

MODERNISING SITE-BLOCKING MECHANISM IN PROTECTING COPYRIGHT OWNERS CONTENT AGAINST DIGITAL PIRACY IN MALAYSIA

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Article history:

Submission date: 12 March 2024
Received in revised form: 19 Sep 2024
Acceptance date: 17 October 2024
Available online: 20 January 2025

Keywords:

Copyright law, digital piracy, site-blocking, copyright enforcement, digital technology

Funding:

The authors would like to acknowledge the financial support from the Ministry of Higher Education, Malaysia, under the Fundamental Research Grant Scheme FRGS/1/2020/SSO/UKM/01/2.

Competing interest:

The author(s) have declared that no competing interests exist.

Cite as:

Abdul Latif, M. S., Abdul Manap, N., & Althabhwai, N. M. (2025). Modernising site-blocking mechanism in protecting copyright owners content against digital piracy in Malaysia. *Malaysian Journal of Syariah and Law*, 13(1), 1-17.
<https://doi.org/10.33102/mjssl.vol13no1.763>



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ABSTRACT

The rapid evolution of digital technology and the widespread demand for online content have facilitated the rise of digital piracy, posing significant challenges to copyright protection. In Malaysia, digital piracy undermines copyright owners' revenue potential and creative incentives, causing substantial financial losses across various industries. Malaysia has incorporated site-blocking mechanisms under section 263 of the Communications and Multimedia Act 1998 and section 43C(2) of the Copyright Act 1987 to combat this issue. These measures aim to disrupt access to websites hosting pirated content, deterring illegal copyright consumption. However, the effectiveness of these mechanisms is continually challenged by the adaptive tactics of digital pirates, jurisdictional limitations, and technical workarounds that allow access to pirated content despite blocking attempts. Determining whether these site-blocking mechanisms effectively protect copyright owners' content against digital piracy necessitates a thorough evaluation of their strengths and weaknesses and a consideration of modern strategies for improvement within those acts. This paper hence will explore the current overview of site-blocking in Malaysia, identify the gaps in improvements and propose recommendations for enhancing the site-blocking frameworks to more effectively combat digital piracy and protect copyright owners' content against digital piracy in the currently evolving digital space.

Introduction

The rise of the internet and digital technology, combined with the high demand for digital copyright content, has established new norms for distributing, sharing, and accessing copyrighted material in an expansive digital space (Lowry et al., 2017). Consequently, copyrighted content is frequently subject to digital piracy (Latifah et al., 2019; Holt et al., 2018). Digital piracy, for instance, involves the unauthorised use, copying, or distribution of copyrighted material, hindering copyright owners from fully exercising their exclusive rights and generating income from their work (Stryszowski, 2009). The impact of digital piracy on copyright owners is significant (Voon, 2022). It has drastically reduced revenue (Aversa, 2019) as consumers increasingly opt for pirated services over legitimate content (Koay et al., 2024). This shift in consumer behaviour poses a significant financial threat to copyright owners, undermining their ability to profit from their creations and invest in new content (Organization of Economic Cooperation, 2016). The ease with which pirated content can be accessed and distributed online worsens the issue (Holt et al., 2018), making it challenging for copyright owners to enforce their rights and protect their intellectual property in the digital space (Lukasz, 2020).

A study conducted by MUSO, an anti-piracy market analytics firm, reported that a global piracy demand has been measured and analysed over 229.4 billion visits to piracy websites in 2023 (Chatterley, 2023). Another study also reported that digital piracy drains up to \$75 billion in revenue from the legal industry every year and is projected to grow by 11% annually, reaching approximately \$125 billion loss by 2027-2028 and continuing to remain rampant nonetheless (Kearney, 2024). By 2027, a research firm also projected a loss of \$113 billion for streaming video providers serving global customers due to content theft (Park Associates, 2023). In Malaysia alone, it was reported that an annual loss due to digital piracy is projected to be RM3 billion to the entertainment and media industries, RM500 million in taxes, and the loss of thousands of jobs in Malaysia (Kwek et al., 2023). Given the statistical data and the ongoing challenges posed by digital piracy, there is an imminent threat to the financial stability and creative incentives (Khalid, 2024) of copyright owners globally, emphasising the urgent need for effective measures to combat digital piracy through site-blocking mechanisms.

Generally, to combat visits to piracy websites and digital piracy demands for illegal consumption of copyrighted works, Malaysia has provided a site-blocking relief under section 263 of the Communications and Multimedia Act 1988 ("the CMA 1998") and section 43C(2) of the Copyright Act 1987 ("the CR 1987"). Section 263 of the CMA 1988 was initially included in the Act during its first enforced on 1st November 1998 by providing a mechanism for administrative broad site-blocking relief. On the other hand, section 43C(2) of the Copyright Act 1987 was introduced through the Copyright Act (Amendment) 2012, which was enforced on 1st March 2012, addressing the growing challenges posed by digital piracy through a judicial copyright site-blocking relief. By blocking access to websites known for hosting pirated copyrighted material, these site-blocking measures aim to reduce the availability of such content and discourage copyright infringement. From 2021 until 2023, Malaysia reported that 2,341 links or websites were blocked, and 2,071 pieces of illegal content were removed by the Ministry of Domestic Trade and Cost of Living (MDCT). This was achieved through collaboration with content industries such as the Premier League, ASTRO, Asia Video Industry Association (AVIA), and other copyright-related industries (International Intellectual Property Alliance, 2023).

While the provision for site-blocking and the government efforts is in place, there is still much room for improvement due to current legal constraints in Malaysia. Despite these efforts, the effectiveness of site-blocking mechanisms in practice is subject to several challenges (Doe, 2024). At the outset, one of the critical challenges facing the effectiveness of site-blocking mechanisms is the rapid evolution of digital piracy tactics (Slabykh, 2019). As technology advances, pirates are becoming increasingly intelligent in circumventing these measures, rendering some site-blocking efforts ineffective (Fiesler, 2020). The global nature of the internet also poses challenges for enforcement as piracy websites can quickly relocate to jurisdictions with relaxed enforcement or operate through mirror sites, which allows them to evade legal action and continue their operations with minimal interruption (De-Yolande, 2022). For instance, a site blocked in one country can still be accessed from another, diminishing the overall impact of the enforcement action as the blocking system only limits access within specific jurisdictions (Sabrina, 2016), for example, Malaysia. This geographical limitation significantly hampers the effectiveness of site-blocking measures, as users can switch to alternative sites or use tools such as virtual private networks

(VPNs) to bypass restrictions (De-Yolande, 2022). Another highlighting concern is the cumbersome process of applying the site-blocking relief under both acts. The process can be delayed and bureaucratic, requiring copyright holders to provide extensive evidence and undergo lengthy legal proceedings before any action is taken (Yeoh, 2019). This delay allows piracy websites to continue operating and profiting from unauthorised content distribution in the interim (Yue, 2020).

Digital piracy continues to be a significant concern, with recent evidence indicating a critical need for advancements, particularly in Malaysia (International Intellectual Property Alliance, 2023). Despite some advancements in combating piracy, ongoing improvements and modernisation in site-blocking mechanisms are deemed necessary to address these challenges (Astro Awani, 2024) effectively. This is, in turn, prompting a reassessment of the current legal framework and the effectiveness of existing enforcement measures to modernise the current site-blocking mechanism in Malaysia (Lyu et al., 2024). To address the issue of digital piracy, it is crucial to identify the problem areas within the current enforcement mechanisms and policies. Despite site-blocking provisions under the Communications and Multimedia Act 1998 and the Copyright Act 1987, digital piracy remains rampant. As discussed above, it continues to grow, as indicated by rising global statistics. Hence, this study seeks to evaluate the effectiveness of site-blocking mechanisms in Malaysia in protecting copyright owners' content against digital piracy. This paper aims to identify the strengths and weaknesses of the current legal framework and propose recommendations for modernising site-blocking provisions to enhance their efficacy. The central research question that the researcher intends to address in this paper is how effective current site-blocking mechanisms are in combating digital piracy in Malaysia and what improvements can be made by incorporating elements from Singaporean and South Korean site-blocking frameworks. Thus, the discussion will begin with an explanation of site-blocking mechanisms followed by an overview of them and their related issues. The remaining sections explore the gaps in the existing system and the improvements needed to enhance the effectiveness of these measures in Malaysia. The article concludes by examining how elements from the site-blocking regimes in Singapore and South Korea can be incorporated to strengthen Malaysia's approach.

Methodology

The research method used in this study is a black letter law approach, focusing on legal research conducted primarily through library research. This study analyses legal materials that systematically form the framework of the norms and principles governing site-blocking remedies and reliefs. Primary legal materials, which are the main sources in this research, were obtained from statutes, regulations, and selected judicial decisions related to site-blocking provisions under section 233 of the Communications and Multimedia Act 1988 ("the CMA 1998") and section 43C(2) of the Copyright Act 1987 ("the CR 1987"). In addition, secondary materials also support this research, including books, articles, newspapers, and seminar papers that discuss and analyse the core issues surrounding digital piracy and site-blocking mechanisms. This study employs a qualitative descriptive analysis method, which involves examining and interpreting legal texts and materials to uncover the underlying legal principles and patterns. The analysis begins by identifying and describing Malaysia's current legal framework governing site-blocking relief. The next step involves a comparative analysis of site-blocking provisions in Singaporean and South Korean jurisdictions to determine the improvements that can be made to Malaysia's approach. After completing this analysis, the data is synthesised to provide recommendations for modernising site-blocking provisions to enhance their efficacy in combating digital piracy.

Site Blocking Mechanism in Protecting Copyright Owner's Content against Digital Piracy

The phrase "*Site Blocking*" involved two words, namely "*Site*" and "*Block*". Specifically, "*site*" refers to a website or online platform, while "*block*" indicates a restriction or prevention of access (Article 19 Portal, 2016). When combined, "*site blocking*" refers to the legal or technical process of restricting access to websites or online platforms that host or distribute unauthorised or pirated content (Geiger et al., 2016). In this context, the term "*mechanism*" refers to the methods or systems used to protect the intellectual property of copyright owners by preventing internet users from accessing infringing websites (Nigel, 2016). In this case, the mechanism typically involves legal actions or remedies the copyright holders sought through a judicial court order or administrative directive requiring Internet Service Providers (ISPs) to block access to specific websites or domains for hosting pirated content (Dinwoodie, 2017).

Copyright owners are responsible for initiating the site-blocking process by identifying websites infringing on their rights and filing a complaint or application with the relevant authorities, such as courts or regulatory bodies (Perel, 2016). This often requires the copyright owner to present evidence demonstrating that the targeted website is involved in the unauthorised distribution of its content. Once a case is made, the copyright owner can request a judicial order or administrative directive mandating ISPs to block access to the infringing site (Wang, 2016). Given the intense focus on combating digital piracy and protecting intellectual property, many jurisdictions have established frameworks that facilitate site blocking (Reis et al., 2024). These frameworks aim to balance the protection of copyright owners' rights with the need to ensure that site-blocking measures are implemented effectively and fairly.

The global and local development of the Site Blocking Mechanism is accelerating due to the rapid growth of digital content consumption and the increasing prevalence of digital piracy (International Intellectual Property Alliance, 2024). As more content is made available online, the opportunities for unauthorised distribution and infringement have also expanded (Noviarita et al., 2024; Quintais et al., 2023). This dynamic environment necessitates ongoing advancements in site-blocking mechanisms to keep pace with new technologies and piracy techniques (Qamar, 2024). Therefore, providing remedies through appropriate laws is one of the essential approaches to address these concerns and safeguard the rights holder's exclusive rights.

The Overview of Administrative site-blocking under the Communications and Multimedia Act 1998 (“the CMA Act 1998”)

To battle visits to piracy sites, Malaysia has introduced section 233(1) of the CMA Act 1998, which provides:

Section 233(1) of Improper use of network facilities or network service, etc.

(1) A person who (a) by means of any network facilities or network service or applications service knowingly (i) Makes, creates or solicits; and (ii) Initiates the transmission of any comment, request, suggestion or other communication which is obscene, indecent, false, menacing or offensive in character with intent to annoy, abuse, threaten or harass another person; or (b) initiates communication using any applications service, whether continuously, repeatedly or otherwise, during which communication may or may not ensue, with or without disclosing his identity and with intent to annoy, abuse, threaten or harass any person at any number or electronic address, commits an offence.

The reading of section 233(1) of the CMA Act 1998 would criminalise a person who initiates an obscene, indecent, false, menacing or offensive in character with intent to annoy, abuse, threaten or harass another person. The broad wording of the CMA Act 1998 would thus criminalise any person who commits any offence under any available written laws in Malaysia, including harassing exclusive rights of copyright owners under the CR Act 1987. Generally, CR Act 1987 entails two (2) notable provisions that make it an offence for:

Section 43A(1) Offences relating to anti-camcording.

Any person who operates an audio-visual recording device in a screening room to record any film in whole or in part shall be guilty of an offence and shall, on conviction, be liable to a fine of not less than ten thousand ringgit and not more than one hundred thousand ringgit or to imprisonment for a term not exceeding five years or to both; and who

Section 41(k)

“...provides or shares access to an online location of any works or copies of works to any other person without authority.”

The first section of 43A(1) was enacted via the Copyright (Amendment) Act 2012 to control digital piracy by way of prohibiting unauthorised recordings of movies made in cinema and distributed via various platforms such as social media, e-commerce, streaming services, file-sharing, or sale of the unlicensed optical disk (Parliament of Malaysia, 2011). The second section of 41(k) was recently introduced under

the Copyright (Amendment) Act 2022, which was enforced on 18th March 2022 and aimed to tackle the latest trends of piracy, namely providing or sharing illegal access links to an online location containing illegal copyrighted contents. These three (3) offences can be best illustrated with the following example:

Scenario 1

A, a Malaysian who resides in Kuala Lumpur, recorded a movie in a cinema and uploaded it illegally to piracy websites like <https://pencurimovie.site>.

In the above example, A would be caught under section 233(1) of the CMA Act 1987 and section 43A(1) of CR Act 1987.

Scenario 2

He also created a URL link and posted it on his social media. Any user who clicks the link will be directed to the piracy website <https://pencurimovie.site>.

In the above example, A would be caught under section 41(k) of CR Act 1987.

The above two (2) examples would involve the illegal doings of recording, uploading, and sharing of access or link to illegal copyrighted work without copyright owners' permission that would otherwise prejudice the exclusive rights of copyright owners. Section 263 of the CMA Act 1998 on the other hand, provides an enabling provision for the Malaysian Communications and Multimedia Commission ("the MCMC"), an agency under the Ministry of Communication ("KK"), to order its ISPs to site-block the piracy websites that host illegal copyrighted under section 43A and section 41(k) of CR Act 1987. Generally, section 263 of the CMA Act 1998 provides:

General duty of licensees.

(1) A licensee shall use his best endeavour to prevent the network facilities he owns or provides or the network service, applications service or content applications service that he provides from being used in, or in relation to, the commission of any offence under any law of Malaysia.

(2) A licensee shall, upon written request by the Commission or any other authority, assist the Commission or other authority as far as reasonably necessary in preventing the commission or attempted commission of an offence under any written law of Malaysia or otherwise in enforcing the laws of Malaysia, including, but not limited to, the protection of the public revenue and preservation of national security.

Section 263(2) of the CMA Act 1998 gives broad power to MCMC or any other authority, such as the Ministry of Domestic Trade and Cost of Living (MDT), to order its licensee to as far as reasonably necessary in preventing the commission or attempted commission of an offence under any written law of Malaysia or otherwise in enforcing the laws of Malaysia, including, but not limited to, the protection of the public revenue and preservation of national security. Section 3 of the CMA Act 1998 further defines 'licensee' among others to include network service providers ("the NSP"), also known as Internet Service Providers ("the ISP"), an entity that provides network or internet services to every consumer in Malaysia.

To invoke the provisions of section 263(2) of the Communications and Multimedia Act 1998, copyright owners must first issue a complaint to the enforcement division of the Ministry of Domestic Trade and Cost of Living (MDT) as an assisting ministry to the Malaysian Communications and Multimedia Commission (MCMC) before site-blocking alleged piracy sites. Copyright owners must also gather evidence of the infringing activities and submit it with their complaints to MDT (Tariq, 2020). MDT will then process the complaint within a stipulated period (Chua, 2019). Vested with the authority conferred on it by section 263(2) of the Communications and Multimedia Act 1998, MDT will instruct MCMC licensees to block access to the alleged websites (Chua, 2019). The approximate timeline for the entire process can take months, from when the complaint is made to MDT to the blocking of the sites. In 2022, MDT initiated the Cyber Copyright Enforcement (CyCORE) Programme to combat digital piracy and expedite the process of blocking illegal websites within 48 hours (Kementerian Perdagangan Dalam

Negeri dan Hal Ehwal Pengguna, 2022) (KPDNHEP, 2022). As analysed above, below is the current flowchart of the administrative site blocking under section 263 of the CMA Act 1998.

Table 1. Flowchart of the administrative site-blocking under section 263(2) of the CMA Act 1998

Steps	Process flow
1.	The copyright owner gathers evidence of the infringing activities
2.	The copyright owner issued a complaint to the enforcement division of MDT
3.	MDT processes the complaint within a stipulated period
4.	MDT decided to block infringing websites
5.	MCMC instructs MCMC licensee to block access to piracy websites by restricting access to an online location

The Overview of Judicial site-blocking under the Copyright Act 1987 (“the CR Act 1998”)

Apart from seeking administrative site blocking under section 263(2) of the CMA Act 1998, the current legal regime in Malaysia also allows copyright owners to file a civil suit to obtain a court order under section 43C of the CA Act 1987. Section 43C (2) of the CA Act 1987 was inserted during the Copyright (Amendment) 2012, which aims to provide injunctive relief through a court order to block piracy websites from infringing upon. The provision was enacted based on section 512(1)(j)(B) of the United States Copyright Act 1976 and section 116AG (3) of the Australian Copyright Act 1968. Generally, section 43C(2) of the CA Act 1987 provides that:

(2) Where infringing material has been identified to come from an online location outside Malaysia or a specified account, and if the court is satisfied that subsection (1) applies to the service provider, the court may order the service provider (a) to take reasonable steps to restrict access to an online location that is physically situated outside Malaysia; or (b) to terminate the specified account.

In order for a copyright owner to invoke section 43C (2) of CR Act 1987, they are required to satisfy section 43(1)(b)(A) of CR Act 1987 in establishing that the ISP would not be held liable for infringement occurs in its network because of:

- (a) The transmission of the electronic copy of the work was initiated by or at the direction of a person other than the service provider;
- (b) The transmission, routing, provision of connections or storage is carried out through an automatic technical process without any selection of the electronic copy of the work by the service provider;
- (c) The service provider does not select the recipient of the electronic copy of the work except as an automatic response to the request of another person or
- (d) The service provider does not make any modification, other than a modification made as part of a technical process, to the content of the electronic copy of the work during its transmission through the primary network.

In other words, the provision placed the burden of proof on the copyright owners to prove that the transmission, selection, and modification of the infringing work (electronic copy) was not initiated by the ISP. Thus, an injunction was justified to be issued to them to disable access to an online location and/or to terminate the specified infringer's account.

Below is the current flowchart of the judicial site blocking under section 43C(2) of the CR Act 1987.

Table 2. Flowchart of the judicial site-blocking under section 43C (2) of the CR Act 1987

Steps	Process flow
1.	The copyright owner gathers evidence of the infringing activities
2.	The copyright owner files a civil suit in court against the ISPs
3.	The copyright owner proves that the ISPs did not initiate the work's transmission, selection, and modification

Table 2. Flowchart of the judicial site-blocking under section 43C (2) of the CR Act 1987 (*continued...*)

4.	Exchange of Pleadings
5.	Hearing of the case
6.	Court Order issued
7.	Service of Court Orders to ISPs
8.	ISP disable access and terminates the specified account

Discussion

Current Gaps and Improvements in the Administrative and Judicial Site-blocking Measures

Both administrative and judicial site blocking in Malaysia have been in place since 1998. Site-blocking mechanism remedies employed under the CMA Act 1998 and CR Act 1987 have extensively provided copyright owners with a relief to enforce their exclusive rights provided under CR Act 1987 against digital culprits and online infringers. However, gaps in both legal frameworks create obstacles to copyright owners in enforcing their exclusive rights. While the administrative remedy provided under section 263 of the CMA Act 1998 can be a reasonably effective enforcement site-blocking mechanism, this remedy still has limitations.

Challenging Legitimacy of Administrative Site-Blocking

Article 10 of the Federal Constitution of Malaysia ("the FMC") guarantees citizens a right to freedom and expression. However, some limitations allow the government to control media regulation as provided under section 263(3) of the CMA Act 1998. Conversely, one of the objectives under section 3(3) of the CMA Act 1998 provides otherwise, which states that:

“(3) Nothing in this Act shall be construed as permitting the censorship of the Internet.”

With conflicting provisions under section 263 of the CMA Act 1998, it may be argued (Aris, 2023) that websites blocked by the MCMC without an official court order are subject to being judicially challenged under judicial review application. An administrative site blocking order issued under section 263 of the CMA Act 1998 may contravene Article 10 of FMC and section 3(3) of the Act as it may be viewed as it was issued unilaterally by an executive government agency and seen as not observing a legitimate due law process (Article 19 Portal, 2017). The legitimacy of the administrative order issued by MCMC was also questioned, as there was no expiration date on how long the website blocking should be in place and enforced.

No Comprehensive Guidelines for Copyright Owners in Making Copyright Infringements Complaints to MDT

Given the existence of a step-by-step guideline for lodging complaints by copyright owners regarding internet content in MCMC FAQs, it is clear that such guidelines need to provide a comprehensive explanation of the progress of a complaint (Chua, 2019). This progress heavily depends on the caseload and responsiveness of the MDT (Alita, 2019). Reports also indicated that MCMC can only instruct ISPs to block access to piracy sites that infringe copyright once it receives direction or instruction from MDT, which can take months. This delay in the investigation process allows copyrighted content to be viewed and duplicated by other piracy sites, resulting in significant losses for copyright owners (Chua, 2019). Thus, Malaysia requires a new, expedient, and modernised site-blocking mechanism to effectively address digital piracy (Malaysian Bar, 2023).

For instance, to assist copyright owners in making a complaint to MDT about copyright infringement activities, it would be helpful if MDT could produce comprehensive guidelines (Chua, 2019) on the following issues:

Table 3. Example of comprehensive guidelines for copyright owners in making copyright infringement complaints under section 43A(1) and section 41(k) of the Copyright Act 1987

Copyright Owners Action	Processing Timeframe
1. The copyright owner shall file a complaint to the enforcement division of MDT together with the following: (a) Evidence of copyright ownership under section 42 or section 26A of CR Act 1987; and (b) Evidence of the infringing activities At the designated MDT office, email or specified sites	At complainant convenience
2. The enforcement division of MDT will acknowledge and verify the complaint made	1 day
3. MDT will pass the decision to MCMC to block the infringing websites	1 day
4. MCMC instructs/orders its licensed ISP to block access to websites by disabling access to an online location	1 day
Total days from complaints made to site-blocking piracy sites by MCMC	3 days

It is to be noted that Table 3 will function as a suggestion in order to provide comprehensive guidelines. The above suggestion depends on the workloads and manpower settings of the MDT and MCMC itself when processing the complaints.

Administrative Blocking Orders Directed to Only Blocking Access to Copyrighted Contents

In Malaysia, one of the examples of administrative site-blocking order issued by MCMC (Open Observatory of Network Interference (Maria et al., 2016) to ISPs was done through a process name called domain name server (DNS) blocking which is also known as DNS re-routing to block illegal peer-to-peer file sharing websites like <https://thepiratebay.se>, <http://extratorrent.cc>, <http://thepiratebay.org>, and <https://torrentz.eu>. This method (Nigel, 2016) blocks the entire domain server by making configuration changes at its DNS server. According to (Nigel, 2016), the example can be seen as follows:

When a user asks to access a particular website, such as www.maindomain.com, the DNS server of the customer's ISP recognises the domain as a blocked site, does not allow it to be translated into an IP address, and responds to the user that the domain does not exist or redirects to an informational webpage.

In other words, with DNS Blocking, ISPs will simply remove the DNS records of blocked websites from their network services so that whenever a user wants to access the blocked sites, users will only get a blank screen in their browsers or move their searches to specific sites because their browsers (which use ISP internet network services, for example, TM Unifi) do not know what the IP address is. In Malaysia, DNS Blocking was the primary method employed by the Malaysian Communications and Multimedia Commission (MCMC) to prevent access to certain websites deemed illegal or in violation of regulations (Sinar Project, 2022).

Globally, there are two other methods for website blocking other than DNS blocking, which are called Internet Protocol blocking (“IP Blocking”) and Uniform Resource Locator blocking (“URL Blocking”) (Nigel, 2016). ISPs generally use IP blocking to block specific IP addresses by modifying their network settings equipment (Internet Society, 2017) so that users may not access specific sites. In IP blocking, ISPs will configure their gateway routers (David, 2017) so that packets for particular IP addresses are either blocked or redirected to another IP Address. On the other hand, URL blocking requires ISPs to block URL links to specific items, contents, and documents stored, such as website links or addresses. In URL blocking, ISPs will inspect every packet in their router, and as they cache content, they block the piracy sites (Atiyah et al., 2024; Nigel, 2016). For example, an ISP may block <http://thepiratebay.org/piratemovie.zip> and redirect users to another site.

It is to be noted that the methods of website blocking employed are not intended to eliminate digital piracy in totality (Danaher et al., 2014), as the methods only aim to block access to such illegal content. Instead, it intends to change consumers' behaviour by routing them from choosing illegal sites to alternative legal sites offering legally copyrighted content material. It is further argued (Internet Society, 2017) that the blocking technique provided does not remove content from the internet of illegal sites itself, nor does it

stop the illegal activity or prosecute the infringers. In other words, the current blocking mechanism only prevents users from accessing the content. The underlying illegal copyright content remains in place and exists on culprits' piracy sites. As a result, these site-blocking measures are often considered a deterrent rather than a comprehensive solution to the issue of digital piracy with the aim of “reducing piracy” rather than eliminating it in totality.

A Virtual Private Network (“VPN”) as a Tool to Bypass Site-Blocking Access to Illegal Copyright Material on Piracy Site

VPN is a virtual private network that enables users to circumvent geo-blocking measures employed by copyright owners in order to control their work limited to certain users in specified territorial copyright licensing arrangements (Althaf, 1990) where the copyright content is located. VPN allows users to virtually fake where their computer is located (Sabrina, 2016) and allows users in Malaysia to pretend they are in the United States to access blocked content in Malaysia. For instance, when users install a VPN on their computer or device, a VPN (Cook, 2017) routes the internet connection through their VPN's private server rather than the internet service provider's ('ISP') server. It hides the users' internet protocol ('IP') addresses and data traffic from external snoopers, making their online actions virtually untraceable (Namecheap, 2020). As a result of using a VPN, users may access the content blocked by MCMC by repositioning their geographic online location from Malaysia to the United States to enjoy the piracy sites that would otherwise not be blocked by the United States.

In Malaysia, VPN services are entirely legal and legitimate. However, activities done through VPNs may be illegal if they are made to facilitate copyright infringement. Section 43A(1) of CR Act 1987, for instance, restricts any person from offering or providing to the public any service of illegal streaming, including a computer program which is in part or as a whole that results in infringement of copyright. Section 36A(1) of the CA Act 1987 also restricts any person who circumvents any technological protection measures ("TPM") that result in infringement of copyright. As both sections regulate activities done for illegal streaming and circumvention of TPM that result in infringement of copyright, the section, however, does not prohibit the usage of VPN for any other purposes. Hence, culprits may still opt to use a VPN for convenience and hide behind a curtain to bypass site-blocking access by changing its geographical location to access illegal copyrighted content (Gasser, 2006).

Cumbersome process of section 43C(2) of CR Act 1987

To date, section 43C(2) of the CR Act 1987 has never been tested in Malaysian courts, possibly because the provision confers a heavy burden of proof on copyright owners, making it cumbersome to establish an ISP's liability against copyright infringement. Besides, filing a civil suit in the high court involves high costs and significant litigation risks, further complicating the cumbersome nature of the process (Dinwoodie, 2017). Copyright owners must provide substantial evidence demonstrating the ISP's direct or indirect involvement in the infringing activities, their knowledge of the infringement, and their failure to act upon notice. Collecting this evidence is time-consuming and expensive, requiring extensive resources many copyright owners may not possess.

Moreover, with the rapid advancement of digital technology, the practicality of section 43C(2) is increasingly questionable. Infringers can easily alter their Internet Protocol (IP) addresses to continue their illegal streaming activities (Internet Society, 2011) even after their websites have been blocked by the Malaysian Communications and Multimedia Commission (MCMC). This ability to quickly change IP addresses and set up new websites or mirror sites undermines the effectiveness of website blocking, rendering the legal process even more cumbersome.

In addition to technological challenges, ISPs face significant difficulties in effectively terminating or disabling infringer accounts for illegal activities (Giannopoulou, 2012). Infringers can quickly set up new accounts and change servers, often moving to jurisdictions with less stringent enforcement. The widespread use of VPN services further complicates enforcement efforts, as infringers can mask their proper locations and continue their illegal activities relatively quickly (Froomkin, 1999).

The combination of high litigation costs, the heavy burden of proof, and the technological adaptability of infringers highlights the cumbersome process imposed by section 43C(2). Copyright owners are left with a complex and inefficient legal framework that struggles to keep pace with the evolving digital landscape, ultimately hindering effective enforcement of their rights. To address these challenges, there is a need for legislative amendments that reduce the burden of proof on copyright owners and enhance the effectiveness of legal actions, alongside the adoption of advanced technological solutions for monitoring and detecting infringing activities more effectively. Below is the proposed selected jurisdictional framework that could help rectify the current site-blocking mechanism

Singapore Judicial Dynamic Injunctions solutions

The new site-blocking provision under the new revamped Singapore Copyright Act 2021 (“SCA 2021”) provides a more efficient mechanism for copyright owners to address the emergence of piracy sites that facilitate online infringements in the digital sphere. Section 325 of SCA 2021 provides that:

The General Division of the High Court may, on application, order a Network Carriage Provider (NCP) to take reasonable steps to disable access to an online location (called in this Subdivision an access disabling order) if —

- (a) The online location is a flagrantly infringing online location;
- (b) The online location has been or is being used to commit rights infringements in relation to copyright works or protected performances of which the applicant is the rights owner; and
- (c) The NCP's services have been or are being used to access the online location.

(2) In deciding whether to make an access disabling order and the terms of the order, the General Division of the High Court must consider all relevant matters, including-

- (a) The harm that is or may foreseeably be caused to the rights owner;
- (b) The burden that the making of the order will place on the NCP;
- (c) The technical feasibility of complying with the order;
- (d) The effectiveness of the order;
- (e) Any possible adverse effect on the business or operations of the ncp and
- (f) Whether some other comparably effective order would be less burdensome.

Under the new framework, section 325 of the Singapore Copyright Act 2021 (SCA, 2021), which is based on Section 193DDA of the Singapore Copyright Act 1987, provides copyright owners with a streamlined mechanism to protect their rights. This provision allows copyright owners to apply for the court order by proving that the NCP (or known as ISPs) network services have been used to commit or facilitate copyright infringements and that the website hosting the illegal copyright content is considered to be "*flagrantly infringing*" online location. SCA 2021 clearly defines what is 'flagrantly infringing online location' under section 99 if the website or online location has been or is being used to flagrantly commit or facilitate rights infringements. To decide whether the website or online location is flagrantly infringing online location, the following matters under subsection (2) must be considered, i.e.:

- (a) Whether the primary purpose of the online location is to commit or facilitate rights infringements;
- (b) Whether the online location makes available or contains directories, indexes or categories of the means to commit or facilitate rights infringements;
- (c) Whether the owner or operator of the online location demonstrates a general disregard for copyright or the protection of performances;

- (d) Whether access to the online location has been disabled by orders from any court of another country or territory on the ground of or related to rights infringements;
- (e) Whether the online location contains guides or instructions to circumvent measures or any order of any court that disables access to the online location on the grounds of or related to rights infringements;
- (f) The volume of traffic at or frequency of access to the online location;
- (g) Any other relevant matters.

Generally, the general reading of the new Singapore site-blocking framework would simplify section 43C of CR Act 1987, where the copyright owner would be allowed to directly apply to the courts to obtain a judicial site-blocking order without having to establish the ISP's liability against copyright infringement as provided under section 43C(1) of CR Act 1987. The process would also simplify the civil action taken as the requirement of the provision would mainly target websites that primarily offer illegitimate copyrighted works rather than aimed at legal service providers such as YouTube, Facebook, Instagram, Netflix, and many others. The new Singapore legal framework also gives the Singapore High Court power to vary a site-blocking order issued under new section 327 of the SCA Act 2021 if there is a material change of circumstances, or it is otherwise needed. For instance, if copyright owners believed that other URLs, proxies, mirror links, or identical sites host the same illegal copyrighted contents, the Singapore High Court may vary the original order issued and include additional information to block further sites mirroring the original sites. The introduction of this section would, therefore, dispense the need for copyright owners to issue new civil suits against new emerging infringing sites.

In practice, before the introduction of section 325 of SCA 2021, copyright owners in Singapore faced significant challenges in combating online piracy due to cumbersome legal processes and the rapid evolution of digital technology. Traditional litigation was often slow and costly, allowing infringers to exploit these delays and continue their activities. Since the introduction of SCA 2021, several high-profile cases have demonstrated the efficacy of the new provisions. For instance, in the case of *Disney Enterprises, Inc. and others v. M1 Limited and others* [2018] SGHC 206, the court issued an access disabling order to 53 websites under section 193DDA of the Singapore Copyright Act 1987 (in *pari materia* with section 325 of SCA 2021) within weeks, effectively blocking multiple infringing sites that had previously evaded detection through frequent IP address changes (Cheo, 2016). Recently, the Premier League of Singapore successfully obtained a court order to block access to 25 websites that were illegally streaming football matches and to date, more than 460 domain names have been blocked by the Premier League (Lam, 2024). This case exemplifies the streamlined process and effectiveness of the new provisions under section 325 of the SCA 2021. The court's decision to block these popular illegal streaming sites reflects the Singapore judiciary's commitment to protecting copyright and reducing online piracy.

Considering the amendment of section 43C(2) of the Copyright Act 1987 in Malaysia, it is essential to understand the context and rationale behind the proposed changes. The current provision in section 43C(2) of the Copyright Act 1987 imposes a cumbersome burden on copyright owners, requiring them to navigate a complex legal process and prove the liability of ISPs for copyright infringement. This approach is time-consuming, costly, and ineffective in addressing the rapid evolution of digital piracy as outlined in the Singapore Copyright Act 2021 (SCA, 2021); the Singaporean model offers a more efficient and streamlined mechanism for addressing online piracy. Allowing copyright owners to directly apply to the courts for a site-blocking order without establishing ISP liability makes the process more straightforward and less burdensome. This approach aligns with the need to modernise copyright enforcement in the digital age. Moreover, the definition of "*flagrantly infringing online location*" in SCA 2021 clarifies the types of websites that can be targeted for site blocking, ensuring that the provision is targeted at illegitimate sites rather than legitimate service providers. This clarity is essential to prevent overreach and ensure that the rights of legitimate service providers are not unduly affected.

Considering relevant factors by the court, such as the harm to the rights owner and the burden on the ISP, ensures that site-blocking orders are proportionate and balanced. This consideration of factors is crucial in maintaining a fair and effective legal framework for combating online piracy. Thus, it is suggested that the amendment of section 43C(2) of the Copyright Act 1987 in Malaysia must be aligned with the Singaporean model to give a proper result in a more efficient, effective, and balanced approach to copyright enforcement in the digital sphere. It would provide copyright owners with the tools to protect their rights while ensuring that legitimate interests are not unfairly compromised.

South Korea's Recommendation of Correction System to Protect Copyright against Digital Piracy

In July 2009, South Korea revised its copyright law (Kim, 2009) to introduce a '*Recommendation of Correction system*' sometimes known as a '*Graduated Response System (GRS)*' or '*Three Strike Policy System*' that will help stem infringement of copyrighted works and encourage consumers to return to legal markets (Moon et al., 2011). Section 133(2) of the Korean Copyright Act 1957 ("KCA 1957") provides that:

Where a copy or information which infringes on copyright or other rights protected under this Act, or a program or information (hereinafter referred to as "illegal copies, etc.") which circumvents technological protection measures is interactively transmitted through information and communications network, the Minister of Culture, Sports and Tourism may order, following deliberation by the Deliberation Committee, an online service provider to take measures to:

- (1) Warnings to reproducers and interactive transmitters of illegal reproductions, etc;
- (2) Deletion or suspension of interactive transmission of illegal reproductions, etc;

2(2) Where any reproducer and interactive transmitter which receives warnings according to paragraph (1) 1 three times or more interactively transmits illegal reproductions, etc., the Minister of Culture, Sports and Tourism may order, following deliberation by the Deliberation Committee, an online service provider to suspend an account of the relevant reproducer or interactive transmitter within a fixed period of up to six months.

Under the law, The Ministry of Culture, Sports and Tourism ("the MCST") through the Korea Copyright Protection Agency ("the KCOPA") is empowered to issue a three-strike policy including (1) issuing a warning to infringers and (2) ordering them to delete or suspend of transmission of the illegal's reproductions (infringing material) from infringers network or piracy sites. In the case of the repetitive infringer, KCOPA may (3) issue an order to suspend infringers' accounts that host illegal copyright material within no more than six (6) months (Introduction to Korean Copyright System, 2015). The issuance of warnings and orders by KCOPA expresses South Korea's strong will and determination to eradicate illegal reproductions to foster a fair Internet environment and create a sound Internet space where rights and responsibilities are balanced (Moon et al., 2011).

The three-strike policy in South Korea is an efficient tool apart from a site-blocking system to monitor, warn, and cease any emerging digital piracy content happening in digital space within South Korean jurisdiction (John, 2012). According to a 2019 study by the Korean Copyright Commission, implementing the three-strike policy led to a 72% reduction in illegal file-sharing activities within the first year (Motion Picture Association, 2019). Additionally, a report indicated a 90% decrease in visits to piracy websites within three months after a site block (IFPI, 2019). The policy has contributed to a significant increase in revenue for the South Korean entertainment industry, with the Korea Creative Content Agency reporting a 25% rise in digital music and movies sales in the two years following the policy's introduction (Korea Creative Content Agency, 2011). Recently, it has also been reported by the 15th Advisory Committee on Enforcement that South Korea has issued 664,400 recommendations in 2021 alone, where the implementation of the three-strike policy led to a 72% reduction in copyright infringement activities within the first year of its introduction (World et al. Organization, 2022). This data indicates that South Korea's three-strike policy, implemented in 2009, has been highly effective in reducing copyright infringement activities, which Malaysia can be considered to adopt.

Based on the success of South Korea's three-strike policy in reducing copyright infringement activities, Malaysia could consider adopting a similar system or incorporating elements of it into its existing legal framework. This could be achieved by amending Section 233 or 263 of the Communications and Multimedia Act 1998 or introducing a new provision. One possible approach could be to amend Section 233 to include a provision for a recommendation of a correction system similar to South Korea's three-strike policy. This could involve empowering a relevant authority, such as the Malaysian Communications and Multimedia Commission (MCMC), to issue warnings to infringers and order the deletion or suspension of infringing material from online platforms. For repeat infringers, the MCMC could be authorised to suspend their accounts for a fixed period, similar to the South Korean model. Alternatively, a new provision could be explicitly introduced addressing online copyright infringement activities. This provision could outline a graduated response system similar to the South Korean model, specifying the actions that can be taken against infringers and the criteria for issuing warnings and suspension orders.

Comparative Contribution of Singapore and South Korea Jurisdiction in Reforming Malaysian Law

In constructing a robust and modernised copyright enforcement framework in Malaysia, a comparative analysis of the legal systems of Singapore and South Korea offers a valuable approach for Malaysia to take up such a legislative framework. Singapore and South Korea have successfully implemented innovative mechanisms to tackle digital piracy, which can provide practical guidance for potential reforms in Malaysia for the following reasons.

Firstly, Singapore's approach, focusing on dynamic judicial intervention through judicial site-blocking injunctions, mirrors Malaysia's section 43C under the Copyright Act 1987. Section 43C of the Malaysia Copyright Act 1987 is rooted in the same objective through SCA 2021, which empowers courts to issue flexible orders to block access to infringing websites and their mirror sites. This method has proven effective in curbing digital copyright infringement without overburdening the courts or rights holders with repetitive litigation.

Secondly, South Korea's Three-Strike Policy provides an administrative solution that addresses copyright infringement through warnings and penalties, escalating actions from content takedowns to account suspensions. The South Korean framework also mirrors Malaysia's section 233 of the Communications and Multimedia Act 1998, empowering the Minister to take administrative actions against digital copyright infringements. Expanding the scope under CMA 1998 to address digital piracy more comprehensively would allow Malaysia to adopt a similar approach that would alleviate the burden on the courts and promote a more efficient enforcement mechanism.

Both jurisdictions are needed as hybrid models for Malaysia that create a more comprehensive and practical copyright enforcement framework. This dual approach would streamline handling digital piracy cases and allow swift intervention to prevent repeat offences. Furthermore, combining these strategies ensures that rights holders and infringers are treated fairly, with the flexibility to address complex piracy issues while minimising unnecessary litigation and resource strain on the judicial system. Such reforms would place Malaysia at the forefront of digital copyright protection in the region, aligning with international standards and addressing the evolving challenges of the digital age.

Way Forward for Malaysia

Based on the above critical discussion, it can be concluded that the Malaysian legal framework for site-blocking mechanisms can be further improved to protect copyright owners' content against digital piracy. The Malaysian site-blocking mechanism provides an adequate framework for site-blocking piracy sites. There is a reason why website blocking is being used in Malaysia, as it acts as a valuable tool to reduce piracy and encourage the consumption of legal copyrighted material. For the site-blocking to be workable, it must be adequate, expedited, and quick to implement by MCMC and MDT, considering digital piracy happening in real-time and borderless.

MCMC and MDT may improve and modernise the current framework under the CMA Act 1998 and CR Act 1987 to include several recommendations and proposals as discussed above. It is to be noted that Malaysia's quick effort in responding to review provisions in the CA Act 1987 to combat digital piracy in December 2022 should be applauded. Nevertheless, provisions in the CMA Act 1998 still need to be reviewed and changed to challenge and overcome digital piracy in totality, especially in copyright

infringement offences. As there is no regulatory certainty as to the protection of copyright owners and the exact parameters that copyright owners should follow, it is suggested that MCMC and MDT should address this concern to achieve a definitive result to protect copyright owners' content that is disseminated in a digital environment by employing a strict site-blocking mechanism that not only blocking access to piracy sites but also taking down the illegal copyrighted material itself from the infringers hosting sites that currently being done by Singapore and South Korea jurisdiction.

For instance, Malaysia could consider incorporating a clear and comprehensive definition of 'flagrantly infringing online location', similar to Singapore's framework. This would provide legal clarity and guide the authorities in determining which sites warrant blocking based on their primary purpose, disregard for copyright, or facilitation of rights infringements. Furthermore, Malaysia may benefit from adopting a hybrid approach, drawing inspiration from Singapore and South Korea. Introducing a Recommendation for a Correction system like South Korea's three-strike policy could deter and encourage compliance with copyright laws. This system would involve warnings, content deletion or suspension, and, for repeat offenders, suspending user accounts hosting illegal copyrighted material. The Malaysian legal framework should also be flexible and adaptive by allowing regular reviews and updates to address emerging challenges. Collaboration with international entities, neighbouring countries, and industry stakeholders is crucial for effective cross-border enforcement and sharing of best practices.

Conclusions

The Malaysian legal framework for site-blocking mechanisms has room for further enhancement to safeguard copyright owners' content against digital piracy. Although Malaysia's current approach to site-blocking is generally practical, providing a functional means to limit access to piracy sites, it can be refined to become more responsive and efficient, especially given digital piracy's real-time, borderless nature. The Malaysian Communications and Multimedia Commission (MCMC) and the Ministry of Domestic Trade and Consumer Affairs (MDT) are encouraged to update the existing frameworks under the Communications and Multimedia Act 1998 and the Copyright Act 1987 (Yusry, 2024). The effectiveness of site blocking depends on quick implementation by these bodies to ensure immediate response to infringement.

Malaysia's commitment to revising copyright-related provisions in the Copyright Act 1987, as seen in its 2022 amendments to address digital piracy, is commendable (Adnan, 2022). However, further revisions of the CMA Act 1998 are necessary to address gaps in the current framework. Given the lack of regulatory clarity on copyright owners' protections and precise enforcement guidelines, it is recommended that MCMC and MDT adopt a stricter site-blocking approach that limits access to infringing sites and actively removes illegal content from host sites, as practised in Singapore and South Korea. This approach would ensure more comprehensive protection of copyright in the digital sphere.

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