem to be the last opportunity for all interested parties to reinforce their points of view. This phase also opens for staff from the Copyright Office's and NTIA to inquire about the post-hearing questions, and the stakeholders are encouraged to clarify all inquiries. The class of works is basically used to group the overlapping questions and answers.⁷⁵⁹

For the Phase of Recommendation and Final Rule, the Register would consider all administrative records gained from the previous process, and these results would be taken to consult with the Assistant Secretary of NTIA. Then, a recommendation on the class of works is provided to the librarian in order to establish the exceptions over the next three-year period. The librarian would review the register's advice before making

⁷⁵⁶ *ibid* 254-256.

⁷⁵⁷ *ibid* 254-256.

⁷⁵⁸ Perzanowski (n 699) 6.

⁷⁵⁹ Koberidze (n 15) 256.

final rules and exceptions. These decisions are officially announced in the Federal Register. Although the recommendation of the register plays an important role in the outcome of this procedure, it should be noted that the librarian has recently exercised discretion without relying on the advice. These would occur where specific exemptions contribute to social benefits.⁷⁶⁰

Due to the complexities of a notice-and-comment process under the DMCA rulemaking, it requires the active engagement of users and other interested parties. The evidentiary and legal criteria are significant challenges for the general public to follow or participate in this administrative procedure. Only a minority of individuals are able to propose the expected exception to the Copyright Office. Even copyright holders, research communities, or educational institutions have to frequently rely on lawyers. As a result, the legal experts became the groups of people who took over the rulemaking proceeding instead of broader public engagement.⁷⁶¹

Recent Modification of Rulemaking Proceeding and the Lessons for Enhancing Procedural Effectiveness

Currently, either petitions for a new exemption or the renewal have to be submitted in writing by using the form available on the office's website. The parties could electronically submit their proposal or comment, and the Copyright Office also uses the website for the publication of public petitions. Specific instructions or details in terms of submitting petitions and comments could be found on the website of the Copyright Office.⁷⁶² It is arguable that the rulemaking proceeding attempts to enable a faster and more convenient process for all stakeholders by using information technology.

The revised procedure attempts to facilitate the proponent by requiring merely a brief proposal containing essential information. It is no longer necessary to provide a detailed proposal backed up by complete law and evidence during the petition phase.⁷⁶³ Nonetheless, the party has to fill out the petition form to provide the identity and contact information of the petitioner. The person or organisation proposing the exception is required to provide their name, or the name of their representative, and contact information on the

⁷⁶⁰ *ibid* 257-263.

⁷⁶¹ *ibid* 247-249.

⁷⁶² Regan A. Smith, 'Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, the Dairy journal of united states' (the Federal Register) <<https://www.federalregister.gov/documents/2020/06/22/2020-12911/exemptions-to-permit-circumvention-of-access-controls-on-copyrighted-works> > accessed 9 March 2023.

⁷⁶³ Koberidze (n 15) 250-251.

form. The description of the requested exception has to be briefly explained in the form, which typically involves a class of copyright materials that the user seeks to access; the devices or media used to store the works or the services through which the materials are made available; the purposes for accessing the works; the types of users seeking to access them; and the current barriers or those likely to take place in the near future that hinder the users from gaining access to the works.⁷⁶⁴ Moreover, the Copyright Office has supplied details on the structure, format, essential content, and components of the initial proposal. The template for petition forms is also provided. Due to the simplification of the rulemaking proceeding, late petitions might be rejected from the procedure, even though the Copyright Office preserves the discretion to deal with unforeseen circumstances that may arise during the submission process.⁷⁶⁵ The Further amendment is separating proposal to reduce complexities. The proponents have to separately identify a single exception per proposal, but they are able to submit more than one proposal. The separation of submissions according to class of work could ensure the proposed exception is clearly assessed and effectively replied to.⁷⁶⁶

With regard to the modified public comment phase, this process has been divided into three rounds. First, only proponents of exemptions are able to comment and provide important information to prove their proposals. The proponents could introduce evidence, relevant documents, and multimedia presentations to support the entire case. In the second round, it is limited to those who oppose the exception. The opponent could submit a multimedia presentation and relevant evidence to demonstrate the unacceptability of the proposed exception. The third round allows proponents, supporters, and neutral parties to discuss the points that have been previously addressed. The new issues could not be raised in the final round of the public comment phase.⁷⁶⁷ In order to prevent the difficulty of this process, all commentators are required to submit a separate comment for each requested exception. This policy would establish separate records of proposals, which would enable the effective tracking of a particular class of works. Furthermore, the Copyright Office has offered explanations on the practice of comment submission, which include specific areas of law and information in connection with proposed exceptions, types of reliable evidence, format, template, and content for comment submissions. The overlapping exceptions

⁷⁶⁴ Regan A. Smith, 'Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, the Dairy journal of united states' (the Federal Register) <<https://www.federalregister.gov/documents/2020/06/22/2020-12911/exemptions-to-permit-circumvention-of-access-controls-on-copyrighted-works> > accessed 9 March 2023.

⁷⁶⁵ Koberidze (n 15) 250-251.

⁷⁶⁶ *ibid* 251-254.

⁷⁶⁷ *ibid* 252-254.

are grouped based on a class of works; these could facilitate the stakeholder to review and refer to the proposed exemption in their comment. The Copyright Office also repeatedly highlighted the significance of presenting evidence to support the comments.⁷⁶⁸

In terms of the modified process of public hearing, all procedures would address the legislation, evidence, facts, and technological arguments in connection with the proposals. The separate hearing on technology was precluded from the procedure. It is important to note that combining factual, legal, and technological considerations into a single hearing reduces complexity and shortens the time required to arrange rulemaking proceedings. However, eliminating separate technological hearings may raise questions about the thoroughness of technical hearings and keep pace with technological development to consider in issuing exceptions of TPMs, especially in the digital age. Hearing agendas are delivered by the copyright office in advance and include details regarding the time and location of hearings. This agenda would identify the witnesses who will participate to testify about the exceptions, and the classes of works discussed in the hearing are also communicated before the date of procedure. Likewise, it is important to note that the parties seeking to testify on several classes of work have to complete a separate form for each petition.⁷⁶⁹

The Copyright Office has ensured a balanced approach and transparency, which are essential for developing and enforcing regulations. The Code of Federal Regulations describes the notice-and-comment procedure to achieve this. The Copyright Office also makes all relevant information accessible to the public by posting it on the website. These would include comments, letters between the Register and the Librarian, and audio recordings of all hearings. Therefore, the Register aims to preserve the balance of interests when establishing exceptions and maintain transparency for the public to review throughout the entire rulemaking procedure. These could demonstrate the capacity of the Copyright Office to play a great role in monitoring and modifying copyright laws.⁷⁷⁰

Thus, these modifications to procedure may allow the public to participate in the rulemaking process more effectively. A brief summary of the proposal is required in the petition phase rather than submitting the entire case. The public comment phase is restructured by dividing it into three rounds; only the proponents are allowed to submit their comments in the first round. The second round is limited to comments from opponents, and the third round is organised to reply to comments. Additionally, the petitions and

⁷⁶⁸ *ibid* 252-254.

⁷⁶⁹ *ibid* 254-255.

⁷⁷⁰ Singh (n 16) 574.

comments have to be separately submitted for each proposal to create effective tracking and better administrative records. The demonstration on facts, legislative and technological issues in relation to the class of works is included in the same hearing. The copyright office supplied the format, template, and recommended contents for the petition and comment. The other guidelines are provided to make the rulemaking proceeding accessible and comprehensible for the public, which raises public awareness of the triennial regulation. These developments on evidentiary and legal requirements could substantially decrease procedural burdens on both participants and the Copyright Office.⁷⁷¹

Standard of Proof for Determining Exceptions

With regard to the burden of proof, the proponents seeking the exception bear the burden of proving to demonstrate the harm of technological measures used to control access to digital materials. They are required to present three main components: (1) there has been a substantial adverse effect or there is likely to be a substantial adverse impact on non-infringing uses; (2) the alleged endanger is more likely than not; and (3) the anti-circumvention regulation has caused or is likely to cause the claimed damage in the following three years.⁷⁷² To meet this burden, a preponderance of evidence is required. The proponents have to show clear and substantial evidence in order to demonstrate that the alleged damage is more likely to occur than not. Generally, Section 1201(a)(1)(B)-(C) of the DMCA requires proof that non-infringing users are adversely affected or are likely to be harmed by access-control measures and anti-circumvention laws.⁷⁷³ The user has to show substantial, trustworthy, and probative evidence to support their proposals. If a proponent could satisfy this standard of proof to seek an exemption, the burden would shift to the opponent to demonstrate that the exemption is unacceptable.⁷⁷⁴ According to the Assistant Secretary, the Register requires proof for either present or future harms, which is a significant burden for claiming future harms. A number of comments were rejected because they were subject to theoretical arguments, lack of proof of existing or likely harm, and de minimis or mere inconveniences.⁷⁷⁵

Hence, to meet the standard of proof, the proponent has to show that: (i) the uses barred by the anti-circumvention rules are non-infringing or are likely to be lawful; (ii) the adverse effects are substantial or are likely to be significant (not too small to be taken into consideration); and (iii) there is a causal link

⁷⁷¹ Koberidze (n 15) 257-259.

⁷⁷² Singh (n 16) 545-547.

⁷⁷³ Koberidze (n 15) 236-238.

⁷⁷⁴ *ibid* 236-238.

⁷⁷⁵ Singh (n 16) 554, 565-567.

between TPMs and the harm to access to digital works.⁷⁷⁶ Furthermore, the Register has to consider the statutory factors outlined in Section 1201(a)(1)(C) and whether the positive impact of this provision outweighs the negative effects. The Copyright Office argues that it seems insufficient to demonstrate whether a certain usage of work is non-infringing, it is unacceptable for the proponents to merely show that the activity might be possibly deemed non-fringing. Instead, they have to prove that the intended use is likely to be permitted or lawful under relevant legislation in order to issue the exception. This indicates that the rulemaking proceeding requires a higher standard than the rule of doubt.⁷⁷⁷

The user who requests an exception has to demonstrate that the enforcement of TPMs causes substantial harm to non-infringing uses.⁷⁷⁸ There is a challenge concerning the evidence of “substantial harm” from non-infringing use of works, which is required to determine an exception. The Commerce Committee Report stressed that the adverse impact on lawful uses of a certain class of copyright works has to be significant. The rulemaking process would mainly rely on measurable and verifiable effects in order to meet the harm criteria; minimis impacts would not be considered.⁷⁷⁹ Similarly, this administrative procedure also focuses on the substantial reduction of specific classes of works that are available in the market and the actual harm to non-infringing activities.⁷⁸⁰ The Copyright Office provided further explanation that sole inconveniences or isolated harms are not qualified as serious adverse impacts.⁷⁸¹ In other words, it is likely to have de minimis impacts if alternative work is available in tangible form or unprotected format, regardless of cost or inconvenient access to the works. The librarian would typically reject an exemption because this alternative form of material would mitigate the negative impacts caused by the prohibition on circumvention.⁷⁸²

To justify the exemptions, the following factors might be examined: (1) the availability of copyright materials for non-infringing uses. The Register has to consider whether copyright works are accessible in the market. In the case that encrypted versions of works and unprotected formats remain, the exemption from anti-circumvention rules seems unnecessary. A proposed exemption would be rejected if there were alternatives for non-infringing uses.⁷⁸³ Moreover, the additional two factors have to be taken into account,

⁷⁷⁶ Koberidze (n 15) 238-242.

⁷⁷⁷ *ibid* 238-242.

⁷⁷⁸ *ibid* 238-242.

⁷⁷⁹ Perzanowski (n 699) 5-8.

⁷⁸⁰ Koberidze (n 15) 239-240.

⁷⁸¹ Perzanowski (n 699) 7-8.

⁷⁸² Singh (n 16) 565-566.

⁷⁸³ Perzanowski (n 699) 7-8.

which comprise: (2) the availability of works for preservation carried out by non-profit libraries and other educational purposes; and (3) the effect of anti-circumvention legislation on research, teaching, news reporting, criticism, and commentary. The impact of these regulations on the value or market of copyrighted works and any necessary criteria recognised by the Librarian.⁷⁸⁴ In this regard, other factors are typically excluded, such as the cost and quality of works existing in the marketplace; these would be irrelevant during the rulemaking process. However, the librarian has to consider not only the adverse impact of TPMs, but also the benefits of the digital dissemination of works and the opportunity for creativity when carefully evaluating the exception to these rules. Due to the fact that the Register and Librarian have to weigh all of the aforementioned factors, the burden of proof is placed on the proponent to address these factors in the proposals. It seems to be extremely difficult for the user seeking the exception to participate in this procedure without the assistance of a lawyer.⁷⁸⁵

Further, if the proponents express their concerns about the future impacts rather than the existing negative effects, they are required to prove that the future effects are likely to arise. The Copyright Office highlighted that the expected impact could be taken into account merely in extraordinary cases when there is precise, persuasive, and compelling evidence of harm throughout the upcoming period. Thus, it seems extremely difficult to establish an exception based on future adverse effects because a higher standard of proof and evidence is applied to the procedure.⁷⁸⁶

Interpreting the Classes of Works

Even though the Copyright Act provides a definition for "categories" of copyright works, such as literary, musical, and audio-visual works, the same legal term has not been defined in the DMCA, which raises the challenge for the librarian to determine exceptions based on classes of works. According to the statutory language of the DMCA, the rulemaking proceeding would grant additional exceptions for a particular class of works; the scope of the exempted works is determined on a case-by-case basis.⁷⁸⁷ The Register emphasised in previous rulemaking that a particular class of works refers to a limited subset of the wider categories of works in Section 102, which should be used as a starting point to identify a particular class. For instance, even if books or journals and computer programs are included in the category of literary works under Section 102, the Register's interpretation is that these two categories are not considered to be the

⁷⁸⁴ *ibid* 7-8.

⁷⁸⁵ Koberidze (n 15) 38-42.

⁷⁸⁶ *ibid* 240-241.

⁷⁸⁷ Singh (n 16) 547.

same particular class for the rulemaking proceeding. A further example of works exempted by rulemaking proceedings are cellphone unlocking, e-books for the visually impaired, motorised land vehicles, voting machines and medical implants for security testing.⁷⁸⁸ For determining a class of works, the following factors have to be considered to establish the administrative exemptions: (i) the form on which the materials are distributed; (ii) a specific technological measure applied to control access to the works; or (iii) the danger to the market or adverse effects on the value of the work that might be caused by the expected exception.⁷⁸⁹

Additionally, a class of works should not be overly broad or excessively narrow. The clearest example of this is that seeking an exception for all wireless devices or entire computer tablets seems to be tremendously broad. In contrast, proposing the exemption for particular types of movies seems unreasonably narrow, such as merely comedies, thrillers, or dramas. Hence, the proponents could not request an extremely general or too specific exception; these might be difficult to reach in a rulemaking proceeding. To enhance the opportunity to gain the exception, the proponent should be reassured that their submissions have met these criteria.⁷⁹⁰ Therefore, the class of works exempted by the rulemaking procedure is limited; they are narrower than the categories of works defined by traditional copyright laws. These would be determined on a case-by-case basis after taking relevant factors into account. These would hinder the users from enjoying a wider class of copyrighted works in 102 if such works are not exempt by the rulemaking process.

Prior Renewal Process and Adverse Impacts on Maintaining Exceptions

It is important to note that the exception identified by the librarian is not permanent; the exempted works in prior rulemaking are definitely terminated if such materials are not reinstated in the next proceeding period. For this reason, the particular class of works is likely to be available for non-infringing use for a limited period of time, and they are no longer able to enjoy their rights after the end of the former proceeding period.⁷⁹¹ In the prior renewal process, the de novo or anew standard of review is required. The rulemaking proceeding is anew in every three-year period. Even though the needs for non-infringing uses of works remain unchanged, the proponent could not rely on their proposals submitted in previous

⁷⁸⁸ Koberidze (n 15) 246

⁷⁸⁹ United States Copyright Office, 'section 1201 rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention recommendation of the register of copyrights' (copyright.gov, October 2015) <https://cdn.loc.gov/copyright/1201/2015/registers-recommendation.pdf> accessed 19 Dec 2022.

⁷⁹⁰ Koberidze (n 15) 245-247.

⁷⁹¹ Ginsburg, 'Legal Protection of Technological Measures Protecting Works of Authorship: International Obligations and the US Experience' (n 2) 33.

rulemaking proceedings. Despite the fact that the resistance to renewal did not exist, the de novo standard of proof is required to renew the granted exception. Generally, the existing exceptions from previous rulemakings would not be automatically renewed under the following procedures:⁷⁹² The proponent has to demonstrate the adverse impacts, and evidence has to be provided in every triannual rulemaking to preserve the current exemption. This provision was likely to be a significant issue in the past because the proponents of the existing exemption are required to demonstrate that the same conditions contributing to the establishment of the prior exception currently exist or that new circumstances have arisen to determine the exception.⁷⁹³ The parties have to prove that the absence of an existing exemption would hinder the lawful use of works, and the proponent has to present adequate evidence to support the renewal. Persuasive and current evidence is required to demonstrate that the proposed activity is non-infringing or is likely to be non-infringing and whether the anti-circumvention regulation has a current impact or is likely to have a future negative effect on non-infringing uses. However, it seems to be of extraordinary difficulty to obtain factual evidence to prove the harm because the fact that evidence of harm may no longer be easily available due to the existing exception already mitigating the issue. The exceptions have already been granted in previous rulemaking, this means that the users are permitted to circumvent the technological measure to exercise their non-infringing use, and the works remain available for lawful purposes.⁷⁹⁴ These would result in a lack of evidence to reveal the harm to non-infringing uses. It is arguable that renewing becomes more difficult than seeking an exception, which similarly relies on the actual harm or measureable impacts. Because the copyright office is mainly focused on the present harms, the future impacts are considered speculative or too theoretical. The existing exception remains in effect; it has prevented or reduced current harm. The evidence of impact might be difficult to gather. It is significant for the proponent to convince the copyright office to extend the existing exception. The rulemaking procedure is likely to preclude non-infringing use rather than preserve it.⁷⁹⁵

However, after a proponent has satisfied the standard of proof or provided adequate evidence for the re-adoption of an exception, the burden of proof would then shift to the opponent to show that the existing exception is no longer necessary. Due to these difficulties, in the latter rulemaking proceeding, the Register attempts to reform the standard of proof by providing a presumption in favour of renewal. The Register

⁷⁹² Koberidze (n 15) 263-267.

⁷⁹³ *ibid* 243.

⁷⁹⁴ Mark Gray, 'New Rules for a New Decade: Improving the Copyright Office's Anti-Circumvention Rulemakings' (2014) 29 *Berkeley Tech. LJ* 777-779.

⁷⁹⁵ *ibid* 777-779.

recommended the Congress modify the rulemaking process to establish a presumption favouring the re-adoption of exceptions when substantial resistance has not occurred.⁷⁹⁶ The details of the improvement of this mechanism will be discussed in the following section.

Improvement of Renewal Process

The significant improvement of the renewal process was officially established in the seventh round of rulemaking proceedings. Rather than filing a new petition, the proponent could submit a separate renewal application outlining the grounds for their proposals to readopt exemption. The proponents are required to fill out the petition form provided on the website of the copyright office and follow the mandatory contents. The renewal form was shorter than those seeking the new exceptions; it was designed to identify the details of the proponents and the relevant exemption.⁷⁹⁷ The current exception has to be submitted in a separate petition form for renewal to clarify the factual basis used to support each exemption. In other words, a single submission encompasses only one exception sought to renew, but the same party is able to apply for multiple petitions. There are four elements contained in the petition form. The first component is the identity and contact information of the petitioner. The person or organisation requesting renewal must fill out a form with their contact information, name, and the names of any representatives. Then, identification of existing exemptions is required. The form includes a list of the current exemptions with a checkbox; the exemption requested for renewal has to be precisely identified by marking the corresponding checkbox. The third element is an explanation of the need for renewal. The petitioner has to provide a concise summary in connection with an ongoing need to justify the exemption. The supporting documentary evidence is not required, but it is permissible to encompass it in the petition. It is important to note that the US rule-making process attempts to facilitate all parties attending this procedure by providing an example of what it considers to be a satisfactory explanation. The final section is Declaration and Signature. The petitioner is required to sign a declaration certifying the continued necessity of the exception and the truthfulness of the provided explanation.⁷⁹⁸

In a streamlined renewal process, the copyright office could consider the similar situations, facts, and materials that supported the former rulemaking proceeding. Proponents are required to only demonstrate

⁷⁹⁶ Koberidze (n 15) 242-244.

⁷⁹⁷ Regan A. Smith, 'Exemptions to Permit Circumvention of Access Controls on Copyrighted Works' (The Federal Register, 11 June 2020) < <https://www.federalregister.gov/documents/2020/06/22/2020-12911/exemptions-to-permit-circumvention-of-access-controls-on-copyrighted-works> > accessed 19 January 2023.

⁷⁹⁸ *ibid.*

that substantial changes in factual basis have not occurred, and exceptions remain essential to facilitate non-infringing activities. The users are using or relying on the exemption to engage with copyright works. Hence, the submission has to explain that the factors that caused the exemption in the previous round are unchanged and will continue to exist in the upcoming triennial period. The facts, law, or other circumstances described in the former rulemaking record have not been changed. With this aspect, the renewal could rely on the same evidence and factual and legal basis underlying the prior exception.⁷⁹⁹ Any interested party may submit comments to support or oppose a renewal of an exemption. The Copyright Office did not provide the comment form, but it is crucial to clearly indicate on the first page which renewal that interested parties support or oppose. Participants may comment on multiple exemptions, but a single submission may separately address only one exception.⁸⁰⁰

In the case that the existing exception was opposed, the office requested the comments from the opponents. They have to provide evidence to demonstrate that the record of previous rulemaking and any additional information in the renewal submission are insufficient for re-adaptation. The argument might involve a change in case law, the development of technology, or business models affecting the availability of copyright works. The Office will not be able to reject the renewal of an exemption based solely on an unsupported and unsubstantiated opinion.⁸⁰¹ If there is a meaningful contest concerning the appropriateness of an existing exception, it would be officially noticed to gain written comment and lead to a public hearing. This procedure is useful to create the new administrative record, enabling the register and librarian to determine whether to renew, modify, or preclude the existing exemption. However, it is important to note that if the proponent seeks to expand exemptions, it would become a new proposal and fall into the usual petitioning process.⁸⁰² It is arguable that the new process of renewal is easier than the previous procedure, which facilitates proponents to share their experiences and expectations to preserve

⁷⁹⁹ Karyn A. Temple, 'Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies' (The Federal Register, 26 October 2020) < <https://www.federalregister.gov/documents/2018/10/26/2018-23241/exemption-to-prohibition-on-circumvention-of-copyright-protection-systems-for-access-control> > accessed 19 January 2023.

⁸⁰⁰ Regan A. Smith, 'Exemptions to Permit Circumvention of Access Controls on Copyrighted Works' (The Federal Register, 11 June 2020) < <https://www.federalregister.gov/documents/2020/06/22/2020-12911/exemptions-to-permit-circumvention-of-access-controls-on-copyrighted-works> > accessed 19 January 2023.

⁸⁰¹ *ibid.*

⁸⁰² Karyn A. Temple, 'Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies' (The Federal Register, 26 October 2020) < <https://www.federalregister.gov/documents/2018/10/26/2018-23241/exemption-to-prohibition-on-circumvention-of-copyright-protection-systems-for-access-control> > accessed 19 January 2023.

the existing exceptions for the next three years. These improvements prolong socially valuable exceptions and reduce the evidentiary burden placed on proponents.

Evaluative Reflection on Exemptions Established by Rulemaking Proceeding

It is noteworthy that the early round of rulemaking included a small number of exceptions; they were also restricted by further descriptive limitations. These restrictive scopes involve the content of works, the media through which they are distributed, or the characteristics of the access-control measures.⁸⁰³ The application of rulemaking exceptions is restrictively limited; they do not benefit the public at large. These exceptions contain a limitation on either the type of use or the user's identity. The clearest exemplar of this is audio-visual works exceptions, which contain the boundary on the user and how the works would be employed. Only university staff are permitted to circumvent technological measures for the sole purpose of assisting qualified professors to use a portion of their work in educational activities.⁸⁰⁴ Limitations on the user and the manner of use could be found in computer programmes and video games. The library or archive are exempt from legal liability for carrying out circumvention, and it has to be done merely for preserving the works or archival purposes. It could be said that these exceptions did not cover the circumvention undertaken by the general user or other types of uses.

In light of the limitation on intended use, the firmware of a mobile phone could be circumvented only for the purpose of connecting to a wireless telephone communication network. Likewise, the exception for sound recordings and audio-visual works distributed in compact disc format allows the circumvention for limited purposes of investigating, testing, or correcting security vulnerabilities or flaws in good faith. The circumvention of other objectives remains prohibited.⁸⁰⁵ Therefore, it is arguable that the rulemaking exemptions narrowly permit specific uses of works, and these could apply to specific groups of users. A few exceptions are generally applicable, but the majority of them did not contribute to the wider range of the public.⁸⁰⁶ The rigid and limited exceptions established by the rulemaking proceeding reflect that this process does not intend to protect non-infringing activities. In contrast, it was a strict regulatory mechanism that allowed specific applications of exceptions only under certain conditions. This limitation indicates a priority to protect TPMs over access to the work by fair users. The flaw of administrative exceptions is their rigid regulatory style, which results in limited applicability. The rigidity and inflexibility of legislation are

⁸⁰³ Perzanowski (n 699) 6-9.

⁸⁰⁴ *ibid* 20-22.

⁸⁰⁵ *ibid* 20-22.

⁸⁰⁶ *ibid* 20-22.

unlikely to comply with the fundamental principles of copyright law; they could not maintain a balance between the protection provided by technological measures and the right to access knowledge.⁸⁰⁷ It seems to be theoretical for DMCA rulemaking to prevent adverse impacts of anti-circumvention rules, and it is likely to be unsuccessful to make works available to the general public for any non-infringing uses.⁸⁰⁸

Nonetheless, the amendment to the 2015 rulemaking proceeding discussed earlier reduces procedural complexity and makes the process more accessible for the ordinary user of the works. These modifications indicate a change to more user-friendly procedures and more flexible to technological progress. The revisions enable a wider set of stakeholders to participate in the rulemaking process and enable the user to demonstrate the practical effect of TPMs. These changes facilitate the participants' ability to provide adequate legal and factual support for their claims and minimise administrative burdens for both the office and the public to establish the new exceptions.⁸⁰⁹ Over time, with the improvement of rulemaking proceedings, the number and scope of exemptions have expanded. Each round of rulemaking determined the exemptions for the broader class of work; the wider range of users and utilities are included in the exemptions. These expanded to consumer electronics, tablets, smartphones, smart televisions, 3D printers, medical devices, and automobiles. It reflects the improvement of administrative procedures, encouraging wider participation of all stakeholders to jointly establish the exception. These could reveal the impact of the technological measures and anti-circumvention rules, and the legal solutions could be found to be compatible with the needs of the user.⁸¹⁰

Even though there have been several developments in the 2015 round of rulemaking procedures, several limitations remain. They still are limited to certain types of works, users, and purposes, which limits the applicability and effectiveness of exceptions created by rulemaking proceedings. The Register is concerned about renewal, and encourages Congress to amend the law to make it easier to renew exemptions. But this problem was not solved, and the librarian is prohibited from re-establishing the exemption of prior rulemaking without the support of fact and law from participants. Moreover, the Register and the Librarian are constrained by existing law; they cannot themselves determine what would not be an infringement without statutory or case law. Rather, the Register should carefully examine the wording of the law, the

⁸⁰⁷ Singh (n 16) 528-529.

⁸⁰⁸ Perzanowski (n 699) 20-22.

⁸⁰⁹ Library of Congress, 'Understanding the Section 1201 rulemaking' (Library of Congress, 28 October 2015) <https://cdn.loc.gov/copyright/1201/2015/2015_1201_FAQ_final.pdf>, accessed 1 October 2023.

⁸¹⁰ *ibid.*

evolution of the fair use doctrine, and the facts set out in each proposal before it can accurately evaluate the non-infringing use and determine the exceptions. Further, any exception contained in the 2015 final rules still only applies to the anti-direct act of circumvention; it did not provide an exception for the trafficking in circumvention devices and services. The exception did not permit acts of circumvention carried out on behalf of a third party or another person.⁸¹¹

However, the exception concerning third parties is established solely to help the owner of the wireless telephone handsets and other tools unlock or connect to wireless telecommunications networks. This assistance of circumvention has to be initiated by the owner of the handset or device, by the owner's direction, or by a provider of data services or commercial mobile radio. This provision seems to be influenced by the Unlocking Consumer Choice and Wireless Competition Act. Due to the fact that consumers who do not have technical skills might require assistance from third parties to circumvent technological measures and gain access to the works, the application of third-party exemption was extremely limited to a specific class of works. This narrow approach makes the exceptions limitedly enforceable because many users lack the technical know-how to self-sufficiently exercise their rights under the exceptions. Consequently, officially granted exemptions might not result in practical access, as the users cannot seek assistance from others to circumvent technological measures to access the works. This shortcoming is acknowledged by the Register to expand third-party support. The Register has urged Congress to clarify Section 1201 by expanding the scope of an exemption to permit third-party assistance. These would realise the exception by allowing another actor to facilitate beneficiaries to access to the works. The third-party exception would enable the user to take full advantage of their rights and privileges. For instance, the third-party provision should be adopted for libraries and archives; it would facilitate the libraries' access to specific works and fulfil their role of preservation. The Register also insisted that the current anti-circumvention rules under the DMCA adversely affect a variety of consumer activities to access creative content. It seems to contradict the fundamental principle of copyright law. The Register has stated its support for a broader legal evaluation of Section 1201 to solve all of these concerns.⁸¹²

Although the exemptions have been increased in rulemaking proceeding from 2015 to 2021, they remain inadequate to reach the non-infringing use of works. It is arguable that these exceptions seem to protect a specific community instead of benefiting a wider range of people. The exceptions are limited in terms of

⁸¹¹ *ibid.*

⁸¹² *ibid.*

the users, nature of the works, purpose of use, and type of technological measure. These approaches also restrictively apply to the prohibition on circumvention of access control measures and remain irrelevant in preparatory activities. The scope of the rulemaking process is too narrow to achieve the goals of making the work available for non-infringing uses and maintaining the balance of interest between stakeholders.

Strengths of the DMCA's Rulemaking Proceeding

The main objectives of this procedure are to examine the adverse impact on information access and identify the legitimate consumers affected by the application of anti-circumvention provisions. After the process of examination and evaluation, the librarian of Congress has the authority to exempt a particular class of work from the prohibition on the act of circumvention. This exemption would last until the next period of rulemaking proceedings. There are a number of benefits to this mechanism.⁸¹³ First, this mechanism enables lawmakers to revise the additional exception to anti-circumvention rules in a more efficient manner, and the process is also faster than the traditional law-making or court procedure. With this measure, the protection from technological measures would be more flexible, and the scope of exemption would be broadened to reduce the adverse effect on access to information.⁸¹⁴ Second, the argued process is regularly conducted every three years, so it could keep up with the rapid development of technologies and the marketplace of copyright works and assess whether a negative effect is likely to rise over the next period.⁸¹⁵ In general, it seems difficult for the laws to effectively govern the impacts of new technologies on the right and the ability to access information for users. The rulemaking proceeding under the DMCA provides authority to the Copyright Office to investigate the interactions between legislation and technology every three years. The updated information and evidence gained from this process would be useful to grant or reject the exceptions. These would effectively regulate copyright infringement in the digital environment and enable users to access and use the works in specific circumstances.⁸¹⁶

Furthermore, this administrative proceeding is able to limit the prohibition of access control circumvention; it seems to be an additional mechanism taken place to assess the impacts of anti-circumvention rules on the ability to access electronic materials and accommodate the lawful use of protected works in a digital

⁸¹³ Besek (n 7) 416-417.

⁸¹⁴ Koberidze (n 15) 213-215.

⁸¹⁵ Besek (n 7) 416-417.

⁸¹⁶ Dave Davis, 'The Seventh Triennial Section 1201 "Final Rule" has Been Issued' (Copyright Clearance Center, 25 October 2018), <<https://www.copyright.com/blog/section-1201-rulemaking/>> accessed 9 January 2023.

environment.⁸¹⁷ It enables users to access digital material for lawful purposes.⁸¹⁸ Thus, it can be said that the rulemaking proceeding is considered a useful instrument to reduce the adverse impact on fair use and reconcile the conflict between lawful use under the fair use provision and the anti-circumvention rules. Even though the renewal process places an unnecessary burden on the proponents, there are benefits to renewal in terms of affording new information to determine exceptions. Due to the development of technologies and business models, the user might no longer rely on the exception. The factual changes may make the exception outdated and useless. This process allows the copyright office and librarians to consider the new evidence and regularly revise or revoke the existing exceptions based on recent needs and factual changes. The renewal procedure may ensure proof of reliance on exceptions and factual continuity to readopt the prior exemptions.⁸¹⁹

The Remaining Issues of the DMCA's Rulemaking Proceeding

There are some limitations regarding the rulemaking proceeding; this approach seems to be very restricted and narrow in terms of application. The fundamental deficiency of this procedure is that the exception could be granted to specific classes of works that seem to be only subsets of “categories” of works existing under the U.S. copyright law.⁸²⁰ With these approaches, these exempted classes of protected materials would be a focused subset of the broad categories of copyrighted works.⁸²¹ More especially, even a particular class of works is exempt from the legal protection against acts of access control circumvention, but this exception might be very limited in practice. Because the exemption does not expand to cover anti-trafficking devices, the manufacturing and distribution of circumvention tools remain mostly banned.⁸²² The provisions allowing the third party to enable the user to circumvent technological measures are very limited to specific exceptions. Generally, the librarian is unlikely to establish exceptions allowing third parties to facilitate users exercising their privileges. The manufacture and distribution of circumvention tools are not permitted to enable users to take advantage of exceptions established by rulemaking proceedings.⁸²³ Thus, it seems difficult for the user to engage with the work because the majority of users

⁸¹⁷ Perzanowski (n 699) 5.

⁸¹⁸ Koberidze (n 15) 213-214.

⁸¹⁹ Gray (n 794) 779-785.

⁸²⁰ De Werra (n 334) 20-21.

⁸²¹ Gasaway (n 11) 283.

⁸²² Hinze (n 386) 799-801.

⁸²³ Koberidze (n 15) 267-268.

do not have the technical skills to hack technological measures to access digital works by themselves. They cannot produce circumvention devices to exercise exceptions.⁸²⁴

From the US's experiences, the legal or administrative frameworks have not been put in place to oblige the copyright holder to make the works available for privileged users under the statutory and rulemaking exemptions. Despite the triennial proceeding that granted the exception for the e-books, these works remain inaccessible to eligible users. The vast majority of digital books and electronic works are protected by technological measures to restrict access to materials. In addition to the blocking of textual content, the copyright distributors may technologically lock their works to be used with specific devices or services to prevent users from switching to another service provider and stifle the fair competition in the market for software suppliers. These make exceptions to the DMCA become ineffective and unrealised. With these reasons, the register provided a suggestion to the Congress that Section 1201 should be amended to permit the third party to assist non-infringing users in accessing the works. The librarian should have the authority to establish an exception for a specific third party to facilitate engaging with the exempted works. These would ensure the effective implementation of exceptions. At least, an active system should be established to enforce the exception by mandating the copyright holder to facilitate qualified users engaging with the exempted class of works.⁸²⁵

With regard to the burden of proof, Gwen Hinze concerns that the rulemaking proceeding is governed by several technical laws and procedural burdens.⁸²⁶ There are some criticisms that distinct, verifiable harm is an unnecessarily high criteria for the proponent to bear the burden of proof, and this substantial harm seems to be difficult to demonstrate to gain the exception.⁸²⁷ It seems to be a high burden of proof to present factual support or verifiable evidence of substantial adverse impact, and the legislative knowledge in connection with fair use provisions and non-infringing uses is necessary for participating in rulemaking procedures.⁸²⁸ These factors make the process excessively complicated and less comprehensible for individual users, which could be considered a significant challenge for users to participate in these administrative activities without hiring technical experts and lawyers.⁸²⁹ Gasaway argued that the rulemaking proceeding remains problematic for libraries and users because the Copyright Office narrowly

⁸²⁴ *ibid* 275.

⁸²⁵ *ibid* 267-269.

⁸²⁶ Hinze (n 386) 799-800.

⁸²⁷ Gray (n 794) 765-766.

⁸²⁸ Singh (n 16) 557-567.

⁸²⁹ Koberidze (n 15) 217.

construed the statutory language. Generally, during the process of rulemaking, this organisation focuses merely on the current adverse impacts faced by various groups of interested parties due to technological measures used by publishers and content producers to control access to and use of their works. This interpretation seems to be extremely difficult for the users who testified during the process of hearings because proof of current damage in relation to the engagement of copyright works is required.⁸³⁰ Even though the statutory language allows for the exploration and examination of those who are likely to be harmfully affected in the next three years, the Copyright Office seems to take a different approach to interpretation by concentrating specifically on current negative impacts.⁸³¹ In the consumer's perspective, focusing only on the present impact of technological measures would be too late to prevent or reduce the harm. While testifying groups or the users of copyright works were permitted to suggest and discuss the potential adverse effects, the Office has narrowed this testimony in practical rulemaking by focusing solely on actual harm.⁸³² Consequently, this process excludes the vast majority of users who are not specialists in the copyright area; only a limited group of organisations or individuals could propose a limited number of exceptions.⁸³³

Moreover, several rulemaking processes typically take time, which takes about one year to complete. The 2010 Rulemaking, for instance, has taken nearly twenty months to conclude the exceptions.⁸³⁴ The ambiguity of non-infringing is a further fundamental limitation of this process, the specific class of works is exempt if the anti-circumvention provision hinders the users from making non-infringing uses.⁸³⁵ The Copyright Office primarily relies on court judgments to determine whether a use meets the legislative requirements for non-infringement. In other words, the copyright office attempts to avoid exceeding statutory and constitutional authority by following the case law, and exemptions are granted when the uses are obviously non-infringing under well-established regulations.⁸³⁶ However, it is important to note that Congress has the intention of introducing anti-circumvention rules to keep up with the development of information technologies. The rulemaking proceeding is established to determine the exception compatible with these legal and technological changes rather than the well-settled doctrines. Although the office avoids establishing the new exception that goes beyond precedence, relevant laws, and legal doctrines, it

⁸³⁰ Gasaway (n 11) 283-284.

⁸³¹ *ibid* 283-284.

⁸³² *ibid* 283-284.

⁸³³ Singh (n 16) 557-567.

⁸³⁴ Koberidze (n 15) 217.

⁸³⁵ Gray (n 794) 786.

⁸³⁶ Perzanowski (n 699) 24.

is essential to implement the factual standard for seeking the exception in order to create certainty in the rulemaking process.⁸³⁷ As discussed prior, the administrative exceptions are determined based on the judgements. The process appears to be delayed and narrow because courts only have the authority to decide on the legality of circumventions when an exemption is claimed as a defence during judicial proceedings. In the absence of the initial act of by-passing, the court might never have the chance to determine whether or not specific activities are non-infringing. As a result, numerous exceptions or fair use are unlikely to take place in the digital era due to the lack of a court's judgement or case law that supports their legality.⁸³⁸ Due to these complexities, the provision of rulemaking is quite limited in practice and seems to be meaningless for non-infringing users.⁸³⁹

Furthermore, the educational community expresses concern in terms of the preservation of digital contents by libraries. This community also proposed that two classes of protected works should be exempted in favour of non-profit library and educational use; these would include fair use works and certain works with minimal level of creativities or originality. In this context, social and academic databases, academic articles and journals, textbooks, law reports, treatises, and educational audio-visual materials would be considered fair use works. The exemptions for these classes of works should be linked to the lawful users who have privileges under the fair use provision. This solution would be useful for educational purposes, as these works are the most necessary sources for learning and teaching. Similarly, certain works with minimal level of creativities or originality should be exempted for non-profit library and educational uses; these might include maps, newspapers, scholarly scientific journals, and databases. One could argue that these works contain valuable information that does not fall under the purview of copyright protection.⁸⁴⁰ Moreover, Mark Grey claimed that the fair use provision should play more role in justifying the additional exemptions. These could broaden the scope of rulemaking proceeding to meet real-world conditions. He asserts that the main purpose of the rulemaking process is to preserve non-infringing use, which includes fair use as a subset. Four criteria of fair use should be more carefully considered to determine the exception. Moreover, the librarian is permitted to evaluate additional factors that he "considers appropriate." The copyright office and librarian should exercise their authorities by applying fair use to justify the proposed exemption.⁸⁴¹ The implementation of fair use factors would help to identify the significant impact of anti-

⁸³⁷ *ibid* 24.

⁸³⁸ *ibid* 24.

⁸³⁹ Hinze (n 386) 799-800.

⁸⁴⁰ Gasaway (n 11) 285.

⁸⁴¹ Gray (n 794) 775-789.

circumvention rules on the availability of copyright works; the effect on news reports, criticism, commentary, and other non-infringing activities would be reflected. The analysis of fair use also examines the market effect of anticipated use, which enables the Register to assess whether the rule prohibits people from using copyright works for non-infringing purposes. Fair use is likely to be an indicator of whether or not an activity contributes to society, which enables the librarian to decide whether an exception is incompatible with a specific context and the public interest.⁸⁴²

Samuelson argued that the Librarian of Congress should conduct studies or observations concerning the adverse impacts of either the prohibition of circumvention or anti-trafficking circumvention devices on non-infringing purposes. They should closely examine the capability of certain classes of works or users to engage in non-infringing uses of encrypted content. In addition, the organisations should also have wider authority to make other studies about potential unintended side-effects of the TPMs that may overrule the public interest.⁸⁴³ In terms of the renewal procedure, although there are some concerns that the rulemaking proceeding has placed an unnecessarily heavy burden on the proponents who attempt to renew existing exceptions in every rulemaking.⁸⁴⁴ The copyright office and librarians still consider that the renewal process would result in fresh consideration for renewing the essential exceptions and revoking the ineffective or unnecessary exceptions granted in previous rulemaking.⁸⁴⁵

4.2.3 The CDPA Voluntary Measure and Complain Procedure for Enforcing Exceptions

Since the anti-circumvention rule under the CDPA includes copy control and access control measures, there is a potential that users will be hindered from accessing digital information. It is important to maintain the balance between legal protection against circumvention of technological measures and the opportunity for lawful consumers to be able to exercise the permitted act under the copyright exceptions. In order to address this issue, Section 296ZE introduces the provisions of the voluntary measure and complaint procedure to ensure that users are able to benefit from the list of copyright exceptions in the digital

⁸⁴² *ibid* 775-789.

⁸⁴³ Samuelson (n 161) 560-562.

⁸⁴⁴ Koberidze (n 15) 216.

⁸⁴⁵ Federal Register, 'Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies' (The Federal Register, 26 October 2020) <<https://www.federalregister.gov/documents/2018/10/26/2018-23241/exemption-to-prohibition-on-circumvention-of-copyright-protection-systems-for-access-control>> accessed 19 January 2023.

environment, such as private study, non-profit research, library, and educational uses.⁸⁴⁶ The complaint process enables non-infringing users to make a notice of complaint to the secretary of state concerning problems with access to work due to the application of technological barriers. This provision allows the interested parties to find agreed-upon solutions first. If the copyright holders fail to establish this agreement, the relevant governmental bodies are required to take any other appropriate measure to enable non-infringement users to access copyright works.⁸⁴⁷ However, it is necessary to note that Section 296ZE is the consequence of the implementation of the EU Directive's Article 6.4.⁸⁴⁸ This measure allows the fair dealing provision to be linked to the anti-circumvention rules.

Eligible Users or Representatives to Make a Complaint

To be eligible for the complaint process, certain conditions have to be met. For example, the work has to be copyrighted, the user has lawful access to the materials by purchasing or owning a legal copy of the work. The technological measure bars the user from engaging in or taking advantage of the listed exceptions.⁸⁴⁹ In other words, if a user is prevented from carrying out a lawful act in relation to copyright work by the application of effective technological measures, then such user or the representative is able to make a notice of complaint to the Secretary of State.⁸⁵⁰ However, it is important to note that this mechanism does not cover some copyright works, such as computer programmes. The works available to the public under agreed contractual terms or the work made accessible from any place and time chosen by the members are also excluded.⁸⁵¹

Process of Complaints

For the process of filing complaints, after receiving the notice of complaint, the Intellectual Property Office (IPO) will acknowledge it within 10 working days. If the complaint is eligible, the IPO will initiate contact with the copyright holder to seek a voluntary measure in the first instance. In the event that a voluntary

⁸⁴⁶ Intellectual Property Office, 'Guidance on the TPMs (TPMs) complaints process' (GOV.UK) <<https://www.gov.uk/government/publications/technological-protection-measures-tpms-complaints-process/guidance-on-the-technological-protection-measures-tpms-complaints-process>> accessed 12 March 2023.

⁸⁴⁷ Section 296ZE of Copyright, Designs and Patents Act 1988.

⁸⁴⁸ Hinze (n 386) 810.

⁸⁴⁹ Intellectual Property Office, 'Guidance on the TPMs (TPMs) complaints process' (GOV.UK) <<https://www.gov.uk/government/publications/technological-protection-measures-tpms-complaints-process/guidance-on-the-technological-protection-measures-tpms-complaints-process>> accessed 12 March 2023.

⁸⁵⁰ Shah (n 524) 10-11.

⁸⁵¹ Intellectual Property Office, 'Guidance on the TPMs (TPMs) complaints process' (GOV.UK) <<https://www.gov.uk/government/publications/technological-protection-measures-tpms-complaints-process/guidance-on-the-technological-protection-measures-tpms-complaints-process>> accessed 12 March 2023.

solution could be agreed upon, the case would be successfully resolved and terminated. Nonetheless, where satisfactory voluntary measures cannot be found, the complaint will be published on the website of the UK government. Within 30 working days, the parties will carry out the observations, and the officials will examine relevant factors to advise the Secretary of State. Then, the Secretary of State makes a determination, notifies the parties, and publishes the decision.⁸⁵² In other words, the Secretary of State is entitled to conduct an investigation to determine whether any relevant agreement or voluntary measure has already existed. In the event that such a mechanism cannot be agreed upon, the Secretary may take action to require the right holder in order to make the encrypted works available to the beneficiaries and to ensure that the complainant is able to engage with the permitted act.⁸⁵³ In general, the Secretary may provide written directions to copyright holders for issuing any voluntary measure or other agreement in relation to the copyright work.⁸⁵⁴ This procedure would be carried out on a case-by-case basis instead of in connection with a class of users. If the right holders deny following the direction of the secretary, it would result in a violation of statutory duty.⁸⁵⁵

Hence, copyright holders are entitled to use technological measures to restrict the unauthorised reproduction and dissemination of their works in the digital era. The voluntary measure and complaint procedure do not aim to undermine this underlining principle. Instead, these measures are aimed at preserving the interests of copyright holders and making copyright exceptions to benefit lawful users. They encourage all stakeholders to find agreed-upon solutions. The complaint mechanism would basically reassure that the users could enjoy the content that they already own in accordance with an exception.⁸⁵⁶

Factors for Determining the Outcome of Complaints

To determine the outcome of complaints, several factors are considered to ensure the effectiveness of this provision and prevent any endangerment to all stakeholders. These factors might vary based on the specific details of each case. For instance, whether the versions of the material are available on the market and on reasonable terms. The possibility of imposing a huge and disproportionate burden on the copyright industry. The capability of the businesses to produce creative works. The secretary of state may consider

⁸⁵² *ibid.*

⁸⁵³ Akester (n 12) 19.

⁸⁵⁴ Shah (n 524) 10-11.

⁸⁵⁵ Akester (n 12) 19.

⁸⁵⁶ Intellectual Property Office, 'Guidance on the TPMs (TPMs) complaints process' (GOV.UK) <<https://www.gov.uk/government/publications/technological-protection-measures-tpms-complaints-process/guidance-on-the-technological-protection-measures-tpms-complaints-process>> accessed 12 March 2023.

the reasonable expectations of users to use the work after lawfully gaining such materials. In this aspect, all relevant factors and situations will be carefully taken into account by the Secretary of State to implement copyright exemptions and preserve the privileges for lawful users.⁸⁵⁷

Strengths of Voluntary Measure and Complain Process

It is important to note that a voluntary measure or agreement is any measure or action voluntarily performed by copyright holders, their exclusive licensee, or anyone who issuing copies of works or communicating with the public. It also means any agreement between the copyright holder, their exclusive licensee, or anyone who is issuing copies of works or communicating to the public and another party.⁸⁵⁸

In this aspect, voluntary measures and administrative procedures have the main purpose of ensuring that the copyright holders make the material available to lawful users or facilitating the complainant to exercise the permitted act under the exceptions of copyright law.⁸⁵⁹ More generally, this provision encourages the copyright holders to find an acceptable solution to facilitate non-infringing uses first. But if copyright holders fail to do so, then the Secretary of State or the relevant governmental body is required to take any actions to accommodate the users.⁸⁶⁰ This approach would ensure that the users are able to gain access to copyright materials and enjoy their rights under the copyright exceptions.⁸⁶¹

The complaint procedure provides a significant benefit to the users because this approach might be applied to both the prohibition on direct acts of circumvention and the anti-trafficking of circumvention devices.⁸⁶² In comparison with the rule-making proceeding, the voluntary measure seems to be more practical in terms of minimising the adverse impact on non-infringing uses because the rule-making proceeding is limited to apply only to anti-circumvention. The application of Section 296ZE may allow the manufacture and distribution of circumvention devices, allowing permitted users to legally access material and preventing digital lockup in the information network.⁸⁶³ Moreover, this provision would not be applied where the works are accessible on agreed-upon contract terms; these seem to encourage copyright owners to join

⁸⁵⁷ *ibid.*

⁸⁵⁸ 296ZE of Copyright, Designs and Patents Act 1988.

⁸⁵⁹ *ibid.*

⁸⁶⁰ Supasiripongchai (n 13) 211.

⁸⁶¹ Intellectual Property Office, 'Guidance on the technological protection measures (TPMs) complaints process' (GOV.UK) < <https://www.gov.uk/government/publications/technological-protection-measures-tpms-complaints-process/guidance-on-the-technological-protection-measures-tpms-complaints-process>> accessed 9 February 2023.

⁸⁶² Hinze (n 386) 810-811.

⁸⁶³ *ibid* 810-811.

the CMO to make their works available through the licencing scheme system.⁸⁶⁴ The establishment of the CMO will be discussed in greater detail in Chapter 6.

The Causes Making of Voluntary Measure and Complain Process Insufficient for Access

However, there are a number of problems concerning the complaint procedure in the UK. Akester claimed that although the employment of technological measures prevents the user from accessing copyright works, the complaint mechanism is unlikely to be popular because the majority of users are not familiar with this procedure.⁸⁶⁵ The further challenge of the complaint procedure is the incomprehensible language. This provision contains unconceivable content; it seems to be very difficult for users to understand the process of this mechanism; it does not identify the steps that the users are required to take in order for the complaint mechanism to be processed efficiently.⁸⁶⁶ Moreover, Aashit Shah points out that the complaint procedure is time-consuming and impractical because the Secretary of State may receive a large number of complaints, and it seems to be a huge burden for consumers and other related organisations to make complaints every time that technological measure precludes activities permitted by copyright exceptions, and it needs to be removed.⁸⁶⁷ These results in inadequate responses to the complaint from the Secretary of State, and this approach remains as impractical as it should be.⁸⁶⁸ The legislation does not establish the right to appeal to the complainant if the Secretary does not provide an appropriate response. Furthermore, if the copyright holder ignores or fails to follow the secretary's direction, there is an absence of alternative measures to enforce the exceptions. The complainant can only rely on the court to enforce their rights. It is arguable that it seems to be a complicated and time-consuming procedure for those seeking to use copyright works legally.⁸⁶⁹

Section 296ZE further states that when the work is made publicly accessible under agreed contractual terms and users may choose the time and place to use it, remedies against technological measures cannot be applied. In other words, the administrative measure will only take place when access to the works is completely hindered. The complaint process would not be implemented if there was an agreement or contract that offered the works on the internet, irrespective of whether the licencing fee was affordable or

⁸⁶⁴ Supasiripongchai (n 13) 211-212.

⁸⁶⁵ Akester (n 12) 104-105.

⁸⁶⁶ Deazley (n 583) 33-34.

⁸⁶⁷ Shah (n 524) 17.

⁸⁶⁸ *ibid* 17.

⁸⁶⁹ Ashok (n 521) 107.

not.⁸⁷⁰ The governmental authority has to be silent as long as copyright holders make voluntary efforts, regardless of their level of effectiveness, to make the material available. This demonstrates that the contractual terms taken by copyright holders are given priority over the complaint process performed by the States.⁸⁷¹ Moreover, if technological measures hinder lawful uses, there is no mechanism to guarantee the rights of users where the works are available under a licencing scheme or other contract. It allows the copyright holder to control the works and enforce contractual arrangements that mainly ensure their profits. These allow contracts to overcome state procedure and fair dealing; the licencing schemes would contractually override the public interest.⁸⁷² Although the provision on voluntary measures encourages all parties to find agreed solutions, it seems to mainly depend on the copyright holder to fulfil their legal responsibilities to make their works available for permitted purposes. Due to bargaining power, the voluntary agreement seems to be more effective if the user is a public archive or library. It is difficult for individuals to reach a fair negotiation with copyright holders.⁸⁷³

Even though the UK provides a wide range of exceptions for educational purposes, there are some restrictions on accessing digital information in reality. Because materials are provided digitally, the library is bound by a contractual licence. The technological measures are typically used to restrict the period of reading, viewing, and reproduction; the number of copies is limited to be made.⁸⁷⁴ Therefore, if the digital works are supplied externally, The British library is obligated by the contract to use technological measures restricting the quantity of copies that could be reproduced, and the time of view is contractually limited. In terms of the remote user who enjoys the works digitally, they are permitted to access and view the materials for a very limited period of time. The amount of content and the ability to copy the work are limited. It is arguable that the non-infringing user of the library could not fully engage with the works; they obtained merely a temporary electronic copy with restricted usage. According to Akester's study, not only the libraries in the UK are adversely affected by technological lock-up, but disabled people are also prevented from engaging with the works. Although the visually impaired are allowed to produce accessible copies of materials, books and other works are rarely made in Braille, audio, or printed versions. Furthermore, some technology providers have introduced the option to switch off accessibility settings or

⁸⁷⁰ Christina J Angelopoulos, 'Modern Intellectual Property Legislation: Warm for Reform' (2008) 19 Entertainment Law Review 38-39.

⁸⁷¹ Ashok (n 521) 103-110.

⁸⁷² Angelopoulos (n 870) 38-39.

⁸⁷³ Ashok (n 521) 103.

⁸⁷⁴ Akester (n 12) 36-39.

prevent a text-to-speech synthesiser (TTS), which facilitates the blind by speaking aloud the information. The eBooks are created with the most effective level of security, where speaking loudly is blocked; this technology would prevent people with visual disabilities from accessing the works available digitally.⁸⁷⁵ Furthermore, the licencing system enables the copyright holder to preserve their rights and profit; they could also attach their works to the public domain. Then, technological measures enable the copyright holder to use contracts to control how people engage with this digital content. The CDPA did not provide guidelines concerning the validation of contracts that restrict copyright exceptions or block the use of repackaged public domain.⁸⁷⁶ Unlike the rulemaking proceeding in the US, the CPPA does not introduce a periodic assessment regarding the impact of anti-circumvention rules. The complaint process basically focuses on the situation, facts, and details of each case presented before the relevant authorities.⁸⁷⁷

To ensure the public interest, the users and libraries should be allowed to deactivate technological measures if the copyright holder fails to comply with the Secretary of State's direction and denies making their work accessible. To achieve permitted bypassing, the circumvention tools should be lawfully available for users and libraries. There is concern from libraries and archives that the CDPA precludes fair dealing with the work provided via on-demand services. They argue that the priority of on-demand delivery should be provided only for the entertainment sector, such as films and similar broadcasts; digital publication of literary materials should not be included. Despite the fact that the licencing system for digital literary works exists, the complaint process should cover this category of works.⁸⁷⁸ Due to issues about the privilege of on-demand service or contractual terms that might undermine copyright exceptions and the public interest, it should be considered the duty of the Secretary of State to address complaints with fairness and thoughtfulness. The appropriate measure or direction issued by this authority should benefit the class of users instead of a specific individual. In the event that the Secretary of State does not effectively deal with a complaint, there should also be an appeals process to reconsider his/her determination.⁸⁷⁹ However, it is important to note that the UK introduced the Legal Deposit Libraries (Non-Print Works) Regulations 2013 for digital archiving. This law extends the role of the library in collecting non-printed materials published in the UK for preservation and making the works accessible for specific purposes. The deposit process is an

⁸⁷⁵ *ibid* 42-44.

⁸⁷⁶ Akester (n 582) 377-380.

⁸⁷⁷ Ashok (n 521) 123.

⁸⁷⁸ Brown (n 525) 126 -127.

⁸⁷⁹ *ibid* 126 -127.

additional exception that reduces the impacts of technical measures and anti-circumvention rules. This regulation will be discussed in Chapter 6.

4.2.4 Indian Third Party Provision and the Role in Making Works Accessible

In order to facilitate access to digital knowledge, Section 65A(2)(a) of the Indian Copyright Act 2012 (Amendment) allows any person to enable the circumvention of a technological measure by another person for lawful purposes. The complete record of such another person shall be kept, which includes name, address, and all relevant details required to identify the user, as well as the purpose for which he or she has been accommodated.⁸⁸⁰ In general, this provision allows a user to seek the assistance of a third party to circumvent technological measures to enable the users to engage with the works. This approach is limited for the purposes that the Copyright Act does not specifically forbid. These would enhance the ability of users to access materials. This clause covers circumvention devices or software distributed by third parties to facilitate the use of content that the Copyright Act does not expressly ban. This action is allowed as long as third parties keep record of the purpose of use and details of the individual who employs their tool or service to violate technological measures. Therefore, the scope of third parties' facilitation includes both assistance in circumventing technological measures and the provision of services, devices, tools, technologies, or any product that aids in doing so.⁸⁸¹ This means that Indian law did not ban circumvention tools for non-infringing uses. However, this provision does not specify the nature of the connection between a facilitator and a user. It would be reasonable to presume that the individual developing the device or software serves as the facilitator. It remains unclear whether or not the facilitators cover the technical specialist who set up the software, the proprietor of the website providing that software, or even a friend or colleague who downloaded the circumvention programme. It is vague in terms of the facilitator's relationship with the user or circumventor that could fall within the ambit of Section 65A (2) (a).⁸⁸²

Additionally, the law imposes a legal obligation on facilitators to carry out the record concerning users and purposes of use; the defence of third parties to be exempt from legal liability is based on this provision. The interesting question arises as to whether the goal of the proviso was to make record-keeping compulsory or to make the record beneficial to the facilitator to use as a defence. Ramesh pointed out that the records should be irrelevant if the facilitator did not employ the circumvention device for infringement.

⁸⁸⁰ Article 65A of The Indian Copyright Act (amendment) 2012.

⁸⁸¹ Verma (n 365) 25-26.

⁸⁸² Ramesh (n 535) 102-104.

Furthermore, due to the increasing distance between the facilitator and the circumventor in the digital world, the issue of maintaining records becomes more unclear.⁸⁸³ Generally, the legislation exempts third parties who assist or facilitate circumvention from liability if certain conditions are met. This provision requires the records of the people seeking assistance with circumvention and the purpose for which the circumvention was conducted.

The Lack of Adequate Restriction of Third Party Provision

Section 65A(2)(a) allows third parties to assist users in circumventing a technological measure to access digital works. This provision could be interpreted to enable the supply of circumvention technologies by third parties. The facilitators are mandated to keep a record of the users asking for assistance, which includes their name, address, and all relevant details necessary to identify the users and their purposes of circumvention.⁸⁸⁴ There are a number of arguments concerning this third-party provision. Although Section 65B(2)(a) obliges the facilitator who assists in circumvention to maintain records, the definition of record is not explained by this law, and the implication of maintaining remains unclear. These cause the requirement of maintaining record uncertainty.⁸⁸⁵ Moreover, while accurate records are kept, these details are unlikely to be useful as the facilitators could alter the content of the records. This provision does not impose any legal liability on third parties who fail to keep correct records, and it does not introduce any inspection into the practice of facilitators. In this instance, the distribution of works and circumvention devices might be uncontrolled, which enables copyright infringers to easily obtain circumvention devices. The infringer might keep a circumvention device and then misuse it for illegal purposes or disseminate such tools to other users. Indeed, this provision allows the facilitator to make the circumvention device available on the Internet system as long as some records of user details have been kept by facilitators. These could not prevent unlawful file sharing, and the circumvention devices might be widely available for copyright infringement.⁸⁸⁶ Moreover, the registration process is not established to identify facilitators, and it seems to be tremendously difficult to find third- parties who facilitate circumvention when their records are needed for prosecution. It could be said that the supply of works and circumvention technologies would allow widespread copyright infringement and make the Indian anti-circumvention rules meaningless.⁸⁸⁷

⁸⁸³ *ibid* 102-104.

⁸⁸⁴ Section 65A(2)(a) of The Copyright (Amendment) Act, 2012.

⁸⁸⁵ Ramesh (n 535) 103.

⁸⁸⁶ Chaudry (n 537) 182-185.

⁸⁸⁷ *ibid* 182-185.

4.3 What should be Appropriate Measures for Thailand according to Global Experiences?

This thesis has demonstrated that the exceptions provided by the Copyright Act are inadequate to ensure educational accessibility. The ministerial procedures determining the exception of Thailand are not effective and lack public engagement. It is important to revise existing administrative procedures and seek additional measures to enforce exceptions, assess, and prevent the adverse impacts on educational uses of digital works, which will be suggested as follows.

4.3.1 Improving Thai Administrative Procedure by Following DMCA's Strengths

As Section 53/5 (1) involving the administrative process for prescribing exceptions to anti-circumvention laws in Thailand remains underdeveloped. The current exceptions provided under the ministry's announcement are excessively specific and narrow in terms of the class of works and the purposes of uses. There is a lack of precise criteria to propose the exception, and the process of proposing additional exceptions by the public remains unclear. This mechanism is not well established enough to monitor and evaluate the negative impacts of TPMs in Thailand. It seems ineffective for the minister of commerce to establish the proper exceptions to make the copyright materials available for educational purposes and other non-infringing activities. The thesis has shown that the ministerial mechanism of Thailand is influenced by the US rulemaking process, the following suggestions adapt and apply the lessons and experiences learnt from the US, taking into account the specific contexts and expertise of Thailand. However, this thesis refrains from proposing additional exceptions for the ministerial proceeding because the previous chapter has already recommended the appropriate exceptions for private study, research, educational use, and libraries. This section would only adapt the experiences learned from other jurisdictions to recommend solutions to improve this administrative proceeding and suggest a new process to investigate the impacts of anti-circumvention rules for future exceptions. Hopefully, the recommendations will enhance the engagement of the public and the effectiveness of these mechanisms.

Reforming the Process of Administrative Measure to Enhance Public Participation

This thesis suggests that the procedure should be officially decided, and then the DIP should publish the precise process and explanation of administrative procedures that enact additional exceptions in the form of the ministry's announcement. These should be published on either their website or their locations. In addition, the DIP should provide the form of petitions to facilitate the user's proposal of additional exceptions. The experiences of US rulemaking proceedings should be applied in terms of providing information on the structure, format, key content, and components of the initial proposal and petition form

template. The parties could submit proposals in writing through DIP websites and locations, and public petitions should be published online. Only a brief proposal with the necessary information is required to make it easier for the proponent. The petition form should include the petitioner's name and contact information. The description of the needed exception has to be succinctly stated in the form, which usually encompasses the categories of copyright works that the user is attempting to access; the devices containing the works or the services that make the material available; the objectives for accessing the works; the types of users who request access; and the present obstacles that prevent the users from gaining the materials. After receiving and publishing the proposal, DIP should begin the public comment phase. The proponents of exemptions make comments by providing facts and evidence to support their ideas. The opponent and neutral parties could provide pertinent facts and evidence to indicate that the proposed exemption is unacceptable.

Then, it should be a public hearing process; this stage opens for any parties who seek to comment on and testify about the proposal of new exceptions. The parties have to submit their written request to enter the public hearing process. The IP department delivers agendas in advance, which include information about the time and venue of hearings. This agenda would indicate the witnesses who will testify to the exceptions and the classes of work mentioned in the hearing prior to the day of process. The public hearing would allow the public to discuss their experiences with the impact of anti-circumvention rules and share their expectations for accessing digital knowledge. The post-hearing questions phase would be arranged to allow the DIP to raise follow-up questions concerning proposed exceptions, and the parties would have to respond to these problems. The information, evidence, and comments gained from all of these processes would enable the IP department to determine proper exceptions. DIP should maintain transparency and fairness, which are critical for drafting regulations. The process should be outlined in the ministry's announcement. The DIP should make all necessary information and records of hearings available on the website to enable the public to examine them throughout the process of forming exceptions. This streamlined approach would encourage more public participation to enter the ministerial process. It increases the opportunity for users to share their experiences on the problems of accessing digital works due to the application of technological measures and anti-circumvention rules and express their expectations concerning proper exceptions to these laws. These lead to more effective administrative and practical exceptions.

Designing a Proper Standard of Proof and Factor Justifying the Exceptions

In terms of burden of proof, the proponents of the exemption carry the burden of demonstrating the detrimental effects of technological measures used to control access to digital materials. They are expected to present reliable evidence that (1) there has been or is likely to be a significant detrimental effect on non-infringing uses, and (2) the anti-circumvention legislation has caused or is likely to cause the claimed damage within the next three years. To determine the exception, the DIP may consider the accessibility of copyrighted content for non-infringing use. If encrypted versions and hard copies of works remain reasonably available, the exception appears to be unneeded. If there are CMOs to license the work at an affordable price, a proposed exemption will not be implemented. Furthermore, the DIP should consider the availability of works for preservation replacement carried out by non-profit libraries and the impact of anti-circumvention legislation on research, teaching, criticism, and commentary. Moreover, it is arguable that the majority of technological measures are used to protect copyright works, so it is important to preserve the fundamental principle of copyright protection. The traditional copyright law should play a greater role when DIP decides the exception to anti-circumvention rules. For example, DIP should introduce an exemption to cover the class of works under copyright law rather than a specific subset of them. The fair use and three-step test should be considered to determine the lawful users, non-infringe activities, and the manner in which the digital works could be used. These would result in broader exceptions on the class of work and permitted activities, which may comply with the context of a developing country like Thailand.

Furthermore, this thesis proposes that DIP should establish a clear timeline for proceedings, potentially applying the triannual rulemaking procedure to Thailand. The administrative mechanism under Section 53/5(1) may be organised every three years to evaluate the impact of anti-circumvention rules on access knowledge. This information would be useful to justify a new exception to comply with technological, educational, and social development. The DIP should supply an official code of conduct to provide practical guidelines for each process and details on the burden of proof. These procedural improvements would increase public understanding and efficiency of the mechanism. Again, the thesis confirms that DIP should establish the exception based on the categories of work defined by traditional copyright law; it seems to be more practical than a limited subset of categories of work as DMCA. These provide wider works for non-infringing uses. The thesis strongly agrees with the permanence of the administrative exceptions in Thailand. The ministry announcement is not automatically expired unless new provisions for the following round are enacted to repeal the existing exception. These could resolve the burden of prove placed on the user or proponent on renewal exception in every round; they rescued the right of the user to engage with

non-infringing uses in the long term. Moreover, the thesis recommends that the exceptions established by the administrative procedure should apply to the anti-trafficking device provision. This solution would implement the exceptions and facilitate the permitted users access to knowledge by enabling the manufacture and offering of the circumvention tools for lawful purposes.

However, due to the development of technologies and business models, the user might no longer rely on the exception. Additionally, each round of administrative proceedings is suggested to be organised every three years; it may not cover all the practical problems caused by technological measures and anti-circumvention rules. It is proposed that this administrative mechanism should be conducted along with the complaint process to enable users to complain about the harm of anti-circumvention rules. Furthermore, Thailand should establish a specialised agency to routinely conduct in-depth studies on legal issues caused by new technologies. The studies would be useful to predict the adverse impact of technological measures and anti-circumvention legislation; these would result in deciding and implementing laws that are compatible with the social and economic context of Thailand. The suggestions concerning the complaint process and the establishment of a specialised agency to study the impact of laws will be discussed as follows:

4.3.2 Suggestion for Establishing the Complaint Process Enforcing Exceptions

Thai law does not have any active provision to mandate the copyright holder to make the works accessible for permitted uses, and there is a lack of self-help provision to allow lawful users to circumvent technological measures to engage with the works. Therefore, this project would suggest establishing a complaint mechanism in Thailand to ensure that DIP, or the Minister of Commerce, takes any actions to make the works available for non-infringing use. In Thailand, the DIP plays a number of essential roles concerning intellectual property protection. This organisation carries out the registration procedures to safeguard intellectual property rights and develops policies on intellectual property protection that are effective and adaptable to changing domestic and international circumstances. Furthermore, the DIP has the main aim of creating a balance of interest between all interested parties in society by implementing effective protections for intellectual property and supporting legal uses of works under specific exceptions. These could encourage new creations and foster the exchange of knowledge. According to traditional copyright law, this governmental body has the authority to resolve disputes by conducting arbitration and

mediation on intellectual property issues.⁸⁸⁸ The user, right holder, and other interested parties could submit complaints in connection with intellectual property protection and the exercising of non-infringe use under the exceptions. The submission of a complaint is available at either the locations of DIP or on the official website.

Therefore, it is arguable that the DIP has experience enforcing the law and working as a mediator in an analogue environment. The same responsibility should be performed under anti-circumvention provisions. The DIP seems to be the most suitable administrative agency to deal with the complaint process. The stakeholder should be able to make a complaint concerning the technological measure used to hinder access to digital information under certain exceptions. The notice of complaint could be done by using an online form published on the website of DIP; the complaint could also be sent to an official email of DIP. It would be easier and reduce the length of time. After considering the submission, the department would facilitate the mediation procedure between copyright holders and users. These would result in gaining voluntary solutions and enabling eligible users to access digital information. In the event that the agreement cannot be reached, the DIP is entitled to introduce any appropriate measure to realise the exception without unreasonable danger to the profit of the copyright holder. In doing so, the DIP should follow several factors used in the UK's complaint procedure to determine the outcome of this process. These might include the availability of works in the marketplace on fair terms, the likelihood of imposing a substantial burden and undue impact on copyright businesses, and the capacity of creative industries to continue to produce the works. Additionally, the DIP should ensure that the exceptions can be implemented and that technological measures do not impede the libraries or archives from reproducing the works for cultural preservation.⁸⁸⁹ In short, the complaint mechanism could provide users with the opportunity to file a complaint with the DIP to obtain permission to access and copy the digital work for legitimate purposes. It would guarantee that copyright holders accommodate the statutory exception and ministry announcement by making their copyright materials available for non-infringing usage and that users are not unfairly prohibited from enjoying the benefits of such exemptions.

⁸⁸⁸ Department of Intellectual Property, 'Authority, duties and ministerial regulations concerning the division of government bodies into the Department of Intellectual Property, Ministry of Commerce 2020' (Department of Intellectual Property) <<https://www.ipthailand.go.th/th/duty2.html>> accessed 19 March 2022.

⁸⁸⁹ Intellectual Property Office 'Guidance on the technological protection measures (TPMs) complaints process' (GOV.UK) < <https://www.gov.uk/government/publications/technological-protection-measures-tpms-complaints-process/guidance-on-the-technological-protection-measures-tpms-complaints-process>> accessed 9 February 2023.

4.3.3 Suggestion on a TPM Impact Monitoring Mechanism

The anti-circumvention rules are new in Thailand. Thai people are not familiar with the administrative mechanism for determining additional exceptions under Section 53/5(3). The thesis argues that Thailand should not only rely on this procedure. It is important to introduce other bodies to investigate the adverse impacts of technological measures and anti-circumvention laws until administrative procedures are well established. The thesis suggests that to adapt the provision concerning the Commission under Article 12 of the EU Directive, the Thai Copyright Act should introduce a committee to monitor the implementation of the law. This monitoring authority should be able to investigate whether the anti-circumvention rules cause monopolies and excessive restrictions on accessing information. The monitoring authority should be able to assess the enforcement of anti-circumvention laws and exceptions. This body may examine the impacts of the laws and technological measures in terms of the ability to engage with digital works by non-infringing users. These would be meaningful to avoid the negative effects on relevant users, businesses, fair competition, and innovation.⁸⁹⁰ Therefore, not only the users gain benefits from the establishment of monitoring mechanisms, but this body could also protect the copyright holder by examining the violations of technological measures and copyright infringement in the digital environment after the law is promulgated. The committee should have authority to investigate the dissemination and use of circumvention devices to ensure that the tools are not misused for infringement purposes. These could help assess the effectiveness of regulations.

To avoid overlapping responsibilities between committee and Ministry of Commerce, this thesis suggests that the committee submit the report on the impact of anti-circumvention rules to the DIP rather than determining exceptions themselves. The review of the monitoring mechanism would supply fresh information and updated evidence for DIP to justify the additional exceptions to anti-circumvention rules. In addition to determining the new expectation, the committee may play a key role in revising the existing exception. Users may no longer be able to rely on exceptions because technologies and business models are rapidly developing. The factual changes may render the exception outdated and worthless. The monitoring authority may assess new evidence and submit the report to DIP to amend or repeal existing exceptions depending on current needs and factual changes. Therefore, the monitoring committee would explore the links between regulation and technology. The information and proof obtained through this process would be important in reinforcing the law and regulating the distribution of circumvention devices.

⁸⁹⁰ Samartzi (n 62) 76-77.

The report also enables DIP to grant or repeal the exceptions based on social and technical changes. These would effectively restrict copyright infringement in the digital age, allowing users to access knowledge in specific situations.

Conclusion

Since copyright works are protected by technical measures, people cannot access digital knowledge. Even though there are exceptions that allow the public to circumvent technical measures, these exceptions might not actually be applicable because they are outdated or inconsistent with technological development. The users may not have the skills to deal with technical measures to access work. Anti-circumvention legislation basically contains provisions on appropriate measures to implement exceptions and facilitate user access to work. Therefore, the thesis studied the measures applicable in various countries to provide guidance for Thailand to formulate the appropriate measures. Article 6.4 of the EU Directive includes provisions on voluntary and appropriate measures to reconcile the interests of rights holders and users, but it does not provide legislative guidance on the type and nature of appropriate measures. Member States can make decisions at their own discretion and determine different solutions through specific procedures and institutions according to their national conditions. The US DMCA provides the Library of Congress authority to review new exceptions every three years; this process has been implemented for many rounds. The procedures are well developed and allow the public to participate in determining new exceptions, but the exceptions introduced by the rulemaking process remain narrow and detailed. These exceptions do not apply to the anti-trafficking device. Therefore, this mechanism cannot adequately accommodate users accessing digital works. To implement appropriate measures under Article 6.4 of the EU Directive, UK laws establish a complaint procedure. If users are unable to enjoy the obtained work, they may file a complaint with the Secretary of State. The Secretary of State will investigate and apply measures to allow users to use copyright. This measure is able to enforce a broad range of exceptions, and it can also apply to both the prohibition of circumvention and the anti-trafficking device provision. However, complaint procedures have some limitations. If there is voluntary licencing, it is not applicable, regardless of the price of copyrighted works. The Indian Copyright Act has a provision that suppliers accommodate users using digital works. However, there is a lack of measures that have been taken to prevent users from abusing the work or forwarding circumvention tools to others.

Thailand enacted Article 53/4(1) of the Copyright Act, which authorised the Minister of Commerce to issue additional exceptions. This measure was initially implemented in Thailand in 2022. However, this procedure

still has problems due to the absence of a clear procedure and timeframe. The public is unfamiliar with and cannot participate in this legal enactment procedure. These do not reflect the actual needs of users or social conditions. As a result, the scope of exemption is restrictive in terms of the category of works and the group of users. These exceptions cannot be applied to anti-trafficking circumvention devices and are unable to allow Thai users to access digital knowledge. Therefore, the thesis proposes to improve this administrative mechanism in Thailand by following the rulemaking procedure. Moreover, it is important to introduce a complaint procedure to allow the public to complain to the DIP when they are unable to use the works due to the application of technical measures. Then, the DIP will investigate and take any measures to facilitate users engaging with the work. It is interesting that these compared jurisdictions do not actively support the rights of users by explicitly establishing the right of self-help to enable the user to circumvent the technological measures for non-infringing purposes. It is evident from the procedural frameworks implemented by different jurisdictions that individuals seeking to exercise legitimate exemptions have to rely on the designated specialists, specific entities, or the courts. These may delay the enforcement of exceptions.⁸⁹¹

⁸⁹¹ Srivastava (n 64) 77-85.

Chapter 5

CMO and Non-Print Deposit System; Alternatives in the Dynamic of Copyright Protection and Accessibility

Introduction

This chapter represents the claim that the collective management organisation and non-print deposit system can reduce problems with strict anti-circumvention rules, unestablished administrative mechanisms, and exceptions for libraries and educational institutions. Even though these provisions have been in place in other countries for a long period of time, they seem to be absent in Thai copyright legislation. CMOs has the authority to issue agreements or licences with consumers on behalf of copyright holders, and they are able to collect any royalties that right holders are owed.⁸⁹² With the absence of well-structured CMOs and these licensing bodies educational sector in Thailand, it seems very difficult for the user to directly get in touch with the copyright holders to obtain permission for accessing and using the protected materials, and it is very difficult for copyright holders to collect the royalty fees from every single use of their works without any agencies. The establishment of CMOs could reduce the complexity of accessing digital materials and granting licences.⁸⁹³ With the absence of these licencing bodies in Thailand, it seems very difficult for the user to directly get in touch with the copyright holders to obtain permission for accessing and using the protected materials, and it is very difficult for copyright holders to collect the royalty fees from every single use of their works without any agencies. The establishment of CMOs could reduce the complexity of accessing digital materials and granting licences. This section will study the operation of CMOs and the deposit system to explore their potential to protect copyright while ensuring access in the digital era. These systems would promote more flexibility and balance for TPMs and access in Thailand.

⁸⁹² Intellectual Property Office, 'Guidance Licensing bodies and collective management organisations' (GOV.UK, 11 April 2016) < <https://www.gov.uk/guidance/licensing-bodies-and-collective-management-organisations#printed-material-1>> accessed 29 January 2024.

⁸⁹³ Supasiripongchai (n 13) 267-275.

5.1 The Functions of CMOs to serve the TPMs Exceptions

CMOs are institutions that specialise in dealing with copyright administration. The authors licence their rights to the CMO to make agreements or issue licences to users; this body would then collect and distribute royalties for the copyright holder. The CMO could be considered a one-stop shop that provides a centralised location for consumers to acquire licences and gain access to the work. These entities govern literary, musical materials, dramatic works, and performing rights.⁸⁹⁴ This organisation could be deemed an intermediary who makes the works accessible for users while compensating copyright holders through a licencing scheme. Due to these functions, CMOs should be formed to manage the distribution of academic works and collect fees on behalf of copyright holders. Residual payments may compensate the authors for the use of their materials.⁸⁹⁵ It is arguable that the CMOs are a significant mechanism to preserve the fundamental aims of copyright protection in both the analogue and digital environment. These bodies enable the dissemination of copyrighted works; the same organisation also functions in controlling the unauthorised reproduction and distribution of materials to the public. The CMOs convert the right to forbid the copying and disseminating of copyright holders into the right to negotiate the reasonable payment of licences, and permission for employing works is provided systematically.⁸⁹⁶

As discussed in the previous chapter, non-infringing users have to rely on strict and detailed exceptions to engage with digital materials. These are conditions on the unavailability of work in the market and obtaining authorisation from the copyright holder. The exception is also limited to a specific class of works. Additionally, the exemptions apply only to the prohibition on acts of circumvention, but the circumvention devices remain banned. These make the privileges for educational institutions, and libraries limitedly applicable. The potential solution to deal with these difficulties is the establishment of CMOs in Thailand. This section will examine the function and operation of CMOs in detail to provide the best practices for Thailand to tackle the impacts of anti-circumvention rules.

⁸⁹⁴ Aurobinda Panda and Atul Patel, 'Role of Collective Management Organizations for Protection of Performers' Right in Music Industry: In the Era of Digitalization' (2012) 15 *The Journal of World Intellectual Property* 155-156.

⁸⁹⁵ Wang, 'Anti-Circumvention Rules in the Information Network Environment in the US, UK and China: A Comparative Study' (n 516) 127-129.

⁸⁹⁶ Reto Hilty and Sylvie Nérisson, 'Collective Copyright Management and Digitization: The European Experience' [2013] *Handbook on the Digital Creative Economy*/Ruth Towse and Christian Handke (eds.), Cheltenham: Edward Elgar 233-235.

Negotiate and Issue the Licence

It is important to note that copyright holders and users have to negotiate the price and other terms of use for copyright materials. It would be more convenient for copyright holders to enter CMOs to contact numerous users. The CMOs may administer the use of copyright materials and secure the interest of copyright holders who are members of these institutions. These bodies play essential roles in circumstances when the copyright holder cannot enter into a direct contract with consumers.⁸⁹⁷ After copyright holders become members of the CMOs, they typically make an agreement to entitle this organisation to administer the copyright works. Then, the CMOs would be representatives of the copyright holders to negotiate and grant licences to the users to use the works. The CMOs are able to independently determine the terms and price of the licences; they can grant or reject a licence based on the satisfaction of conditions without any consultation with the copyright holder.⁸⁹⁸ The CMOs become more importance when a large number of copyright works are employed by a large group of consumers on numerous platforms and at various times and locations.⁸⁹⁹

Wang pointed out that even though voluntary licencing is contractually negotiated by stakeholders, there are a number of difficulties concerning transaction costs and unequal treatment between interested parties.⁹⁰⁰ As the copyright law protects the exclusive rights of authors and the attempt to gain their permission is a requirement of exceptions to anti-circumvention rules, copyrighted works cannot be used without consent. The CMOs facilitate the use of materials by acting on behalf of the author to communicate with users. These bodies could minimise the issues that users could not directly contact with authors and reduce the burden for users in terms of identifying and trying to contact copyright holders across the country to seek permission.⁹⁰¹ In addition, it seems to be more convenient for users to gain access to a worldwide repertoire with a single licence rather than purchasing several licences from different authors or entities. The CMOs could offer this service.⁹⁰² The CMOs may make agreements with similar collecting societies in other countries to offer a licence to the consumer to access various types of works in the world's repertoire. Through the licencing, the users are able to use music, literal materials, and other contents

⁸⁹⁷ Christian Handke and Ruth Towse, 'Economics of Copyright Collecting Societies' (2007) 38 *International Review of Intellectual Property and Competition Law* 937-351.

⁸⁹⁸ Supasiripongchai (n 13) 271-272.

⁸⁹⁹ *ibid* 273.

⁹⁰⁰ Wang (n 19) 180.

⁹⁰¹ Supasiripongchai (n 13) 267-271.

⁹⁰² Philippe Gilliéron, 'Collecting Societies and the Digital Environment' (2006) 37 *IIC. International review of industrial property and copyright law* 944-946.

administered by the local CMOs and compatible bodies in other territories. Therefore, the CMOs would provide joint services for the rights holders and offer a joint and wider product to users. All works in the repertoire of the national societies are to be available for licensees. After the initial investment in the system of licencing, monitoring mechanisms, and revenue setting is well structured, it will be low-cost to provide these services to all stakeholders, minimising the financial burden of licencing to authors and users is minimised.⁹⁰³ It could be concluded that the assistance of CMOs would make the negotiation and issuing of the licence for users to access work more convenient and practical.

Manage the Use of Works

To effectively administer the copyright use, the copyright holder has to issue numerous licences; specific procedures and expertise are necessary to control the mass usage and prosecute copyright violations. It is tremendously costly for individual management.⁹⁰⁴ In contrast, CMOs have financial resources, expertise, experience, and staff technologies beyond those of individual copyright holders. These facilities enable CMOs to monitor the usage of works and enforce copyright protection and exceptions more efficiently than individuals. The CMOs could actively pursue legal action against the infringer when users avoid paying royalties and copyright has been violated. These bodies could effectively raise the case to court when copyright infringement occurs. It would encourage people to rely on materials licenced by the CMOs instead of circumventing technological measures to violate copyright protection.⁹⁰⁵ Therefore, participating in the CMOs could reduce the cost or burden of licencing management and deal with copyright infringement in a digital environment.⁹⁰⁶

According to the EU directive, CMOs are involved in monitoring the use of work, including licensing to enable users to use the works. They audit users by ensuring that individuals adhere to the terms and conditions of the licence. This organisation monitors the use of rights to ensure that proper royalties are collected. They continue to keep records on where and how the works are being used. CMOs take appropriate action to enforce the law and rights of members when copyrights and related rights are infringed. They gather revenue from the use of rights and redistribute that revenue to the owners of those rights. Users will get invoices from the CMO. The invoice contains the details about the works and

⁹⁰³ Ruth Towse, 'Economics of Copyright Collecting Societies and Digital Rights: Is There a Case for a Centralised Digital Copyright Exchange?' (2012) 9 Review of economic research on copyright issues 12.

⁹⁰⁴ Gilliéron (n 902) 944.

⁹⁰⁵ Supasiripongchai (n 13) 280.

⁹⁰⁶ Gilliéron (n 902) 938-946.

authorised rights in the context of online service. Therefore, the directive requires the CMO to maintain accurate records of members, licences, and the use of works or other assets to ensure correct payment distribution. The CMO has to be able to efficiently manage data electronically by online systems to identify work types, monitor usage, and issue invoices for multi-territorial licensing of works.⁹⁰⁷

The UK adopts the legal frameworks of the directive and introduces the code of practice to govern the CMOs. CMOs or Copyright Collecting Societies (CCS) control the use of works using collective administration in order to allow widespread use and provide remuneration to copyright owners. The UK CCS basically governs blanket licensing, which grants users, especially educational institutions, the ability to engage with a whole catalogue of works in return for an annual fee. These include the Copyright Licensing Agency (CLA), the Educational Recording Agency (ERA), the Performing Right Society (PRS) and Phonographic Performance Ltd (PPL). One distinctive aspect of the UK system is that if the works are available through licensing from a CCS, copyright exceptions would not apply. For instance, if a certified licensing system is in place and the user is aware of it, the exceptions for educational institutions to record broadcasts (Section 35) or to make reprographic copies (Section 36) are not applied to enable the user to access the works. These systems could protect their financial interests and encourage copyright holders to enter CCS schemes. The Copyright Tribunal is a specialised body that monitors licensing practices and prevents abuse of a CCS's power. Its duties include settling disputes between users and CCSs, prohibiting discrimination and reviewing terms. Such a system would make CCS in the UK transparent, and accountable.⁹⁰⁸

Collect Royalties from Users and Distribute them to Copyright Holders

The CMOs would facilitate the copyright holder to gain remuneration from the use of their works.⁹⁰⁹ The CMO would set the system and standard for distributing the collected revenue to members. Adequate information on the calculation of royalties has to be disclosed to the member to ensure transparency and equity.⁹¹⁰ The CMOs might have sufficient resources to apply a system database containing the names and necessary bank and contact details of the copyright holders to distribute the collected revenues. The members would ensure that they receive royalties from the sale of blanket licences and other types of

⁹⁰⁷ Intellectual Property Office, 'Guidance on the Collective Management of Copyright (EU Directive) Regulations 2016' (February 2016) <<https://assets.publishing.service.gov.uk/media/5ff6cbb68fa8f53b7f26d6fe/collective-management-of-copyright-regulations.pdf>> accessed 9 June 2026.

⁹⁰⁸ Supasiripongchai (n 13) 144-146.

⁹⁰⁹ *ibid* 275.

⁹¹⁰ Wenqi Liu, 'Models for Collective Management of Copyright from an International Perspective: Potential Changes for Enhancing Performance' 51-52.

compensation.⁹¹¹ Therefore, it is arguable that the CMOs could preserve the interest and prevent the dispute between the copyright holder and users.⁹¹²

5.2 The Roles of CMOs in the Digital Era: Do they remain important?

The CMOs seem to have more importance in the digital world because the works are now created in digital format, and these contents could be globally duplicated, disseminated, and downloaded through the internet. This network enables mass storage and electronic delivery of materials. The user could easily download an e-book or engage with online music and other works from cyberspace. The administration of rights has to be changed and expanded based on these technical improvements.⁹¹³ The ability of individual copyright holders to administer copyright use was hampered by new copying technology and various distribution platforms. The rights holders have to installed digital rights management (DRM) to monitor the copyright use or pay IT companies for DRM services. The individuals may not have the technical capability and financial resources to afford the DRM system. CMOs may lower the expense per member and reduce the cost of licencing for either users or copyright holders.⁹¹⁴ The improvement of information technologies and the internet system increases the significance of the CMO. This body could be a representative of the copyright holder to manage the online exploitation of works and issue a licence to make the digital works accessible.⁹¹⁵ The CMOs have applied systems for the digital delivery of information about the licencing of materials, monitoring of copyright exploitation, and the collection and circulation of payment for different types of works on the digital platform. These online systems rely on a unique code or numbering system embodied in the in the electronic carrier of works. The databases could properly identify the works, the copyright holder, the digital carriers, and other relevant information.⁹¹⁶ The works might be provided with watermark or encryption technology to control the unauthorised transmission.⁹¹⁷

Additionally, CMOs have enforcement mechanisms in the digital environment. Due to their technical resources and expertise, CMOs could use DRM as an effective instrument to identify and accurately trace the exploitation of works. By monitoring the web, all these bodies employ their own personnel, lawyers,

⁹¹¹ Towse (n 903) 13-19.

⁹¹² Handke and Towse (n 897) 937-939.

⁹¹³ Panda and Patel (n 894) 165-166.

⁹¹⁴ Handke and Towse (n 897) 949-951.

⁹¹⁵ Pamela Samuelson, 'Extended Collective Licensing to Enable Mass Digitization: A Critique of the US Copyright Office Proposal' [2016] *European Intellectual Property Review*, January 1.

⁹¹⁶ Panda and Patel (n 894) 165.

⁹¹⁷ *ibid* 157-158.

and third parties to monitor the website. These could actively regulate the web to prevent unauthorised distribution of contents online.⁹¹⁸ Although the Internet and digitisation facilitate communication and transactions between content contributors and consumers, computers cannot achieve the essential task of balancing the interests of stakeholders. The sole technologies are unable to negotiate the terms of licences, monitor uses, enforce rights, or prosecute in cases of infringement.⁹¹⁹ The DRM embedded in works cannot standardise databases of authors' contact information; it cannot deliver income from royalty fees for licencing to copyright holders.⁹²⁰ However, the CMOs could use the DRM or other technologies for the collection of information and data processing on the exploitation and users of copyright contents. The CMOs could effectively employ information technology to precisely assess the use of works and set the proper price for licences.⁹²¹ The electronic management of CMOs could minimise the cost of licencing for all interested parties.⁹²² The expertise of these bodies could use digitalisation to minimise the back-office tasks to collect and evaluate the data concerning the use of works.⁹²³

In addition to these numerous functions, the CMOs enable international licencing in the digital world. The internet and digitalisation make the works accessible over the globe, and the public is able to distribute and duplicate the content through information technologies. These advancements increase the difficulty for copyright holders to individually administer their rights. Worldwide multi-territorial licencing has become more important than in the analogue era; this type of licence facilitates the user's engagement with the worldwide materials. The CMOs are the bodies that could deal with this licencing to encourage consumers to lawfully use the works rather than circumvent technological measures to infringe copyright.⁹²⁴ There is a model for an international CMOs that offers the licence to digitally access works throughout the world. The central licensing provider may issue worldwide licences after considering an application.⁹²⁵ Generally, the establishment of a blanket rights institution could cover all member nations. This solution would make the work globally available for businesses and people, especially those in developing countries outside of the main market. It is arguable that the internet has increased the demand for accessing digital materials in developing countries. Users are likely to resort to piracy networks to engage with the works if they are

⁹¹⁸ Gilliéron (n 902) 946-950.

⁹¹⁹ Hilty and Nérison (n 896) 233.

⁹²⁰ Towse (n 903) 23-27.

⁹²¹ Handke and Towse (n 897) 949-951.

⁹²² Towse (n 903) 23-27.

⁹²³ Handke and Towse (n 897) 949-951.

⁹²⁴ Panda and Patel (n 894) 157-158.

⁹²⁵ *ibid* 165- 166.

unable to purchase digital products at a reasonable price, which is determined by the amount of payment that the local market can afford. The international CMOs would enable digital distribution by eliminating the obstacles to negotiating licences and engaging with the worldwide catalogue.⁹²⁶ The management of rights in an international repertoire of CMOs also reduces the costs of contracting and monitoring. To do this, the CMOs would make reciprocal agreements with other CMOs operating in the countries. They perform on behalf of each other to grant licences and administer their respective repertoires. This enables each CMO in the network to grant licences for the works of copyright holders, who are the participants of all other CMOs around the world. Therefore, users could access the wider materials from either local CMOs or other bodies in the network. The users could acquire licences to use the works from the CMO they contract with, and they are also able to use the contents from the catalogues of all CMOs that join the reciprocal representation network. For the copyright holders, they merely entrust the rights to a CMO. Then, this representation system offers worldwide management of their rights, which includes globally licencing and monitoring the uses of their works. These secure the interests of copyright holders all over the world, which might be unmanageable for individuals.⁹²⁷

Reproduction Rights Organisations (RROs) are an example of CMOs that might help to resolve the problem of the narrow exception of anti-circumvention rules to address the problem of accessing literary works and interlibrary loans. RROs dealing directly with the publishing sector; these bodies were initially established in response to the need to access the digital works of educational institutions. They facilitate the academic organisation to simply engage with certain portions of published works with an affordable payment. Generally, RROs manage reproduction rights and distribute published works for users by photocopying, making works accessible on the internet.⁹²⁸ In this vein, the educators or institutions could reproduce the works in various ways, such as printing, scanning, digital reproducing, downloading, and other online uses.⁹²⁹ Typically, the RRO serves as a one-stop access point, granting authorisation on behalf of copyright holders and publishers to the users to access the electronic materials. They operate in many countries and have the ability to issue licences by taking culture, education, and economic conditions into account. These make the published works available for educators based on local contexts.⁹³⁰ It is arguable that establishing the CMOs serves a greater quantity and wider range of work than uncompensated exemptions. The

⁹²⁶ *ibid* 165- 166.

⁹²⁷ Hilty and Nérissou (n 896) 224-225.

⁹²⁸ Olav Stokkmo, 'The Role of Collective Licensing' (2019) 3-6.

⁹²⁹ *ibid* 16.

⁹³⁰ *ibid* 3.

detailed exemptions and restrictions are insufficient to address the demands of educators or other users for uninterrupted utilisation of copyrighted materials. The CMOs offer a convenient platform to lawfully access these works at a reasonable expense. The educational institutions could legally obtain high-quality materials for teaching and research, especially academic contents such as books, articles, journals, newspapers, and novels. These would satisfy the needs of users and enable educational development.⁹³¹ Not only local content, the repertoire of RROs also offers materials from foreign rights holders obtained through agreements with their sister institutions. The bodies would make an agreement to collaborate with RROs in foreign nations to facilitate access to international content. Hence, the users could legally access the works from all over the world. RROs provide blanket licences that grant permission to use all of the materials in the repertoire under defined terms. This type of licence allows the users to access a wide range of works without the need to individually seek permission to use the works from the copyright holders. These bodies also offer pay-per-use or case-by-case licences, for example, when a request to use the works exceeds the amount of the copy limitation specified in the licence.⁹³²

The licence issued by RRO allows the user to duplicate a portion of materials for personal and internal use. The amount of work that could be copied differs in several countries based on a variety of factors, including user requirements. The licence agreements encompass reproduction of either hard copies or digital content; the works may be made available in both analogue and digital formats under the scheme. The law can set the royalties, or the RRO can determine them unilaterally. Many factors are carefully considered to decide the compensations, which involve the type and quantity of copies as well as economic, social, and other regional contexts. These prices vary significantly in different countries based on their needs and financial capabilities to afford access to work. After the fees are collected by RRO, they will be allocated to copyright holders and publishers in accordance with an agreed-upon method of distribution.⁹³³ The licence's terms are basically negotiated between the RRO and the educational institution. The negotiation is held between RRO and an association or other entity representing educational organisations instead of on an individual basis.⁹³⁴ Therefore, establishing the RROs would benefit all interested parties. These bodies offer the licences by considering the right holder's requirements, the user's needs, and local contexts. This mechanism ensures reasonable compensation and makes the work accessible for users. The local RRO also focuses on various factors for their operation, which include domestic legislation, copying practices, the

⁹³¹ *ibid* 3.

⁹³² *ibid* 3.

⁹³³ *ibid* 16.

⁹³⁴ *ibid* 16.

needs of users, technical changes, negotiating the proper licence terms, and compensation. These enable the local RRO to function in certain countries in accordance with national conditions.⁹³⁵ In addition to the educational sector, the RROs also facilitate the other beneficiaries of copyright exceptions to engage with online information. The RROs may enhance the opportunity for individuals with print disabilities to engage with the works by granting permission to reproduce the content beyond the limitations specified in the licence agreement or modifying the materials to facilitate the creation of accessible formats.⁹³⁶ In many countries, the licence also allows the libraries to create accessible formats of works and make copies for interlibrary loans. The libraries are able to digitise copyrighted materials for their collections and enable patrons to access electronic materials within the library's. The national library pays licence fees to CMOs to reasonably remunerate copyright holders; the individuals could then access the resources within the library's digital system without any charges.⁹³⁷

In terms of the security system, The RRO's licence allows the user to make a limited number of copies of publications for internal use. The main users are institutional organisations such as governmental agencies, private corporations, schools, and universities. The copies are not permitted to be disseminated or transferred to another institution, and the licensees are prohibited from selling the works in the market. The works are available only to students who have enrolled in the course; unenrolled students are not permitted to engage with the works under the licence agreement.⁹³⁸ It is important to follow a security system that prevents the distribution of works to other bodies beyond the licensee agreement. The licensees could download content from the Internet, store, and disseminate portions of materials through a password-protected system or other security measure to make the works accessible only on internal networks.⁹³⁹ These functions of CMOs or RROs would help to implement the exception to the Ministry of Commerce's announcement, which requires the beneficiaries to install the security measure to prevent the dissemination of works outside the institutions. The CMOs could serve this requirement, as security measures are important for mass digitisation. These would effectively implement the exceptions and ensure that the works are not distributed to people other than beneficiaries. Therefore, the establishment of CMOs would prevent unauthorised distribution of the works and protect the profits of copyright holders

⁹³⁵ *ibid* 20 - 21.

⁹³⁶ *ibid* 25.

⁹³⁷ Samuelson (n 915) 10-11.

⁹³⁸ Stokkmo (n 928) 6.

⁹³⁹ *ibid* 16.

from licensees. In the digital environment, the fair price of licencing and the convenience of accessing the works would reduce piracy.

5.3 Thailand's Best Solutions for Balancing Copyright Protection and Digital Accessibility?

Thailand is a developing nation that needs access to knowledge at an affordable price. Access to knowledge is important for the advancement of education, research, technology, and the overall quality of life. Currently, technological methods are frequently employed to restrict access to digital materials. Regulations are being implemented to deter the circumvention of technology in order to obtain knowledge. Furthermore, the exceptions to these regulations are limited and require the users to rely on alternative methods before resorting to violating technological measures, such as seeking physical copies of work. These conditions may cause difficulty, be time-consuming, and be costly. Although the Ministry's announcement allows educational institutions and libraries to access and reproduce motion pictures and audio works, however, the exceptions permitting these agencies to bypass technological barriers do not apply to other categories of copyright material. The exceptions exclude literary works that could serve as significant research resource. These issues affect students, researchers, and educational institutions in terms of acquiring knowledge to enhance education and research. The library lacks access to the work for preservation and interlibrary exchange, which could hinder the nation's sustained growth. Based on the study, the thesis found that the compulsory licence and statutory licence enable the beneficiaries to use and reproduce the works without the right holder's consent. These uses of works are allowed by legislation, and there is a requirement to pay fair remuneration to copyright holders. Moreover, the CMO has the authority to licence those works under the condition of sharing the royalties with the right holders.⁹⁴⁰

An example of a statutory licence could be seen in an EU Member State; it is legal to allow reprographic reproduction under an exception, and the authors have the right to get fair compensation. Singapore also establishes a statutory licence to copy and use portions of more than 5% of materials for educational purposes. The CMOs are able to manage the statutory licence on behalf of the relevant copyright holders. They are representatives of their members and negotiate agreements with users and issue the licence. Then, the fair remuneration is collected and distributed to copyright holders.⁹⁴¹ Fair compensation collected by CMOs is set to avoid unreasonable prejudice to the interests of the copyright holder. The affordable payment of remuneration might be useful to enhance the ability to gain access to information

⁹⁴⁰ Liu (n 910) 48.

⁹⁴¹ Stokkmo (n 928) 12-29.

by a wider range of users. This approach could maintain financial profit for the copyright holder, which may achieve the goal of stimulating creativity and innovation as well as knowledge distribution.⁹⁴² Lewinski also stated that the compulsory licencing of compensation rights through collective administration would benefit copyright holders.⁹⁴³ Collective organisations are commonly used to preserve the statutory remuneration for the authors when their works are exploited or made available to users, especially in the case of internet-distributed works. These would foster the opportunity to access digital information in communities and also minimise the effect on the exclusive rights of the creators.⁹⁴⁴ In this context, it could be said that there are relationships between compulsory licencing, remuneration, and mandatory collective administration. The collecting society should be launched to respond to exceptions to anti-circumvention rules and collect fees for the reproduction of electronic compilations of protected works by non-infringing users.⁹⁴⁵

Therefore, due to several challenges arising from Thai anti-circumvention rules, the compulsory licence seems to be an important limitation to anti-circumvention rules and copyright protection. The potential solution may be implementing this licence for educational institutions and libraries. The compulsory licence would facilitate these bodies to use digital work for the purposes of research, education, preservation, replacement, and interlibrary loan. A fair remuneration would be paid to compensate and encourage copyright holders to distribute their works.⁹⁴⁶ Thailand lacks CMOs in the educational sector. Although there are a large number of CMOs in Thailand, most of them govern the music works with various organisational structures and operations. Thailand does not, however, have any laws to control this organisation. In terms of revenue collection, it still faces extremely challenging operations in competition between various CMOs with limited legal oversight. The users are confused and face difficulties selecting and acquiring mass-market public performance licences from the appropriate CMOs. There are frequent complaints about corrupt CMOs operating unchecked and without proper legal representation. Users made incorrect payments as a result of scams and common misunderstandings about which CMOs to pay.⁹⁴⁷

⁹⁴² Annette Kur and Jens Schovsbo, 'Expropriation or Fair Game for All? The Gradual Dismantling of the IP Exclusivity Paradigm', *Intellectual Property Rights in a Fair World Trade System* (Edward Elgar Publishing 2011) 11-22.

⁹⁴³ Silke von Lewinski, 'Mandatory Collective Administration of Exclusive Rights--A Case Study on Its Compatibility with International and EC Copyright Law' (2005) 2004 Copyright bulletin/UNESCO 8.

⁹⁴⁴ Samartzi (n 62) 69-70.

⁹⁴⁵ *ibid* 69-70.

⁹⁴⁶ Wang (n 19) 176-177, 263.

⁹⁴⁷ World Intellectual Property Organization (WIPO) and Association of Southeast Asian Nations (ASEAN), 'WIPO-ASEAN Copyright and Related Rights Collective Management Resource Document 2023' (October 2023)

Thus, this thesis recommends establishing CMOs for educational sector in Thailand to govern compulsory licencing. The CMOs established in Thailand can oversee several types of copyrighted works, which include literary works, dramatic works, and musical materials. The CMOs would make an agreement with the author to gain the authority to manage the copyrighted works. Then, these institutions would perform on behalf of the copyright holder in terms of negotiating with users, issuing licences, collecting royalties from the users, and distributing the revenues to the copyright holders or their members. Moreover, the CMOs also monitor the mass use of works, whether the works are infringed on or unauthorisedly transmitted by the users. These bodies would effectively enforce the right by taking legal action when they found that the infringing activities occurred against the materials in their catalogue. These management tasks are expensive and uncontrollable for individual copyright holders. The high cost of these tasks motivates the authors to transfer their rights to the CMOs, reflecting the importance of these bodies in the copyright system.⁹⁴⁸ Furthermore, the CMOs would help beneficiaries obtain permission or a licence from the copyright holder. The users could lawfully engage with copyright materials from licences provided by CMOs without the need to seek out other versions of works in the market or negotiate with the copyright holder.⁹⁴⁹ They are no longer at risk of being liable due to their act of circumvention. Therefore, it is arguable that the establishment of compulsory licences and CMOs is a solution to facilitate users access to electronic information; it decreases the burden of satisfying numerous requirements to exercise exceptions to anti-circumvention rules. These would enhance learning, creativity, and educational development. Nonetheless, there is some challenge in applying this provision. Students, researchers and educational groups in Thailand may not fully understand the scope of allowed usages under compulsory licensing systems or exceptions of TPMs. Without legislative guidance, they may be reluctant to depend on the proposed solutions because of their copyright liability concerns.

Alternatively, the CMOs could govern a blanket licence, which allows users to use a wide range of materials under a single licencing contract. Therefore, this licence, which accommodates a large number of copyrighted works, is usually more popular among educational communities and businesses.⁹⁵⁰ The thesis strongly agrees with Supasiripongchai's recommendation that the blanket licence is a significant instrument to implement educational exceptions. The beneficiaries pay an annual fee or a single price for the blanket

<[https://www.aseanip.org/docs/default-source/content/wipo-asean-resource-document-for-circulation-v6---31-oct-23.pdf](https://www.aseanip.org/docs/default-source/content/wipo-asean-resource-document-for-circulation-v6---31-oct-23.pdf?sfvrsn=1)> accessed 9 May 2026.

⁹⁴⁸ Hilty and Nérison (n 896) 222-225.

⁹⁴⁹ Supasiripongchai (n 13) 269.

⁹⁵⁰ Wang (n 19) 180.

licence to access all materials in the CMOs' catalogues.⁹⁵¹ It may contribute greater benefits to academic organisations than the exceptions under the copyright act and the ministry's announcement. This type of licence allows users to access or use the entire works of CMOs instead of limiting them to audio material and motion pictures. As the ministerial exemption to the anti-circumvention law of Thailand does not cover literary works, blanket licences are a potential solution because they enable educational institutions to reproduce multiple copies of copyright materials for mass use for educational purposes. The CMOs in numerous developed nations use blanket licences to manage rights to duplicate books, articles, journals, and other works in educational institutions.⁹⁵² It is arguable that blanket licencing enables efficiency and equity in copyright administration, and it remains used for both analogue and digital technology.⁹⁵³ This licence provides rapid and insured access to the whole materials in all catalogue. It reduces the cost of negotiating individual licences and lowers the circumvention of technological measures that lead to copyright infringement.⁹⁵⁴ In other words, the blanket licence would minimise the burden or expense of searching, contacting, and negotiating with all of the authors for every single license. It encourages users to enter into an agreement with the CMOs rather than circumvent technological measures to engage with digital materials. These result in a reduction of copyright infringement and securing compensation for authors who participate in the CMOs.⁹⁵⁵ However, blanket licensing remains challenging and difficult to apply in practice in Thailand. Currently there is an absence of criteria to determine reasonable compensation rates, decide on eligible users, and determine the extent of permissible usage. Given these administrative and legal complexities, fixing the prices for blanket licensing at a high level would be financially burdensome for smaller or local educational institutions and libraries in Thailand. It would be a monetary burden to the smaller or local educational institutions and libraries in Thailand.

Moreover, the CMOs could grant licences on a case-by-case basis to users who seek to access the works for personal uses. These bodies may split up or divide the repertory. This licence is useful for individuals who employ a small portion of the whole repertoire managed by CMOs. The users might prefer to pay for a licence to use a single work or small repertoires containing the materials that are pertinent to them. Dividing the repertory may enable a more affordable price for the licence. It might benefit some groups of users to gain a licence to use the separate works at a cheaper and more affordable price than the licence

⁹⁵¹ Supasiripongchai (n 13) 265 -271.

⁹⁵² *ibid* 281.

⁹⁵³ Towse (n 903) 22.

⁹⁵⁴ Liu (n 910) 51.

⁹⁵⁵ Supasiripongchai (n 13) 265.

for entire repertoires.⁹⁵⁶ Due to the exceptions for private study proposed by this thesis, which allow individual users to circumvent technological measures when the works are not reasonably available, the narrow licence issued by CMOS addresses the suggested exceptions for private study and non-commercial research by enabling individuals to access reliable materials at affordable prices. This could reduce the circumvention of technological measures, protect the copyright holder's profit, and ensure that users can access works on the most convenient platform at a reasonable cost.

Hence, this thesis recommends establishing the CMOs for educational sectors in Thailand to issue the licences as the representatives of copyright holders, facilitate the users to access to the works at a reasonable price, monitor copyright infringement, and collect and contribute the royalties for copyright holders. The compulsory and blanket licences would effectively address the library and educational uses; individuals may rely on case-by-case licences for private study and non-commercial research. These would help reduce the adverse impact of anti-circumvention rules in the digital world. Although CMOs may increase access to digital materials and minimise the harmful effects of anti-circumvention laws, applying this suggestion in Thailand remains a practical difficulty. There is currently an absence of institutional establishment and legal framework in Thailand for collaborative copyright management in the digital and educational sectors. The establishment of CMOs involves considerable administrative resources, technological expertise, advances in technology and regulations to oversee the usage of copyright works, particularly in digital form. Significant financial and operational expenses are necessary for the administration of digital copyright databases, royalty distribution, and monitoring systems. The underdeveloped management or a lack of transparency in the distribution and collection of royalties might preclude the user and copyright holder from the CMOs. Addressing these issues also leaves legal gaps that need to be filled in future work to strike a balance between access to digital works and copyright holders' rights under CMOs licensing systems.⁹⁵⁷

5.4 Non-Print Deposit System: A Modern Approach to Libraries and Knowledge Access

The Legal Deposit Libraries Act 2003, or the 2003 Act, mandates publishers to deposit a copy of every printed work with the British Library and the other five deposit libraries. This act covers materials published

⁹⁵⁶ Handke and Towse (n 897) 403.

⁹⁵⁷ World Intellectual Property Organization (WIPO) and Association of Southeast Asian Nations (ASEAN), 'WIPO-ASEAN Copyright and Related Rights Collective Management Resource Document 2023' (October 2023) <<https://www.aseanip.org/docs/default-source/content/wipo-asean-resource-document-for-circulation-v6---31-oct-23.pdf?sfvrsn=1>> accessed 9 May 2026.

in the UK. Although printed works have long been legally deposited, the creative materials were recently produced and shared in non-printed format. The users mostly access and store the works in digital form. To comply with technical and social change, it is important to introduce the rules requiring publishers to deposit electronic creations with libraries. The Legal Deposit Libraries (Non-Print Works) Regulations 2013 (NPLD) were promulgated to expand the scope of the 2003 Act to include electronic materials or works produced in media aside from print. These laws would enable non-print publications to be conserved for future generations.⁹⁵⁸ The details of the NPLD will be shaded in this section.

5.4.1 Scope of Works Subject to Deposit Regulation

The main aim of the regulations of 2013 is to preserve works produced and published digitally. The publishers are legally required to deposit copies of either offline or online materials at libraries.⁹⁵⁹ These laws apply to any non-printed materials that are released online, which include the blogs, websites, e-journals, and e-books. These contents basically fall within the scope of regulations.⁹⁶⁰ The NPLD also covers offline work, which refers to work that is stored in a physical format such as microform, DVD, CD-ROM, or works that cannot be accessed or transmitted via the internet. Moreover, audio-visual elements are governed by the regulations, such as adverts, trailers, and short video snippets. In terms of social media posts and blogs, these contents might be crucial in documenting national history. Broadcasters and organisations in the public sector also have their own social media and blogs. Creators, businesses, and societal commentators may release news or valuable information through their open blogs and tweets. Hence, public blogs could potentially be a great source of research in the future; they may record significant national events or provide insight into changing society over time. Open-access blogs, social media, and user-generated comments on articles fall under the legal requirement of deposit. Artistic works that are made available to the public, whether online or offline, such as pictures or graphic reproductions of

⁹⁵⁸ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013) <https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁵⁹ Hansard UK Parliament, 'Legal Deposit Libraries (Non-Print Works) Regulations 2013' (hansard.parliament.uk, Volume 743: debated on Wednesday 6 March 2013) <[https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries\(Non-PrintWorks\)Regulations2013?highlight=%22legal%20deposit%22](https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries(Non-PrintWorks)Regulations2013?highlight=%22legal%20deposit%22)> accessed on 1 October 2023.

⁹⁶⁰ Cambridge University Library, 'Legal Deposit' (Cambridge University Library) <<https://www.lib.cam.ac.uk/collections/departments/legal-deposit>> accessed 15 October 2023.

paintings, are under the purview of this clause. This is similar to a photography book that requires a print deposit.⁹⁶¹

However, some works are not covered by the Regulations of 2013. These laws exclude content that was released before the enactment of regulations, content made of music or films, and content that includes personal information on social media. The regulations do not apply to work that is exclusively accessible to a limited group of individuals and contains personal data.⁹⁶² In this context, the regulations are not applied to work that is not accessible to the general public. The act does not require the deposit of contents in personal social networking, such as protected tweets that are limitedly comprehensible for approved Twitter followers, posts on Facebook that are accessible only for friends, and chat room conversations restricted to a specific group. The deposit requirement under the NPLD excludes works that are not available for all individuals in the public, but registration does not make the works inaccessible; it could solely delay the availability of certain works. Thus, the laws continue to apply to the works in the system that demand user registration. The significant question arises as to whether or not the licenced works fall within legal deposit regimes. Certain websites or databases contain user-generated works and third-party materials licenced from the creator or publisher. The regulations pertain to digital content that is accessible to the general public. User-generated work and licenced content continue to constitute public access; thus, these forms of content fall within the purview of the regulations.⁹⁶³

It is important to note that the NPLD applies to work published in the UK. Generally, the legal duty to deposit printed works or digital materials is only applied to publishers who publish their works in the UK. The regulations therefore cover non-printed materials that are made available through websites, and these websites have domain names linked to the UK or a place within the territory of the UK. The deposit duty also applies to the works disseminated to the public by an individual or the activities of an individual in connection with the production or publication of works carried out in the UK.⁹⁶⁴ The websites published in

⁹⁶¹ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013)
<https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf>
accessed 29 November 2023.

⁹⁶² Agency for the Legal Deposit Libraries, 'Agency for the Legal Deposit Libraries' (ALDL)
<<https://www.legaldeposit.org.uk/>> accessed 1 October 2023.

⁹⁶³ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013)
<https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf>
accessed 29 November 2023.

⁹⁶⁴ Section 18 of The Legal Deposit Libraries (Non-Print Works) Regulations 2013.

the UK might include those with domain suffixes that are immediately connected to the UK. This may include domain names generated in the future that are related to a place within the UK, such as Wales. Nonetheless, the NPLD excludes materials that are inaccessible for individuals within the UK, such as the works that were exclusively offered for subscription by American people. These works are not considered to be published in the UK, and are not required to be deposited.⁹⁶⁵

5.4.2 Exploring Proper Delivery Methods

In most cases, deposit libraries receive online work through a web harvesting procedure. Web harvesting software would automatically explore the content on the internet or website to request a deposit procedure. This method will ensure adequate collection coverage while mitigating the disruption to publishers' websites. In other words, web harvester software is employed to gather digital materials, or web-based content, which refers to content disseminated on the internet, such as e-journals and e-books.⁹⁶⁶ This includes both publicly accessible and restricted content that requires login details and passwords. Instead of web harvesting, publishers and deposit libraries may reach a voluntary agreement to provide online content through an alternative method. However, the majority of publishers use web harvesting from deposit libraries to fulfil their delivery responsibilities. For the operation, a 'visit' to the IP address of the website containing a particular work by the web harvester software is considered a request for that content. The regulations stipulate that the work has to be delivered to the web harvester using an automatic reply from the website in response to the request. In the case of online content embodied in a login operation, web harvester software would send the request to the login page, which could be considered a request for the materials behind the login page. Likewise, the publisher is obliged to deliver materials via an automatic reply to the web harvester programme. In addition, the regulation allows the publisher to supply login information or a password to the deposit library to access the content. The publisher could fulfil the delivery duty by providing login details other than the works.⁹⁶⁷ The deposit library

⁹⁶⁵ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013) <https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁶⁶ Hansard UK Parliament, 'Legal Deposit Libraries (Non-Print Works) Regulations 2013' (hansard.parliament.uk, Volume 743: debated on Wednesday 6 March 2013) <[https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries\(Non-PrintWorks\)Regulations2013?highlight=%22legal%20deposit%22](https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries(Non-PrintWorks)Regulations2013?highlight=%22legal%20deposit%22)> accessed on 1 October 2023.

⁹⁶⁷ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013)

is required to provide a minimum of one month's notice to the publisher prior to the web harvester software submitting a request. This will enable the publisher to have sufficient time to meet the obligation.⁹⁶⁸

Furthermore, the regulations include provisions for alternative methods of delivery by allowing publishers and deposit libraries to make an agreement to use other ways of delivering online content rather than web harvesting. This may involve the use of a secure web upload function to deliver the work to a designated site. In the presence of such an agreement, the publisher is legally required to provide content requested in writing to the deposit library; delivery has to be done within a month. The negotiation of an alternative delivery method to web harvesting may be arranged at any time. The deposit library or publisher is always entitled to seek modification of the agreement's terms.⁹⁶⁹ Other than the work, additional information may be delivered. For both online and offline work, the publisher is required to deliver or make such works available by using the agreed-upon method. This obligation may be met in various ways based on the nature of the work, which include providing a copy of an instruction, a manual, or additional material that enables the public to access the work. The publisher may supply a copy of the software, computer programme, and any other relevant information required to engage with the work and allow the reader to view the work. Any technological measures used for offline materials would be encompassed.⁹⁷⁰ In terms of legal enforcement, the 2003 Act will be applied if the copyright holders or publishers do not deposit their works. The library may file the case with the court to oblige the publishers to follow the deposit regulations.

With regard to the format of deposit work, if the material is published in both print and digital formats, it is the duty of the publisher to deposit the material in print format. However, if there is an agreement between the publisher and deposit library, delivering the materials in a non-print format is permitted. Likewise, the publisher is able to deposit the non-print materials when the content is published solely in digital form.⁹⁷¹ The offline work has to be provided to the British Library within a month after the

<https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁶⁸ Section 16 of The Legal Deposit Libraries (Non-Print Works) Regulations 2013.

⁹⁶⁹ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013)

<https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁷⁰ *ibid.*

⁹⁷¹ Section 14 of The Legal Deposit Libraries (Non-Print Works) Regulations 2013

publication date.⁹⁷² In accordance with their requests, the other deposit libraries may obtain a copy of offline materials; requests in writing have to be submitted within twelve months of publication. Delivery has to take place within one month from the date of the request or publication, whichever occurs later. The publisher has to send the work that is most appropriate for preservation, depending on the agreement between the publisher and the deposit library. Without agreement, the publisher is able to determine and deliver the works that have the most suitable quality for preservation.⁹⁷³

5.4.3 Permitted Activities Enabling a Cycle of Knowledge

The regulations allow the loan of materials between deposit libraries; they are permitted to lend or transfer the works to other deposit libraries.⁹⁷⁴ Deposit libraries may use the works for their non-profit research, preserving and reviewing.⁹⁷⁵ Generally, the regulations follow the existing laws in terms of providing a copy of a portion of the materials to the users. However, the deposit library has to comply with the requirement that the copy be supplied to users only for permitted purposes, which include private study, non-profit research, review, criticism, reporting of recent events, judicial proceedings, a statutory inquiry, a parliamentary procedure, or the Royal Commission. The deposit library has to ensure that the work will not be employed for other purposes.⁹⁷⁶ The deposit library requires a signed declaration form (in writing) in connection with the work from the person requesting a copy of such work. For personal study or non-commercial research, the copy has to be unrelated to or the same as another person's request.⁹⁷⁷

The copies of materials have to be provided in printed form unless the right holder has agreed to supply the work in another form. The deposit library is able to provide the materials in reasonable portions of the border resources, of which the copied piece is a part.⁹⁷⁸ The next permitted activity is reproduction for a

⁹⁷² Hansard UK Parliament, 'Legal Deposit Libraries (Non-Print Works) Regulations 2013' (hansard.parliament.uk, Volume 743: debated on Wednesday 6 March 2013) <[https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries\(Non-PrintWorks\)Regulations2013?highlight=%22legal%20deposit%22](https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries(Non-PrintWorks)Regulations2013?highlight=%22legal%20deposit%22)> accessed on 1 October 2023.

⁹⁷³ Section 15 of The Legal Deposit Libraries (Non-Print Works) Regulations 2013.

⁹⁷⁴ Section 19, *ibid.*

⁹⁷⁵ Section 20 of The Legal Deposit Libraries (Non-Print Works) Regulations 2013.

⁹⁷⁶ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013) <https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁷⁷ Section 27 of The Legal Deposit Libraries (Non-Print Works) Regulations 2013

⁹⁷⁸ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013)

visually impaired person. The regulations enable the deposit library to create copies of electronic materials in comprehensible form for blind people when they cannot obtain accessible versions of such works from the market. However, the deposit library may enable users to enjoy accessible versions of the same materials at any one time.⁹⁷⁹ The regulations also permit the deposit library to reproduce copies of electronic materials for the purpose of preservation. The duplication of works for replacement is allowed if such works were lost, damaged, or destroyed.⁹⁸⁰ Furthermore, libraries are able to shift or modify the format of works for preservation; such works may be adapted in different mediums from the originals. They are able to modify the digital materials to replace a copy deposited in a different deposit library when such works are lost, damaged, or destroyed. A copy may be recreated in a different medium or form when the deposit libraries determine that doing so is essential for preservation.⁹⁸¹ For disposing of material, deposit libraries are permitted under this clause to destroy deposited material, but they are also required to maintain a copy of all pertinent work, preferably in a suitable format for preservation.⁹⁸² The deposit libraries would not be liable for copyright infringement and other laws in connection with their acts that have been done under the regulations of 2013. The exception also applies to liability for defamation when libraries reproduce works from the internet for permitted purposes. Additionally, publishers are not subject to contract breaches; they are exempt from violations of copyright and other relevant legislation when they deliver print or non-print works to deposit libraries. The exceptions cover the supply of computer programmes and other information required to access digital works.⁹⁸³

5.4.4 Security Policies Preventing the Damage of Publishers

The deposit libraries in the UK have to implement procedures to control the dissemination of works and prevent unauthorised access to deposited works. These systems are basically used to ensure the integrity, confidentiality, and protection of the deposited works against any information security risks. Hence, only authorised users, institutions, software, and hardware are able to engage with deposited materials, and the limited users could enjoy the library's network based on the information security policy. The security

<https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁷⁹ Section 26 of The Legal Deposit Libraries (Non-Print Works) Regulations 2013.

⁹⁸⁰ Section 29, *ibid.*

⁹⁸¹ Section 30, *ibid.*

⁹⁸² Section 31, *ibid.*

⁹⁸³ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013)

<https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

system makes work available restrictively to designated computers or terminals; it also protects the content against printing and digital reproduction.⁹⁸⁴ Each deposit library may deliver the same works to a single terminal at a time. With this aspect, the electronic works may be accessed through the device on the premises of the deposit library, and the terminal that displays the works has to be installed on the premises governed by the deposit library. Only the users who are on library premises could comprehend the content on a terminal. These would consequently restrict the availability of materials for the reader and ensure the security of data.⁹⁸⁵ In terms of password security, the publishers are required by law to deliver the login details to make the work embodied in the login page accessible. The login details or password would be securely kept and managed. The deposit library has to apply the special security mechanism to secure the login details and ensure that this information is employed only for lawful purposes.⁹⁸⁶

Moreover, the regulations provide provisions on embargoes to minimise the effect on the business model of publishers. The right holder is entitled to seek embargoes to restrict the reader's access to their works. This clause aims to protect the right holder's financial interests and make sure that the reader will not unreasonably prejudice them as a result of the display of their works.⁹⁸⁷ While the requirement to deposit the works with a deposit library remains unchanged, readers will be deprived of engaging with the works for a designated duration due to the embargo. However, it is important to note that the embargoes on deposit works would be imposed on the basis described by the act. The right holders have to prove that accessing the digital work would unreasonably prejudice them or that such access is likely to unreasonably harm their lawful interests. The right holders are able to petition in writing for an initial embargo of a maximum duration of three years and may reapply for additional embargoes of the same duration. These

⁹⁸⁴ *ibid.*

⁹⁸⁵ Hansard UK Parliament, 'Legal Deposit Libraries (Non-Print Works) Regulations 2013' (hansard.parliament.uk, Volume 743: debated on Wednesday 6 March 2013) <[https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries\(Non-PrintWorks\)Regulations2013?highlight=%22legal%20deposit%22](https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries(Non-PrintWorks)Regulations2013?highlight=%22legal%20deposit%22)> accessed on 1 October 2023.

⁹⁸⁶ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013) <https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁸⁷ Hansard UK Parliament, 'Legal Deposit Libraries (Non-Print Works) Regulations 2013' (hansard.parliament.uk, Volume 743: debated on Wednesday 6 March 2013) <[https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries\(Non-PrintWorks\)Regulations2013?highlight=%22legal%20deposit%22](https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries(Non-PrintWorks)Regulations2013?highlight=%22legal%20deposit%22)> accessed on 1 October 2023.

additional requests have to be submitted a minimum of one month prior to the embargo's expiration. Right holders have to satisfy the prerequisite of demonstrating harm to their lawful interests at every request.⁹⁸⁸

5.4.5 Collaboration and Conflict Resolution between Deposit Libraries and Publishers

The Joint Committee on Legal Deposit (JCLD) plays a key role in encouraging cooperation between interested parties to ensure the efficient implementation of the NPLD. This body encompasses publishing trade associations and depositary library representatives.⁹⁸⁹ The JCLD facilitate collaboration between interested party for execution of voluntary and statutory deposit procedures. This body also engages in cooperative efforts to resolve interpretation disputes, evaluate future developments, and identify forthcoming requirements, in addition to deliberating on policies in relation to non-print collecting. The JCLD endeavours to mitigate potential conflicts between a deposit library and a publisher by providing guidance on the formulation of suitable policies and methodologies that promote cooperative implementation of deposit provisions. The JCLD will therefore support a three-stage procedure for addressing disputes pertaining to the NPLD when disagreements occur.⁹⁹⁰ While the procedure aims to promote mutual agreement to solve disputes, it does provide the alternative of resorting to an impartial arbitration panel if required. The initial phase is negotiation. This stage is basically carried out to investigate the problem and reconcile disagreements through discussions between the disputing parties, which are the publisher and the library. The second phase is mediation. In the event that negotiation fails to reach a resolution, the issue will be raised to the JCLD task and finish group to mediate to reconcile the disagreement. The representatives of both the deposit library and a publishing (trade association) would join the JCLD task group, which examines all submitted documents and seeks a settlement between the disputing parties. Suggestions for compromises and conclusions accompanied by justifications are duly recorded. The task group may, nevertheless, determine that the outcome of mediation is improbable and

⁹⁸⁸ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013)

<https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁸⁹ Hansard UK Parliament, 'Legal Deposit Libraries (Non-Print Works) Regulations 2013' (hansard.parliament.uk, Volume 743: debated on Wednesday 6 March 2013) <[https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries\(Non-PrintWorks\)Regulations2013?highlight=%22legal%20deposit%22](https://hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries(Non-PrintWorks)Regulations2013?highlight=%22legal%20deposit%22)> accessed on 1 October 2023.

⁹⁹⁰ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013)

<https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

proceed with arbitration instead. The third phase is arbitration. An arbitration panel consisting of two representatives of the library, two representatives of the publisher, and a third-party chair selected by the JCLD. The parties are entitled to submit submissions in writing to the panel, along with an agreement to abide by the panel's decision.⁹⁹¹

The JCLD model in the UK offers a useful lesson for cooperation and resolution of disputes between publishers and deposit libraries. Such a system would promote cooperation among stakeholders, including the National Library and publishers of Thailand. However, its implementation in Thailand would encounter practical problems. Thailand may encounter structural difficulties. Although there is the Thai Printing Association that facilitates members solving challenges and problems concerning negotiating contracts with outside parties for the mutual advantage of members' companies. Additionally, this body promotes harmony, collaboration, and the sharing of ideas and information in academic areas.⁹⁹² These roles are limited in the field of deposit systems; such collaboration remains challenging due to the lack of collective representation. There is limited institutional coordination and no designated lead agency for digital legal deposits. Publishers might also be hesitant to take part for copyright and business reasons, particularly if there is insufficient protection against access and use of their works. In light of these limitations, the complete implementation of the JCLD framework is likely to be impractical. In the Thai context there would be a more progressive, adaptable approach, starting with informal co-operation and negotiation to resolve disputes, led by the deposit library, the Thai Printing Association and representatives of publishers. The objectives and operational guidelines of JCLD in promoting collaboration among relevant stakeholders are beneficial and feasible and can be developed and applied in Thailand in the future after the deposit system and legal frameworks are established.

5.4.6 Evaluative Reflection of Deposit Regulations

There are a number of benefits of the NPLD. The regulations ensure that the digital work will be delivered to the deposited library by using web harvesters and other methods to gain access to a wide range of work that falls within the scope of deposit provision. The deposit regulations guarantee the preservation of non-print publications on a national scale by facilitating an effective framework for the archival and preservation of materials within legal deposit libraries. These allow long-term conservation and ensure that the next

⁹⁹¹ *ibid.*

⁹⁹² The Thai Printing Association, 'Objectives' < <https://www.thaiprint.org/about-us/objective/> > accessed 9 April 2026.

generation continues to have access to the valuable material in the future.⁹⁹³ These would result in a cycle of knowledge in which deposited works serve as sources of ideas and information for future creations or publications.⁹⁹⁴ The NPLD promotes the cooperation of publishers and deposit libraries to preserve the works by mandating them to share and coordinate the archiving responsibility without placing an undue burden on any organisation. This would result in long-term collaboration and the preservation of national heritage.⁹⁹⁵

In terms of the protection provided to the publisher and right holder, there are only six libraries in the UK where non-print content may be deposited. The criteria for selecting deposit libraries could be explained by considering the common characteristics of the six deposit libraries in the UK. These concepts include those being national libraries or major research libraries, or libraries of large universities in specific regions, that serve users, students, researchers and academic communities by providing access to knowledge within the library's location and via the internet system. Furthermore, these deposit libraries have the necessary infrastructure or archival expertise to manage and preserve either printed or digital materials. They have adequate archiving systems to ensure preservation for future generations, and they have to be large libraries located in different regions to provide equitable access to resources for people in different parts of the country.⁹⁹⁶ The act regulates the usage of deposited copies by requiring the deposit library to implement a security system that restricts the availability of digital work within the premises of libraries. Additionally, only researchers, members, or authorised users are able to use the works. It guarantees that the works are not distributed to unauthorised users and are not freely available to the public. These would ensure that the legal deposit of work would not unreasonably harm the interests of the copyright holder or publisher. It is arguable that the regulation could create a balance of interest among all stakeholders by minimising the impact on the interests of rights holders and publishers, as well as complying with the requirements of libraries and researchers who need to use the non-printed works.⁹⁹⁷

⁹⁹³ Cambridge University Library, 'Legal Deposit' (Cambridge University Library) <<https://www.lib.cam.ac.uk/collections/departments/legal-deposit>> accessed 15 October 2023.

⁹⁹⁴ Agency for the Legal Deposit Libraries, 'Agency for the Legal Deposit Libraries' (ALDL) <<https://www.legaldeposit.org.uk/>> accessed 1 October 2023.

⁹⁹⁵ Department for Culture, Media & Sport, 'Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013' (Gov.UK, April 2013) <https://assets.publishing.service.gov.uk/media/5a7ab96ee5274a319e77a491/NPLD_Guidance_April_2013.pdf> accessed 29 November 2023.

⁹⁹⁶ Agency for the Legal Deposit Libraries, 'About' <<https://legaldeposit.org/about/>> accessed 9 June 2026.

⁹⁹⁷ Hansard UK Parliament, 'Legal Deposit Libraries (Non-Print Works) Regulations 2013' (hansard.parliament.uk, Volume 743: debated on Wednesday 6 March 2013) <<https://hansard.parliament.uk/Lords/2013-03->

5.5 What is the Best Practice of Deposit Regulations for Thailand?

Due to the innovative development of computer technology, copyright holders in Thailand are increasingly producing works in digital formats, which may eliminate the availability of new materials in unprotected analogue formats. It is important to require publishers to deposit digitally-born materials at relevant institutions in Thailand to preserve the valuable work and ensure the accessibility of works for permitted purposes. This thesis recommends applying the Legal Deposit Libraries (Non-Print Works) Regulations to require copyright holders to send a copy of their works to the National Library of Thailand. The best practices will be discussed as follows:

5.5.1 Delivery Requirement Learnt from UK Practices

This thesis contends that the National Library of Thailand should be the main deposit organisation; this body could contact copyright holders whose works are deposited. The legislation should be established to require copyright holders or publishers to deposit copies of every work in the National Library. Additionally, rule makers should clearly decide the process and timeframes of deposit procedures; it may be good practice to follow UK laws. The non-printed works should be delivered to the National Library, which include either offline or online materials that were published in Thailand. The deposit requirement covers works created and published in Thailand and those disseminated on the website that have a domain name in connection with Thailand. Personal data on social media is precluded by the deposit requirement. The National Library may use a web harvester to gain as much online work as possible, and the publisher may deliver the works in other ways based on the agreement made with the National Library, such as by sending an email or official website. Alternatively, the publishers could fulfil their duty by delivering the decryption keys or printed versions of copyright works to the National Library; these may encompass login details.⁹⁹⁸ The works should be deposited within one month after the date of publication. Although the publishers are allowed to choose the form of works that they deposit, the national library could modify and reproduce the works in the most suitable format for preservation. These approaches ensure that the National Library can preserve digital knowledge published in Thailand for the next generation and enable permitted users to access the materials under specific circumstances.

06/debates/13030683000250/LegalDepositLibraries(Non-PrintWorks)Regulations2013?highlight=%22legal%20deposit%22> accessed on 1 October 2023.

⁹⁹⁸ Akester (n 12) 110.

5.5.2 Establishing the Link between Deposit Requirement and TPMs

To reinforce the effectiveness of the deposit system, Akester proposed that copyright holders who deny or avoid depositing their works with the relevant organisation could not gain the legal protection afforded by anti-circumvention rules. Akester also stated that where the works are not deposited, the exceptions in relation to public policies should take priority over the copyright holders, even when works are disseminated online under agreed contractual terms.⁹⁹⁹ In the case that the beneficiary is unable to engage with the works that have not been deposited with the relevant agency, the lawful user would be allowed to do the self-help circumvention to take advantage of exceptions. The right to circumvent should additionally be provided to the deposit agency; this body would be entitled to circumvent the technological measure to gain access to the non-printed materials.¹⁰⁰⁰ The deposit agency and users should be exempt from legal liability for self-help circumvention of technological measures when the works have not been deposited with the deposit institution. This approach could encourage copyright holders to deposit their works because the anti-circumvention rules do not protect those who deny depositing their materials.¹⁰⁰¹ The thesis agrees with this idea for modifying the anti-circumvention rules of Thailand: the protection provided to copyright holders should be linked with deposit requirements. In order to gain legal protection, copyright holders are obliged to deposit their new digital works in national libraries. However, the thesis is afraid that the circumvention of technological measures may be widely spread if the individual users in Thailand bypass the technological measures by themselves. The thesis suggests that if lawful users could make a request to the library, then the deposit library should examine whether the users and purpose of the users are permitted by the exceptions. Additionally, this body should investigate whether or not the works were voluntarily deposited by the copyright holders. Thai regulation should permit only deposit libraries to circumvent technological measures where the works are not delivered. Hence, Thai law should adapt some characteristics of Akester's recommendation by establishing the connection between deposit regulation and anti-circumvention rules. Rather than individual users, only the National Library of Thailand is able to circumvent technological measures to access works that are not deposited. These might leave some room for legitimate users to exercise their privileges under the exceptions and make digital work accessible for non-infringing use.

⁹⁹⁹ *ibid* 115-122.

¹⁰⁰⁰ *ibid* 115-122.

¹⁰⁰¹ *ibid* 115-122.

5.5.3 Applying Copyright Exceptions to Deposit Libraries Improves Accessibility

After obtaining deposited works, the exceptions under Section 34 of the Thai Copyright Act should be implemented to enable the library to fulfil its roles. The librarians are able to transform and reproduce the works for replacement and preservation. These acts could be done for use in National library of Thailand and other non-profit libraries. The librarians are allowed to supply the works to users for non-commercial study and research. The national library should apply the process that offers sufficient and rapid access to the materials for beneficiaries. Therefore, the user may make a request to the deposited library for gaining access to content; this request would occur when the users could not exercise their privileges due to the application of technological measures. For example, a lecturer at a non-profit university could not access the necessary materials to prepare their teaching. The lecturer might claim online access to the national library to request access. To verify the eligibility of a beneficiary, the library should record the identification details of these users, which encompass their full name, email address, and purpose of use. After being authenticated, the user would have immediate access to the materials or unprotected versions of works to use for certain purposes.¹⁰⁰² To facilitate the user's access to digital works for legislative purposes, six factors should be considered to determine whether the engagement with the material is fair or not. These additional factors involve: 1) the purpose of use; 2) the eligibility of the user; 3) the nature of materials; 4) the possibility of acquiring the work at a reasonable time and price; 5) the effect on the potential market of the work; and 6) if only some portion of the work is required, the amount should be clearly specified and the significance of such a part should be taken into account.¹⁰⁰³ These factors would prevent unreasonably damage to the interest of copyright holders. With this aspect, the works remain available for preservation and research, while the deposit library could monitor the lawfulness of the users and the amount of work that can be used.

Moreover, the application of a copyright exception to deposit libraries should consider the three-step test under Article 9(2) of the Berne Convention, which is reinstated in either Article 13 of the TRIPS Agreement or Article 10 of the WCT. This provision contains limitations to exclusive rights only in certain special cases, does not conflict with ordinary use of the work and does not unreasonably harm the lawful interests of the copyright holder. The deposit system may be justified under the three-step test. First, the scope of application is subject to certain special cases because the suggested approach is for national libraries of

¹⁰⁰² *ibid* 113-115.

¹⁰⁰³ Wang (n 19) 89-90.

Thailand or extended to some major regional libraries in Thailand that have the capacity to preserve the works and have measures to prevent unauthorised dissemination or use that infringes on copyright. Libraries could also use the deposited materials within a limited scope, such as for preservation, interlibrary loan, private study, non-profit research, review, criticism, reporting of recent events, judicial proceedings, a statutory inquiry, a parliamentary procedure, or the Royal Commission. Hence, it has a limited scope or special case in terms of being institution-based and activity-based. This provision does not represent an unclear or broad designated library or permitted use of work. Second, the deposit system doesn't interfere with ordinary exploitation of works, because the accessibility of deposited works is usually limited to the on-site or internet system of the library. The same works could be made available to a single terminal at a time. Additionally, only non-profit libraries are eligible to enter this system limitedly for non-commercial purposes. Third, the application of a copyright exception to deposit libraries does not unreasonably harm the lawful interests of authors. Appropriate safeguards are necessary to ensure proportionality and balance between preserving the work, making the work accessible and the legitimate interest of the copyright holder. These include the requirement on applying a security system preventing mass distribution, such as use-control and access-control measures. Watermarks are also suggested to track the use of work. The right holder may seek embargoes to prevent the reader's access to their contents. These measures ensure that the interests of right holders are adequately protected while enabling the public interest objectives of knowledge preservation and access. It is arguable that the suggestion on deposit libraries already complies with the three-step test emphasised by international legislation.

5.5.4 Suggestion for Security Policies to Protect Publishers

The thesis suggests that Thai legislators draft deposit regulations using the model of the UK. The new regulation should mandate that libraries apply a security system to prevent the dissemination of deposited works outside the location or internet system of the library. A special system should be implemented to protect decrypted keys or login details. Moreover, to reassure that the copy of the work would not be misused for other purposes other than the identified usage, all copies supplied by the national library should be individually watermarked, and the user who intentionally re-distributed the copies of the work to unauthorised people would be deemed to have committed piracy.¹⁰⁰⁴ Additionally, the watermark method would technically trace and hinder copyright infringement. The users could be easily traced back if they illegally duplicated and disseminated the other people. The combination of digital identification and

¹⁰⁰⁴ Akester (n 12) 113-115.

watermarks would effectively prevent misuse and unlawful circulation of works.¹⁰⁰⁵ Therefore, it is arguable that the deposit process would enforce the exceptions in reality and enable the privileged users to access the works in a practical manner. At the same time, identification records and watermark technology are applied to deter piracy and trace it, which would effectively preserve the interest of the copyright holder and prevent copyright infringement because of the arrangement of the deposit procedure.

Although the deposit system preserves Thai digital culture for the next generation and prevents the loss of digital materials. This approach also encourages educational use and research as well as addresses the problems where works are blocked by technological measures and TPMs. But the necessary issues that Thailand will need to improve in order to ensure effective deposit libraries and deposit systems are digital infrastructure because most of the works are currently produced in digital form. The advanced digital infrastructure is required to maintain large-scale storage and preservation. Thailand has to develop technical capability and expertise to preserve digital materials, which are very fragile. Moreover, Thailand has to develop legal and technological systems that protect deposit works from being abusively distributed or used by unauthorised users in order to prevent financial damage to publishers.

Conclusion

This study demonstrated that the exceptions for education in Thailand are inapplicable and could not prevent the adverse impacts of anti-circumvention rules on educational uses. It is necessary to expand the exceptions' educational use and add private study and non-profit research. To avoid causing damage to the copyright holder, the thesis recommends adding the condition that the exception will not be applied if the works are reasonably accessible by other means. This research, therefore, proposes the establishment of CMOs in Thailand to realise these exceptions. CMOs make many classes of work available to users by issuing licences. The establishment of CMOs could provide users and educational institutions with access to a wide variety of copyrighted works at affordable prices. CMOs help reduce the need to violate technological measures, minimise the impact of anti-circumvention rules, and ensure compensation to secure the interests of copyright owners.

In addition, it is important to ensure that library exemptions are effectively enforced and that libraries acquire non-printed works for preservation. This research proposes to enact non-printed deposit library regulations in Thailand. The regulations should require publishers to deposit non-printed works published

¹⁰⁰⁵ *ibid* 113-115.

in Thailand at the National Library. Such a library should be permitted to reproduce or modify works for preservation as well as supply the works for personal study and non-profit research. However, the regulations should require libraries to keep records of users' personal information. Watermarks have to be used to prevent misuse of the work. To encourage the publisher to deliver works to the National Library, Thai regulations should establish the link between anti-circumvention rules and deposit requirements by permitting the librarians to circumvent technological measures to obtain the works for preservation if the works are not deposited. This solution may solve the problem concerning the unavailability of digital works for preservation without endangering the interests of copyright holders.

Chapter 6

Conclusion

This thesis critically investigates TPMs and the exceptions and administrative mechanism determining additional exceptions under the Thai Copyright Act, with particular arguments about the uncertain scope of legal protection and narrow list of exceptions. The study also claims that the current legal framework in Thailand may undermine user rights and knowledge access. Moreover, the ministerial procedures are new and not well-established in terms of practical process as well as timeframe, which discourages stakeholders from participating in this procedure to share their needs. This mechanism cannot provide balanced and adaptive exceptions to reduce the impact of TPMs in Thailand. Due to these arguments, a comparative analysis of legislative frameworks is conducted across the WCT, the EU directive, the DMCA of the US, the CDPA of the UK, and the India Copyright Act. Additionally, it is argued that CMOs and non-print deposited systems serve as alternative mechanisms that promote fairer copyright protection and encourage access. These systems may be useful to address existing problems in Thailand. Overall, the findings of this thesis illustrate that only TPMs could not achieve the balance of interest between interested parties. The proper exceptions and additional mechanisms are required to create a balance between rights protection and knowledge access in the digital world. This thesis would examine how the combination of TPMs, exceptions and other appropriate measures may be developed and incorporated into the Thai copyright framework.

6.1 Background, Legal Challenges in Thailand and Global Situations

Due to the advancement of digital technology, the behaviour of people engaging with the works has changed. Individuals can conveniently download and duplicate digital works worldwide. It has caused new forms of copyright infringement. Technological measures and anti-circumvention rules introduced by the WCT aim to solve these issues. As Thailand is a member of WIPO and a signatory to the WCT, it has to follow the obligation of international law to provide effective legal framework to anti-circumvention rules to protect technological measure used by copyright holders. It is arguable that the anti-circumvention laws are new in Thailand. The copyright act was revised to include these provisions in 2015, and the amendment took place in 2022. The thesis acknowledged that the DMCA of the US served as a model for the amendment of Thai anti-circumvention rules, which reflects an effort by the Thai Parliament to strengthen

these provisions to comply with international standards. Subsequently, Thailand acceded to the WCT in 2022, which is the initial treaty governing copyright protection in the digital environment. Even though the first version of anti-circumvention rules was revised, several significant issues concerning the scope of protection and the purview of prohibition remain. Since technological measures are used to protect copyrighted works against being viewed, listened to, and copied, the scope of protection may affect the interests of the copyright holder, and the exceptions normally affect the accessibility of works. This thesis argues that the significant definition and the scope of anti-circumvention rules are vague. There are challenges in inadequate exceptions in Thai legislation. The thesis also noted that the Copyright Act 2022 established a new administrative mechanism, which is not well organised enough to determine the exceptions according to the needs and issues of Thailand. The other appropriate measures for implementing anti-circumvention rules and exceptions do not exist. However, this thesis found that these provisions have been established at both the international and national levels. Courts across jurisdictions have made decisions on cases concerning the violation of technological measures and copyright infringement in the digital era. To resolve challenges existing in Thai anti-circumvention rules, it is important to compare legislative models and case law from different jurisdictions. The experiences gained from the study will be used to provide interpretative guidelines and solutions for Thailand and other developing countries.

6.2 Legal Theories and Practices Relating to TPMs and Access

Copyrighted material is often protected by technological measures. Therefore, Chapter 1 discusses the principle of copyright protection and the exceptions to protect these aims in the digital environment. The primary aims of copyright law are to safeguard the interests of the copyright owner and to encourage future creativity in society. Technological measures and anti-circumvention rules enhance copyright protection and provide an effective deterrent against infringement on the Internet. Meanwhile, it has been revealed that exceptions to copyright law or fair use are intended to encourage access to information and allow users to engage with copyright works under certain conditions. The thesis also looked at the effect of technological measures on fair use and limited access to knowledge, especially in the case of developing countries with no or limited financial resources to subscribe to databases. The thesis fairly presented ongoing arguments about technological measures, fair use and digital lock up. Based on the study, anti-circumvention rules may safeguard the copyright holders' interests beyond what copyright laws cover. These approaches prioritise the interests of right holders over users, overlooking the balance between the competing parties. In conclusion, this chapter highlights the conflict between the protection of rights

through TPMs and the preservation of users' access to knowledge, an important issue that leads to a more in-depth analysis in the next chapters on the impact of strict TPMs, narrow exceptions and approaches for achieving a suitable balance within copyright law systems.

6.3 TPM-induced New Access Right impacts and solutions

Chapter 1 also closely analyses the access right because it is a new right granted to copyright holders. This right is an additional privilege beyond the exclusive rights to copy, modify, and communicate the works to the public. The access right has emerged as a result of the implementation of technological measures and anti-circumvention rules. In other words, access-control measures enable the copyright holder to restrict the manner in which users engage with digital works. The copyright holders could apply technological measures to control the duration of playing the works, the number of users, and the number or type of devices displaying the digital materials. Then, anti-circumvention provisions prevent access controls from being circumvented and ban the distribution of circumvention devices. This right would benefit both the users and the copyright holders. It would foster a new business model that allows users to access a wider range of copyrighted works at varying prices. Additionally, it would grant the copyright holders the ability to individually enforce their rights rather than rely on judicial proceedings after their works are infringed. However, the thesis raised challenges in implementing access rights because, if these privileges were not properly controlled, the copyright holder would have absolute power to control the utilisation of digital works. This right is likely to adversely affect the ability of users to utilise copyrighted materials; users may be charged a fee for each access to the content or pay-per-access society. Thus, these findings reflect the need to carefully shape the access right under TPMs to strike a balance in the protection of the rights of copyright holders and the protection of user rights, especially through suitable exceptions for the education and library sectors. This is a significant issue and leads to the next section on assessing the appropriateness of exceptions in the Thai legal system.

6.4 Thailand TPM Reform for Worldwide Protection Standard

Chapter 2 critically evaluates the challenges and difficulties of anti-circumvention rules in Thailand and then examines how other jurisdictions have addressed these issues through an investigation of the WCT, EU Directive, DMCA of the US, CDPA of the UK, and Indian Copyright Act. The case law across these jurisdictions is analysed. The thesis acknowledged that the WCT has initiated the protection of technological measures, but this treaty did not provide the details of prohibition to allow members some flexibility to apply these provisions based on their domestic circumstances. This results in the members having broad discretion in

designing domestic laws. This flexibility leads to differences in approach, particularly on the issue of access control protection and the anti-trafficking circumvention device provision.

The thesis argues that Thai anti-circumvention legislation aligns with the EU directive, the DMCA, and the CDPA by outlawing both individual circumvention and the distribution of circumvention tools. The EU Directive and UK legislation prohibit the circumvention of right-controls and access-controls. While Thai laws follow the DMCA's lead in outlawing only the circumvention of access-control measures, the access-controls are safeguarded to foster a business model of price discrimination to access the works and reinforce protection for copyright holders in a digital environment. Another similarity is that the Thai Copyright Act and the DMCA do not prohibit the circumvention of rights controls that permit users to use works for non-infringing purposes. The implementation of anti-circumvention regulations in Thailand reveals the Thai parliament's effort to strengthen these laws. Although the DMCA provides examples of the term "circumvention", which is deemed unlawful, the Thai law does not follow that clear definition and uses neutral wording. The thesis presents several challenges related to legal terminology in Thai law, such as "effective technological measure" and "circumvention". The ambiguous definitions have to be accurately dealt with as they impact the extent of legal protection and prohibition. The expansion of protection and improper exception would hinder the access to knowledge. Compared to the DMCA and the CDPA, the thesis found that these legal regimes contain clearer definitions of legal terms. They provide precise descriptions of technological measures to identify the nature and technical operation of technologies that are protected by TPMs. These jurisdictions also define the prohibition of circumvention that may lead to legal liability. these model would reduce uncertainty in interpretation and enforcement.

According to the EU Directive and UK law, individuals have to intend to violate technical measures to be held liable. The requirement on the intentions of circumventors helps to minimise the strictness of the law. The requirement of the intention of the circumventor to violate technological measures is suggested to afford clear boundaries for prohibited activities and reduce the severity of the law. It would prevent innocent users from facing a legal penalty because of their accidental circumvention. The Thai legal framework did not contain this requirement, which makes the law ambiguous in scope of prohibition. It may be severely interpreted to penalise those who are innocent or circumvent technology by accident.

The thesis argues that the laws against trafficking devices in the US, UK and Thailand are similar, as they make it illegal to produce and distribute tools that circumvent either access controls or use controls. The study found that the provision of the anti-trafficking circumvention device makes Thailand's legal

framework consistent with international standards. It can provide adequate protection to technological measures and prevent copyright infringement through the control of the dissemination of devices or tools used for circumvention. However, the broad prohibitions on dissemination of circumvention devices would remove necessary technologies from the domestic market. These would impact the use of tools for legitimate purposes because Thai people may not have the technical skill to bypass technological measures to access digital content by themselves even for non-infringing uses. This provision would consequently overlook the balance of interest between the copyright holder and the users. Overall, the comparative analysis reveals that the Thai law is basically consistent with international standards, but challenges remain in terms of clarity of legal wording, scope of protection and balance between the copyright holders' rights and user access. These are important issues which lead to the evaluation of exceptions and other mechanisms in the next section.

6.5 The Exceptions to Promote Digital Knowledge Access

Chapter 3 sheds light on the fact that the exceptions to anti-circumvention rules in Thailand are modelled by the DMCA. The thesis also argued that the transplantation of exceptions from the US is incompatible with Thailand, where the majority of people lack the technical skill to circumvent technological measures to access databases for lawful uses by themselves. Access to knowledge at an affordable price is also essential for developing countries. It is important to note that certain levels of exceptions to anti-circumvention rules support the ability of the users to engage with works. The key issues of restrictive and detailed exceptions are carefully analysed, which limit the ability of users to enjoy the works in very limited circumstances and pose serious dangers to accessing valuable works and educational development. Especially, the exceptions in relation to private study, educational institutions, and libraries have a greater impact on education and the preservation of cultural heritage in Thailand.

It is important to note that the WCT did not specify any exceptions, which leaves members the freedom to design limitations to anti-circumvention rules based on their needs. The thesis found that EU directives contain broader exceptions than those existing in the DMCA. These exceptions are not mandatory and allow the European countries to exercise discretion in implementing all of them or some of them into domestic laws. The UK applied a number of exceptions and established the complaint process to enforce these provisions, which cover the privileges for private study, non-profit research, teaching, criticism or comment, libraries, and educational institutions. Thai legislation and the DMCA provide a similar list of exceptions, which include the privilege to conduct encryption research, reverse engineer, conduct security

testing of computer systems, enforce the law, and protect national security. The thesis argues that the main challenge lies in the privileges of libraries and educational institutions in Thailand; they are too restrictive and impracticable. The exceptions for library and educational uses cannot be applied to the provision of anti-trafficking circumvention devices, and these bodies are unable to obtain the necessary tools for circumvention technological measures to fulfil their roles in terms of preserving the works and making the knowledge accessible for Thai people. There is no exception for private study under the current anti-circumvention rules in Thailand. However, the thesis disagrees with following the Indian provision, which implements the full list of fair use of anti-circumvention rules, because users may circumvent technological measures for entertainment rather than solely for educational purposes. These may contribute a few benefits for society, and the digital works may be redistributed online. In conclusion, these findings demonstrate the challenge for Thailand's legal framework not only from the absence of exceptions but also from the scope, adaptability, flexibility and effectiveness of those exceptions which have a significant impact on maintaining a balance between protecting the rights of copyright holders and enabling user access to knowledge in an online environment.

6.6 Appropriate Measures Enforcing TPMs and Exceptions based on global practices

Chapter 4 examines the new administrative mechanism, which is established by Section 53/5(1) of the Copyright Act (No. 5) 2022 Amendment. This section authorises the minister of commerce to promulgate additional exceptions to anti-circumvention rules in Thailand in the form of a secondary law or announcement of ministry. The DIP would take responsibility for organising public hearings before enacting the exceptions. This chapter finds the complexities of the new procedure concerning the lack of official process and timeline, which result in improper public participation. It is found that the other challenges are the overlapping of exceptions. It is interesting that either Section 53/5(7) of the Copyright Act or the ministry announcement contain exceptions for libraries and educational use, but the privileges provided by the ministry announcement are narrower than those existing in the Copyright Act. The ministerial exceptions allow educational institutions and libraries to bypass technological barriers to accessing solely motion picture and audio works instead of granting access to all classes of works as stipulated in 53/5(7). Furthermore, ministerial exceptions do not apply to literary works, which are the major source of knowledge. These may hinder access to valuable information and not comply with the needs of beneficiaries.

Additionally, this chapter thoroughly investigates the US rulemaking procedure for enacting exceptions to TPMs. It is found that this process includes the petition phase, public comment phase, public hearing phase,

and post-hearing question phase. These several processes lead to fresh information on the impact of anti-circumvention rules and the need to access the knowledge of the public. The rulemaking proceeding also provides a form of exception proposal and other relevant documents to facilitate the public's engagement with drafting regulations and determining the exception in a manner that meets social needs. Moreover, this process is organized every three years to ensure that the impacts of anti-circumvention rules are regularly assessed. By examining the EU Directive and CPPA, the thesis found that the complaint process in the UK is implemented to comply with Section 6.4 of the EU Directive. The users can complain if they are unable to exercise their privileges to use the works because of the application of technological measures. Then, the secretary of state will examine it and take any necessary action to make the work accessible. This chapter can conclude that the ministerial procedures are new and not well established enough to gain the information on the impact of TPMs to determine the exception. This procedure needs to be revised to reform to facilitate the stakeholders' participation in this procedure.

Compared with other countries, it is found that the effectiveness of administrative mechanisms depends on legal framework, operation, and openness for the public to participate in, especially in the process of reflecting the influence of anti-circumvention rules on users in practice. Therefore, the paper concludes that other appropriate mechanisms play an important role in determining and enforcing the exception. The combination of proper exceptions and well-established measures enforcing exceptions would maintain a balance between copyright protection and knowledge access in the digital era. The effectiveness of this mechanism relies either on laws or on the nature of the process that can properly reflect technological changes and user needs in practice.

6.7 Alternatives for Digital Copyright Protection and Access

Chapter 5 seeks out other mechanisms to protect the economic profit of copyright holders and make works available to users. The thesis found that CMOs could act as the representatives of the copyright holder to set the licence fees and then issue the licences for the users to use the works. CMOs collect the royalties and distribute them to copyright holders. Moreover, these bodies have the technologies and expertise to effectively monitor the use of works and then prosecute for copyright infringement in judicial proceedings.¹⁰⁰⁶ Therefore, to enhance copyright protection in Thailand, especially in the digital world, a certain amount of the royalties should be provided to copyright owners, and the CMOs may effectively play this role. Furthermore, the CMOs can set the licence fees by taking into account national contexts;

¹⁰⁰⁶ Supasiripongchai (n 13) 264-275.

accessing copyright works through these establishments may be more affordable and convenient. This approach would better safeguard the user's rights without the need to rely on restrictive exceptions to anti-circumvention rules. The users may gain an affordable licence from CMOs to employ the works rather than circumventing technological measures to use the works. These could reduce the violation of technological measures and enhance the interests of both copyright holders and users in the digital era.

This chapter demonstrates the difficulties of libraries in obtaining digital works because the majority of materials in the digital era are protected by technological measures or bound by licence contracts. It is important to ensure that the libraries acquire adequate works for preservation. The study discovered that the UK introduced NPLD, which required publishers to deposit material in the British library. This requirement applies to non-printed works published in the UK. The thesis also found that the deposited libraries in the UK are permitted to make a copy or transform the works for preservation, as well as provide certain portions of the works for personal and non-commercial research. However, they have to apply proper security policies to control the dissemination of works and prevent unauthorised use of deposited works. This approach would guarantee the effectiveness of exceptions without unreasonably harming the interests of publishers.

In conclusion, the thesis points out that multiple mechanisms are needed in order to secure access to digital works, e.g., a sufficient exception of TPMs, CMOs, digital deposit system, and other mechanisms for enabling the user access to work and securing the interest of copyright holders. All these mechanisms might maintain the balance between the copyright protection and the long-term access of the public to knowledge.

6.8 Contributions of this Thesis and Recommendations for future Research

This thesis suggests legislative models of anti-circumvention rules by considering effective protection for copyright industries and ensuring their right to gain financial interest. Based on experiences from other jurisdictions, the suggested laws could prevent unlawful hacking of technological measures and copyright infringement. These prevent the copying and redistributing of their digital works on the internet. The exceptions also ensure that copyright holders are compensated fairly for access to and use of their works. The recommendation on CMOs will protect copyright holders' economic interests; these bodies will issue the licence and collect the royalties from the users. It is arguable that these legal approaches could effectively protect the rights and the economic profits of copyright industries.

The thesis recommends an exception for law reform by providing legal privileges for non-profit research, private study, libraries, and educational institutions. These non-infringing users will be allowed to circumvent technological measures to access digital knowledge for educational purposes when the works are not reasonably accessible by other methods. The establishment of CMOs also makes the work available at an affordable price through the licencing scheme. These approaches would facilitate private users and academic institutes engaging with digital databases on the most convenient platform at reasonable cost. In addition to the exception, this study suggests a guideline to improve the administrative process of enacting exceptions in order to facilitate users to share their experiences and expectations concerning the impact of anti-circumvention rules on accessing digital works. These measures help determine new exceptions based on the actual needs of users. Moreover, the thesis also proposes to establish a complaint process to allow users to make a complaint when they cannot exercise their privilege or cannot use the obtained works. These would lead to any measure to make the materials accessible. The deposit requirement is also recommended to enable the library to maintain the works for future generations. Therefore, legal reform based on recommendations may enhance equality in education, ensure the preservation of national heritage, and improve the living standard in Thailand.

Furthermore, the thesis contributes to the benefits of improving the anti-circumvention laws. Each chapter critically identifies the complexities and challenges existing in all parts of these provisions. Then, new legal models were carefully evaluated and proposed based on the lessons learned from other jurisdictions. The thesis proposes legislative definitions for the scope of protection and the purview of forbidden activities. The new list of exceptions in relation to education is suggested to make them more practicable. This thesis provides guidance for future law reform and policy changes. The thesis provides practical details to implement Section 53/5 (1) based on the experiences learned from the US rulemaking proceeding, which may help enhance the ministerial process to determine additional exceptions to anti-circumvention rules more effectively. The study also supplies guidelines for legal implementation to relevant governmental agencies to address problems arising in digital copyright law. The legal explanations are proposed to facilitate the courts in resolving disputes in a manner that reconciles the interests of competing parties. It is expected that this thesis provides best practices to legislators and policymakers to revise the anti-circumvention rules to comply with the specific needs of Thailand and be in line with international standards.

Suggestions for Future Research

Overall, this thesis provides significant literature by conducting a critical analysis of numerous challenges concerning the anti-circumvention rules in the context of Thailand. These studies are novel because the new provisions were amended in 2022. Through a comprehensive investigation of the selected issues elaborated upon throughout several chapters, this thesis has reflected the global trends of relevant laws and has adequately recommended solutions to deal with a number of difficulties inherent in Thai copyright protection in the digital environment. However, this thesis does not cover all the challenges and difficulties related to the digital copyright protection regime in Thailand. This thesis specifically examines the protection of technological measures and the impact of these laws on education and libraries. The study does not cover discussion of the effects on recreational uses or people with disabilities. Additionally, there are a series of amendments to the regulation concerning Internet Service Providers (ISPs) in Thailand. The other types of digital right management (DRM) and right management information (RMI) were not included in this thesis, which may be the legal gaps or frameworks for future research to build upon the findings presented in this study.

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