COPYRIGHT IN THE DIGITAL AGE: THE NEED TO FORMALISE?

Sirilak Rungruangkunladit, Senior Copyright Officer of the Copyright Office, Department of Intellectual Property, Ministry of Commerce, Thailand

1. INTRODUCTION

Registration systems prove the existence of work and the ownership of the person who created it by identifying the information within a publicly accessible register. However, in copyright law, works enjoy protection from the date of their fixation without any formalities. The reason lies in the fact that under Article 5(2) of the Berne Convention, copyright protection is obtained automatically without the need for registration and mandatory formalities are prohibited under this article. Moreover, this prohibition was subsequently reinforced, via its incorporation into the TRIPS Agreement and the WIPO Copyright Treaty.

Despite the prohibition on mandatory formalities, some jurisdictions can have a system in place to allow for the voluntary registration of works under Article 5(3) of the Berne Convention.⁵ The main advantage of voluntary formalities over mandatory formalities is that they do not cause any conflict with the international prohibition on copyright formalities.⁶ On the other hand, one significant drawback that the non-fulfilment of voluntary formalities does not result in a defeat of protection which differs from mandatory formalities.⁷ Also, there is a varying degree of optional registration requirements in different countries which is not conducive to the multi-

¹ Dev Saif Gangjee, "Copyright Formalities: A Return to Registration" in Rebecca Giblin and Kimberlee Weatherall (eds), *What If We Could Reimagine Copyright?* (ANU Press, 2017) 219.

² Annabel Tresise, Jake Goldenfein and Dan Hunter, 'What Blockchain Can and Can't Do for Copyright' (2018) 28(July) *Australian Intellectual Property Journal* 144, 147.

³ Berne Convention for the Protection of Literary and Artistic Works, opened for signature 9 September 1886, 1161 UNTS 30 (entered into force 5 December 1887), Article 5(2) ('Berne Convention').

⁴ Gangjee (n 1) 214.

⁵ Berne Convention (n 3) art 5(3).

⁶ Stef van Gompel, *Copyright Formalities in the Internet Age: Filters of Protection or Facilitators of Licensing* (Berkeley Tech. L.J. 28, 2013) 1437.

⁷ Ibid.

jurisdictional nature of copyright infringement made possible by the internet.⁸ Policymakers should manage to find a copyright registration system that can deal with these obstacles.

This research proposes a new platform of formalities that associates with an easily accessible, public and international registration system for facilitating rights clearance in the digital era by eliminating the territorial complexity, and licensing that can motivate right holders to submit additional rights management information.

2. RESEARCH AIMS AND OBJECTIVES

There are many types of formalities; however, this research limits its focus to voluntary and mandatory formalities. It is significant to note that they might achieve the desired objectives on copyright formalities may vary accordingly. The research examines the situation of registration under the United States copyright law by analysing the Supreme Court's decision in the *Fourth Estate Pub. Benefit Corp. v. Wall-Street.com, LLC* (2019) and the film *His Girl Friday*. By scrutinizing the cases, this research investigates the limitation of formalities at the national level but also consider the prohibition of formalities at the international level. It becomes crucial to know the domestic formalities would take on a global effect.

In addition, this research explores how much leeway exists to reinforce the formalities in current copyright law. Moreover, it looks beyond the status quo of the present law to understand the law reforms advocating domestic and international copyright law. This research, argues that mandatory formalities should be utilised to deal with the challenges that copyright is facing today and the coming decade. Lastly, it proposes a shift from voluntary to mandatory formalities using Blockchain as a tool to for compulsory recording of copyright ownership.

3. LITERATURE REVIEW

3.1 THE ROLE OF FORMALITIES IN COPYRIGHT LAW: VOLUNTARY VERSUS MANDATORY

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⁸ Tresise, Goldenfein and Hunter (n 2) 147.

According to Article 5(2) of the *Berne Convention for the Protection of Literary and Artistic Work* (Berne Convention): 'The enjoyment and the exercise of these rights shall not be subject to any formality'. '9 This prohibition was subsequently reinforced, via its incorporation into the *World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights* (TRIPS Agreement) ¹⁰ and the *World Intellectual Property Organization Copyright Treaty* (WIPO Copyright Treaty). ¹¹ Whereas a Berne Union member remains free to impose formalities on its own nationals or works produced within that jurisdiction under Article 5(3) of the Berne Convention, works produced by foreign authors or initially published elsewhere cannot be subjected to formalities affecting the enjoyment or exercise of copyright. ¹² Accordingly, the vast majority of countries do not impose mandatory formalities on their own nationals either. ¹³

Voluntary registration assists to protect right holders by facilitating proof of ownership. This is helpful in both civil and criminal infringement proceedings, in which often the most challenging element for the plaintiff or prosecution to prove is ownership of the copyright. ¹⁴ The Motion Picture Association (MPA) gave an example of proceedings concerning one work that required 150 hours of employee time to assemble the documents necessary to prove ownership. ¹⁵

Moreover, the voluntary system of registration would instead permit a right holder to establish prima facie ownership only by producing a certificate of registration. For example, Article 53(2) of the Copyright Act (Canada) stated that a certificate of registration of copyright is evidence that the copyright subsists and that the person registered is the owner of the copyright. ¹⁶ This

⁹ Berne Convention (n 5) art 5(2).

¹⁰ Marrakesh Agreement Establishing the World Trade Organization, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995), annex IC ('Agreement on Trade-Related Aspects of Intellectual Property Right') Art 9(1) ('TRIPS Agreement').

¹¹ World Intellectual Property Organization Copyright Treaty, opened for signature 20 December 1996, 36 ILM 65, (entered into force 6 March 2002) art 1(4) (*WIPO Copyright Treaty*)

¹² Gangiee (n 4) 214.

¹³ Ibid.

¹⁴ Parliament of the Commonwealth of Australia, *Cracking Down on Copycats: Enforcement of Copyright in Australia* (Report, November 2000) 23-40 (*Cracking Down on Copycats*).

¹⁵ Ibid.

¹⁶ Copyright Act R.S.C., 1985, c. C.42 (Canada) art 53(2) ('Copyright Act of Canada').

act contains a rebuttable presumption that the copyright owner is the person whose name appears on the register.¹⁷ Courts take judicial notice of the registration certificates.

On the other hand, voluntary copyright registration is flawed. It cannot assure title in the way that a system of indefeasible title can. In an optional registration system, a registered holder's claim can always be challenged. The challenge, if successful, has the effect of defeating the registered owner's interest. In other words, the non-fulfilment of voluntary formalities does not result in a defeat of protection which differs from mandatory formalities. ¹⁸ For this reason, a voluntary system of registration is of limited value.

In a 2010 WIPO survey of 80 countries with voluntary registration, systems reported that 48 members states administered voluntary registries within their territory. ¹⁹ Nonetheless, these voluntary public formalities systems document only a tiny fraction of the available works of authorship. ²⁰ The WIPO survey inquired whether a member state s federal copyright registry interconnects with any other copyright data system. In the majority of cases, the answer is "No." ²¹ This means that the majority of copyright registering bodies are not interconnected to other copyright data systems provided either by public or private entities. ²² In only two cases, Mali and Algeria is the public registry interconnected with a CMO database. ²³ Other instances of interconnection involve intragovernmental links between ministries. ²⁴

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¹⁷ Cracking Down on Copycats (n 15) 31.

¹⁸ Van Gompel (n 7) 1437.

¹⁹ World Intellectual Property Organization, 'About IP: Copyright', WIPO Summary of the Responses to the Questionnaire for Survey on Copyright Registration and Deposit Systems (PDF, 2010) < https://www.wipo.intexportsites/www/copyright/en/registration_pdf/registration_summary_responses.pdf ('WIPO Summary').

²⁰ Michael W. Carroll, 'A Realist Approach to Copyright Law's Formalities' (2014) 28 *Berkeley Technology Law Journal* 1511, 1520.

²¹ Ibid.

 $^{^{22}}$ WIPO Summary (n 19) 2.

²³ Ibid.

²⁴ Ibid

Furthermore, the survey discloses that the possibility of interoperability between public or private digital registration databases likely is a long way off.²⁵ Sixteen member states store registration data in hard copy only, including Italy, Brazil, the Kingdom of Saudi Arabia, and Argentina.²⁶ As a minimum, five other member states are currently transitioning to a digital registration system.²⁷ Even for systems that store digital records, only eleven countries enable public access over the Internet.²⁸ Notwithstanding, the critical point is that even on the ostensibly open side of the formalities ledger, private sectors have been delegated the responsibility to perform copyright registration.²⁹

Therefore, it is reasonably easy to understand that the lack of interaction or communication among them, together with the absence of voluntary national registration systems, results in a highly asymmetric international scenario. ³⁰ Legislation in a different jurisdiction can be quite varied when it comes to requirement voluntary registration such as deposit, declarations, and recordation. ³¹ WIPO has received expressions of interest regarding harmonization voluntary registration systems. ³²

Besides, it is very significant to note that the varying degree of registration requirements in various countries is not conducive to the multi-jurisdictional nature of copyright infringement made possible by the internet. ³³ Perhaps, the clearest example of this is that the U.S. has voluntary registration. However, the right to sue for copyright infringement takes effect only

²⁵ Ibid.

²⁶ Carroll (n 21) 1521.

²⁷ Ibid.

²⁸ Ibid.

²⁹ Ibid.

³⁰ World Intellectual Property Organization, 'About IP: Copyright', *Copyright Registration and Documentation Systems* (Web Page) https://www.wipo.int/copyright/en/activities/copyright_registration/index.html ('Copyright Registration').

³¹ Ibid.

³² Ibid.

³³ Tresise, Goldenfein and Hunter (n 8) 147.

when the Copyright Office issues a certificate of registration (or an explicit rejection) to the creator.³⁴ Whereas Australia has no voluntary registration system at all.³⁵

3.2 AN OVERVIEW OF COPYRIGHT FORMALITIES IN THE UNITED STATES

Under the U.S. Copyright Act, copyright protection exists from the moment that the work is fixed in a tangible medium of expression. There is no requirement that the work is registered to secure copyright protection.³⁶ In general, registration of a claim in a copyrighted work with the U.S. Copyright Office is voluntary. However, it is a prerequisite to the filing of a lawsuit for infringement of copyright.³⁷

Under current law, to register a copyright, an applicant must deliver to the Copyright Office a completed application form, a copy of copyrighted work (which is non-returnable), and a non-refundable filing fee.³⁸ Copyright registration is valid once the Copyright Office receives all of the required elements of an application in an acceptable form. Then, the Copyright Office registers the claim and issues a certificate of registration to the applicant. However, if the

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³⁴ Dave Davis, 'Blog', *Copyright at the Supreme Court: When Do Damages for Copyright Infringement Really Start to Bite?* (Web page, 4 March 2019) https://www.copyright.com/blog/copyright-at-the-supreme-court-when-do-damages-for-copyright-infringement-really-start-to-bite/>.

³⁵ Australian Government IP Australia, 'Understanding IP: IP for Digital Business', *Copyright for digital products* (Web Page) https://www.ipaustralia.gov.au/ip-for-digital-business/develop/copyright ('Copyright for digital products').

³⁶ Jeff C. Dodd et al, 'Global: USA', *Copyright in the United States* (Web Page, 1 February 2019) https://www.lexology.com/library/detail.aspx?g=45b57c94-9e9c-4593-82bf-c51afe3b7ce2.

³⁷ U.S. Copyright Office, 'Home: FAQ's', *Copyright in General* (Web Page) < https://www.copyright.gov/help/faq/faq-general.html) ('Copyright in General').

³⁸ Letter from Karyn A. Temple Register of Copyrights and Director of the U.S. Copyright Office to Jerrold Nadler Chairman of the U.S. House Committee on the Judiciary and Doug Collins Ranking Member of the U.S. House Committee on the Judiciary, 31 May 2019 in *Explanation of U.S. Copyright Office Registration Processes and Challenges*. 1

https://judiciary.house.gov/sites/documents/Response%20to%20April%203%202019%20House%20of%20Representatives%20Letter_0.pdf.

Copyright Office determines that work is not copyrightable or the application is invalid for any other reason, the Office refuses registration.³⁹

The U.S. made registration-optional in 1976, removed the condition of the copyright notice in 1989, and removed the requirement to renew registration in 1992. ⁴⁰ The reason lies in the fact that the Berne Convention came into force in the U.S. on March 1, 1989. ⁴¹ The Convention prohibits the U.S. from requiring any formalities – such as registration with the Copyright Office or publication with notice – before granting an author copyright protection for their work. ⁴² Current copyright law in the U.S. provides that copyright protection attaches automatically and instantly to original works of authorship fixed in any tangible medium of expression. ⁴³

Currently, the U.S. Copyright Office states on its website that it examines applications and issues registrations in approximately four months, but it can take longer in some situations. ⁴⁴ Nevertheless, there is expedited processing, also known as "special handling," is available in cases of prospective litigation or other urgent circumstances, and the U.S. Copyright Office endeavours to process the particular handling claims within five working days. ⁴⁵ It is essential to know, however, that the \$800 registration fee and \$550 expedited recordation fee is significantly higher than the payment of \$35-\$55 for regular applications. ⁴⁶ Undoubtedly, the applicant is affected by these implementations.

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³⁹ Ibid.

⁴⁰ Maria A. Pallante, 'The Curious Case of Copyright Formalities' (2013) 28 *Berkeley Technology Law Journal* 1415, 1415.

⁴¹ World Intellectual Property Organization, 'Knowledge: WIPO-Administered Treaties', *Berne Notification No. 121 Berne Convention for the Protection of Literary and Artistic Works Accession by the United States of America* (Web Page) https://www.wipo.int/treaties/en/notifications/berne/treaty berne 121.html> ('WIPO-Administered Treaties').

⁴² Marley C. Nelson, 'Berne Convention', *Debunking Top Copyright Myths - Part One* (Web Page, 12 September 2016) https://library.osu.edu/site/copyright/tag/berne-convention/>.

⁴³ Ibid.

⁴⁴ U.S. Copyright Office, 'Register a Copyright', *Registration Processing Times* (Web Page, 30 September 2019) < https://www.copyright.gov/registration/docs/processing-times-faqs.pdf ('Registration Processing Times').

⁴⁵ U.S. Copyright Office, 'Home: FAQ's', *Special Handling* (Web Page) https://www.copyright.gov/help/faq/faq-special.html ('Special Handling').

⁴⁶ Amanda Wilcox, 'USA: Taft Stettinius & Hollister LLP', *Supreme Court Mandates Copyright Registration Prior to Litigation* (Web Page, 4 March 2019) https://www.lexology.com/library/detail.aspx?g=9ae378a6-3a65-44ce-a69d-8e03295f78ab.

3.3 LEGAL EFFECTS OF COPYRIGHT FORMALITIES IN THE UNITED STATES.

The Copyright Act provides substantial incentives to encourage early registration of copyright claims. ⁴⁷ Firstly, a certificate of registration issued by the Copyright Office after examination constitutes *prima facie* evidence of the validity of the copyright and the facts stated in the document, but only if registration is made before or within five years of the first publication of the work. ⁴⁸ Secondly, the Act provides that right holders may only pursue attorneys fees and statutory damages if the effective date of registration is within three months of publication or before infringement. ⁴⁹ In other words, attorneys fees and statutory costs may not be available if the creator has not promptly registered a copyrighted work.

Lastly, under section 411(a), a right holder of a U.S. work may not institute a civil action for infringement until registration has been made or denied by the Copyright Office. ⁵⁰ This last incentive was the subject of the Supreme Court's decision in *Fourth Estate Public Benefit Corp. v. Wall-Street.com*, *LLC*. ⁵¹ Justice Ruth Bader Ginsburg wrote the opinion that:

In the context of 17 U.S.C. § 411(a), "registration occurs, and a copyright claimant may commence an infringement suit when the copyright office registers copyright." Merely applying without waiting for action from the copyright office, which some circuits had held to be sufficient, is generally not enough to bring a copyright claim. ⁵²

It is now clear that right holders will need an issued certificate of registration before heading to court. A pending application is not enough. Notwithstanding, this ruling does not make the copyright office the gatekeeper for deciding who can file a copyright suit. Justice Ginsburg stated that if the office declines to register the work, Section 411 of the statute provides a

⁴⁷ Letter from Temple (n 39) 2.

⁴⁸ U.S. Code Title 17 (USA) § 410(c).

⁴⁹ *U.S. Code Title 17* (USA) § 412.

⁵⁰ U.S. Code Title 17 (USA) § 411(a).

⁵¹ Fourth Estate Pub Benefit Corp. v. Wall-Street.com, LLC (2019) No. 17-571, slip op. at 12 (U.S. Fourth Estate Pub).

⁵² Supreme Court of the United States, 'Opinions', *Fourth Estate Public Benefit Corp. v. Wall-Street.Com, LLC, Et al* (PDF, 4 March 2019) https://www.supremecourt.gov/opinions/18pdf/17-571_e29f.pdf ('Opinions of the U.S. Supreme Court in Fourth Estate Public Benefit Corp').

copyright owner can still file lawsuit.⁵³ The significant event is for the copyright office to have acted on the application, either by issuing a registration or by declining to do so.⁵⁴

Furthermore, there are two explicit carve-outs to the general rule: First, a right holder who is preparing to distribute a work of a type vulnerable to predistribution infringement—e.g., a movie or musical composition—may apply to the Copyright Office for preregistration. §408(f)(2). 55 Second, a copyright claimant may bring suit without registration if the work is a live broadcast as spelt out in Section 411(c). 56 Outside of statutory exceptions not applicable here, notwithstanding, §411(a) bars a right holder from suing for infringement until registration has been made. 57

Rest assured that although an infringement commences before a right holder applies for registration, the successful copyright claimant can still obtain an injunction, and may eventually recover damages for the past breach, as well as the infringer's profits.⁵⁸ On the other hand, it is essential to note that statutory damages or attorneys fees may not be available, however, unless the copyright claimant filed its application within either three months after first publication of the work, or before the infringement began.⁵⁹

In the U.S., registering works early and registering updated versions regularly are significant best practices for all creators who are producing any copyrightable content, including film, artwork, music, video, print or online publications, databases, and software. ⁶⁰ It is emphasized that copyrighted works must be registered before release or shortly afterwards. This will provide

⁵³ Genevieve E. Charlton and Philip A. Jones, 'USA: Barnes & Thornburg LLP', *U.S. Supreme Court Rulings Impact Two Critical Copyright Issues: Application Not Sufficient to Bring a Claim and Meaning of 'Full Costs' to a Prevailing Party* (Web Page, 12 March 2019) https://www.lexology.com/library/detail.aspx?g=ec9b869e-8b68-42d7-ae10-c9812d7fb246.

⁵⁴ Ibid.

⁵⁵ Opinions of the U.S. Supreme Court in Fourth Estate Public Benefit Corp (n 52) 2.

⁵⁶ Ibid.

⁵⁷ Ibid.

⁵⁸ Ibid at 10.

⁵⁹ Charlton and Philip A. Jones (n 53).

⁶⁰ Wilcox (n 46).

for the most cost-effective registration process, and also offer the ability to recover attorneys' fees and statutory damages in most cases.⁶¹

Notwithstanding, it is very significant to note that even if the U.S. Supreme Court ruled that a copyright owner must actually have its work registered by the U.S. Copyright Office before heading to court, failure to fulfil them would only cause these works cannot get to the U.S court, not in other parts of the world.

Perhaps, the clearest example of this is that in the case of *His Girl Friday*, first published in the U.S. in 1940 and dropped into the U.S. public domain in 1967 for failure to renew U.S. copyright.⁶² On the other side of the world, the French High Court held that the condition for refusing protection did not apply because the French court recognized, Berne's tolerance of domestic formalities is restricted to the U.S. only.⁶³

3.4 THE LIMITATION OF FORMALITIES AT THE NATIONAL LEVEL: THE CASE OF HIS GIRL FRIDAY

A work which, first published in the U.S. before January 1, 1978, obtained a term of U.S. copyright subject to renewal.⁶⁴ What this means is that Under the *Copyright Act of 1909*, after an initial 28-year period of registered protection from the date of first publication, a second statutory term of 28 years was available upon applying for renewal.⁶⁵ Without renewal, the work would enter the public domain.⁶⁶

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⁶¹ Wilcox (n 61).

⁶² Paul Edward Geller, 'The Guide: International Copyright', *International Copyright: The Introduction* (PDF, 2018) < https://pgeller.com/Paul_Geller-International_Copyright.pdf> and published in Lionel Bently (ed.), *International Copyright Law and Practice* (LexisNexis, 2018).

⁶³ Jane C. Ginsburg, 'Home: Intellectual Property Issues', *Restoration of Copyright: An International Perspective* (Web Page, 18 August 2010) https://www.mediainstitute.org/2010/08/18/restoration-of-copyright-an-international-perspective/.

⁶⁴ Geller (n 62) 157 [4].

⁶⁵ Copyright Act 1909 (USA) s 23 ('U.S. Copyright Act 1909'); 17 USC § 24 (1947).

⁶⁶ Gangjee (n 13) 220.

Turn to the film *His Girl Friday*, first published in the U.S. in 1940 and dropped into the U.S. public domain in 1967 for failure to renew U.S. copyright.⁶⁷ It is significant to know that when the U.S. ratified the TRIPs Agreement in 1994, it undertook to implement Article 18 of the Berne Convention.⁶⁸ This means that not every reason for the work being in the public domain in the U.S. allows another member state to withhold copyright protection.

An excellent example of this is that in the case of *His Girl Friday*, the work fell out of copyright because of non-compliance with the renewal registration formality; hence, the French high court held that:

The Court of Appeals correctly held that the conditions for applying article 18.1 of the Berne Convention must be analyzed in light of article 5.2 of this same Convention, by virtue of which the enjoyment and exercise of copyright are not subject to any formality; the Court of Appeals correctly deduced that [the obligation of protection under] the Convention applied to works fallen into the public domain for any cause other than the expiration of the term of protection; thus the work "His Girl Friday" of Howard Hawks, which, registered in 1939, had not fallen into the public domain at the time of the entry into force of the Berne Convention in the USA, in 1989, "through the expiry of the term of protection," which, at the time, and setting aside any formalities, was 56 years....⁶⁹

The U.S. became part of the BERNE UNION, March 1, 1989.⁷⁰ It is common knowledge that Article 5(2) of the Berne Convention is fundamental. A Berne Member State may not impose formalities on foreign works, but it may require that domestic tasks abide by conditions such as registration of copyright and notice.⁷¹ As a consequence, the film "His Girl Friday" remains in the public domain in the U.S. But, as the French high court recognized, Berne's tolerance of domestic formalities is restricted to the country of origin.⁷² Hence, this work was protected in France.

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⁶⁷ Geller (n 64) 158 [2].

⁶⁸ Ginsburg (n 63).

⁶⁹ Ibid.

⁷⁰ WIPO-Administered Treaties (n 41).

⁷¹ Ginsburg (n 69).

⁷² Ibid

It is also critical to understanding if other Berne member States refused protection to foreign works on the ground of non-compliance with formalities in the foreign work's country of origin, then the domestic formalities would take on international effect because of conflicting with the Berne Convention.⁷³

3.5 THE PROHIBITION OF FORMALITIES AT THE INTERNATIONAL LEVEL

The Berne Convention, like its sequel treaties, such as the TRIPs Agreement and the WIPO Copyright Treaty, does not permit the protection of works to turn on formalities. ⁷⁴ It is significant to understand that these international copyright laws forbid formalities as to the exercise and enjoyment of copyright is true, but it must be emphasized that it does not deprive all formalities. ⁷⁵

Stef van Gompel also has identified that the international prohibition on formalities extends to international situations only, contracting states to the agreements mentioned above are free to subject the protection of public works to formalities. ⁷⁶ Moreover, it is emphasized that the prohibition is copyright-specific, it does not seem to hinder contracting states from making the protection of technological protection measures or rights management information conditional on formalities, as long as this does not in any way affect the exercise and enjoyment of copyright. ⁷⁷ Therefore, there is some space in international copyright law. Contracting states are

⁷³ Ibid.

⁷⁴ Geller (n 67) 157 [2].

⁷⁵ Stef Van Gompel, 'Reintroducing Copyright Formalities: Controversies and Challenges' (2014) 18(2) *Copyright & New Media Law Newsletter* 7, 7.

⁷⁶ Ibid.

⁷⁷ Ibid

allowed to create formalities that establish the manner of effectuating a transfer of copyright or prove the existence of the work or scope of the relevant transaction.⁷⁸

3.6 MODELS MAY BE COMPATIBLE WITH THE BERNE CONVENTION

3.6.1 Mandatory Recordation of Transfers of Rights

As Professor Melville Nimmer noted, "Nothing in the Convention plainly prohibits national legislation from requiring those agreements to transfer copyright or rights thereunder be in writing. Arguably, recordation is no more a "formality" than a writer. "⁷⁹ Hence, to improve title searching about ownership of rights and facilitating licensing, lawmakers could consider making timely recordation of transfers of ownership a mandatory act. ⁸⁰ This means that it could give legal effect to transfers of copyright only if they are recorded in a public register or database. ⁸¹

An illustration of this is that the law would require recordation as a prerequisite for effectuating a transfer of rights. If not recorded, the power is not legally transferred and hence remains with the transferor. Alternatively, the law could also provide that transferred rights will revert to the transferor if the recordation is not made within a specified period. Enportantly, such provisions would be allowable under the Berne Convention because they merely address who may assert copyright ownership without affecting the enforcement of copyright. However, requiring recordation as a prerequisite for initiating a copyright infringement suit for persons claiming to be the copyright owner under a transfer of rights, it was believed to violate Article 5(2) of the Berne Convention. That is because it does effectively hinder enforcing the copyright before the courts.

⁷⁸ Ibid.

⁷⁹ Daniel Gervais and Dashiell Renaud, 'The Future of United States Copyright Formalities: Why We Should Prioritize Recordation, and How to Do It (2013) 28(3) *Berkeley Technology Law Journal* 1459, 1473.

⁸⁰ Van Gompel (n 18) 1454.

⁸¹ Van Gompel (n 80).

⁸² Ibid.

⁸³ Ibid.

⁸⁴ Ibid

3.6.2 Metadata-Tagging of Digital Content

Since the prohibition on formalities does not extend to purely voluntary formalities, Berne member countries can set up rules encouraging the metadata-tagging of digital content. ⁸⁵ It is known that metadata expressing rights management information can be attached to the copyrighted work in digital form, can constitute an integral part of the work itself, or can be stored separately and associated with the digital file at the point of use and access. ⁸⁶ This helps to identify the owner of a work subject to copyright protection and makes it easier to find specific contents within a group of copyrighted works.

Therefore, countries should reinforce voluntary registration by collaborating with industry to set up a rights management infrastructure that integrates and combines existing registries and databases and makes relevant information publicly accessible to improve title searching about ownership of rights and facilitating licensing. Once such an infrastructure is operational well, in the sense that it is straightforward and easy to apply, this can motivate copyright holders to voluntarily submit additional rights management information.⁸⁷

Notwithstanding, it must not be forgotten that, in practice, the laws of many countries have not yet generated metadata-tagging of digital content for copyright clearance. It is not universally applicable. In other words, there is no uniform standard for metadata. Moreover, the varying degree of registration requirements in various countries is not conducive to the multijurisdictional nature of copyright infringement made possible by the internet. These problems are the challenges that copyright is facing today and the coming decade.

⁸⁵ Ibid at 1457.

⁸⁶ World Intellectual Property Organization, 'Knowledge', *Topic 10: IP and the Development of DRM Standards: Co-Existence of DRM and Copyright Limitations* (Doc, 29 May 2007) <

https://www.wipo.int/edocs/mdocs/copyright/en/wipo_ip_cm_07/wipo_ip_cm_07_www_82580.doc> ('Topic 10: IP and the Development of DRM').

⁸⁷ Van Gompel (n 85).

⁸⁸ Ibid.

⁸⁹ Tresise, Goldenfein and Hunter (n 33) 147.

Thus, copyright registration systems based on blockchain platforms could overcome these obstacles because it provides an easily accessible, public and global registration system. 90 This could give a tremendous boost to enhancing the public accessibility of rights management information and eliminating the territorial complexity.

3.7 BLOCKCHAIN AND COPYRIGHT

Blockchain is the technical protocol at the heart of Bitcoin. ⁹¹ Nevertheless, it has also recently spurred examinations of how we might change the legal system in areas like share registries, privacy, land title registration, financial regulations, banking, and many, many others. ⁹² Blockchain is a quickly developing technology that can best be explained as a form of digital ledger that is distributed and shared (so that each stakeholder has a duplicate copy) ⁹³ - it creates an unchangeable ledger of records that is maintained by a decentralised network, where all documents are approved by consensus. ⁹⁴

What this means is that the blockchain is a technical protocol to create a secure, transparent ledger that reports transactions to everyone within a given blockchain's network. ⁹⁵ The ledger is secured through the use of cryptography and is immutable. ⁹⁶ So, blockchains are immutable ledgers of data they have an apparent use in copyright rights management. Metadata on ownership and other aspects of the digital copyright asset can be stored on the blockchain. ⁹⁷

It does not matter what that digital copyright asset is – it may be a piece of music, a file, a transaction, a part of digital art or an email. It is important to note, that a blockchain will not

91 Ibid.

⁹⁰ Ibid.

⁹² Ibid.

⁹³ Simon Stokes, 'United Kingdom: Blake Morgan LLP', *Digital copyright: AI and Blockchain* (Web page, 8 April 2018) https://www.lexology.com/library/detail.aspx?g=f470dbbf-eb8e-44e5-9d45-1f55bfc25e2a>.

⁹⁴ Matthew Beedham, 'Hard Fork', *Here's the difference between blockchain and distributed ledger technology* (Web Page, 27 July 2018)https://thenextweb.com/hardfork/2018/07/27/distributed-ledger-technology-blockchain/.

⁹⁵ Tresise, Goldenfein and Hunter (n 92) 145.

⁹⁶ Stokes (n 93).

⁹⁷ Ibid

store the actual copyrighted material, but rather a cryptographic artefact that identifies that material as it existed at a particular time. 98

This is why blockchain can be beneficial for defining the presumption of ownership and resolving disputes as to priority in this sphere. This potential of blockchain in the Copyright sphere is already established by scholars in specialized literature. As Melanie Swan notes, "people can use the blockchain web-based service to hash things such as software or art to prove ownership of the works." An illustration of this point, is all the copyright owners need do encrypt their digital asset, so it becomes a hash on the blockchain, then information about ownership of a copyrighted work would be available on the public ledger. Moreover, the register is based on blockchain; its copies are available for all users as well. Therefore, copyright registration systems based on blockchain platforms are suited to overcome many issues in the digital environment that related to copyright ownership, proof of existence, and user accessibility for the mass of digital works generated daily. 102

3.8 COPYRIGHT REGISTRATION ON BLOCKCHAIN PLATFORMS

The explosion of digital content and the readiness at which jobs can be distributed across jurisdictions on the internet raises questions of ownership and regarding organising remuneration. The complexity of ownership increases when we consider how many works are subject to copyright, how many people share ownership of the copyright, and how we apportion the relevant percentages of distributed ownership. Interestingly, registration systems based on the blockchain platform could overcome these difficulties. Using a blockchain platform is organized as follows: all the copyright owners need is to encrypt their digital asset so it becomes a hash on the blockchain.

⁹⁸ Tresise, Goldenfein and Hunter (n 95).

⁹⁹ Melanie Swan, Blockchain: Blueprint for a new economy (O'Reilly Media, Inc, 2015).

¹⁰⁰ Tresise, Goldenfein and Hunter (n 98) 148.

¹⁰¹ Alexander Savelyev, 'Copyright in the blockchain era: Promises and challenges' (2018) 34(3) *Computer law & security review* 550, 554.

¹⁰² Tresise, Goldenfein and Hunter (n 100) 146.

¹⁰³ Tresise, Goldenfein and Hunter (n 102).

¹⁰⁴ Gangjee (n 66) 215.

Hash function forms the basis of the security and immutability of the blockchain. ¹⁰⁵ Employing the hash function, a type of mathematical service that turns original data into a fingerprint of data called a 'hash', a creator or other copyright owner may obtain a unique digest of their copyrighted work. ¹⁰⁶ Such hash will distinguish different copyrighted work from others. It is important to note that the record could include details of the creator or copyright owners, the percentages of ownership and features directly relating to the creation of the work. If any problems occur in the future in which they need to prove the time and place of existence of their work, then this information would be available on the public ledger. ¹⁰⁷

For example, it would be as evidence in litigation if the copyright owner wishes to prove their copyright against an unauthorised user. ¹⁰⁸ More elaborate versions of the blockchain could provide real-time tracking of the transactions of rights, and could potentially act in conjunction with other management elements, allowing payments, licensing agreements.

Introducing copyright registries on blockchain platforms would be managed at the international or domestic level. On a global level, a WIPO controlled registry could be an uncomplicated solution to local registration systems, permitting users immediate access to rights information about a digital asset. ¹⁰⁹ However, unless WIPO can resolve disputes on the blockchain. For example, domain name dispute resolution services are run by the WIPO Arbitration and Mediation Center. ¹¹⁰ Then, it is unlikely that it would be interested in bearing the cost of implementing a registry when copyright owners would still have to litigate in domestic jurisdictions. ¹¹¹ On a local level, a Berne Member State-run registration system would need to be voluntary in order not to contravene Article 5(2) the Berne Convention. ¹¹² In both these

¹⁰⁵ Savelyev (n 101) 554.

¹⁰⁶ Ibid.

¹⁰⁷ Tresise, Goldenfein and Hunter (n 103) 148.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ World Intellectual Property Organization, 'IP Services', *Alternative Dispute Resolution* (Web Page) < https://www.wipo.int/amc/en/> ('Alternative Dispute Resolution').

¹¹¹ Tresise, Goldenfein and Hunter (n 109) 148.

¹¹² Ibid

situations, the registration system may not be feasible, as these implementations do not come without a price.

4. CONCLUSION

This research has demonstrated that voluntary copyright registration is flawed. A 2010 WIPO survey of 80 countries with voluntary registration systems revealed that public searches are usually hindered by administrative requirements, search costs, and time delays, hence not providing much utility for a potential user. Moreover, a registered holder's title can always be challenged. The requirement for voluntary registration is varies in different countries that is not conducive to the multi-jurisdictional nature of copyright infringement made possible by the internet. There are expressions of interest regarding harmonization voluntary registration systems.

This research investigated the situation of registration under the United States copyright law by analysing the Supreme Court's decision in the *Fourth Estate Pub. Benefit Corp. v. Wall-Street.com, LLC* (2019) and the film *His Girl Friday*. Based on evidence, the U.S. Supreme Court's decision runs more risk of falling afoul of the Berne Convention because it does effectively preclude enforcing the copyright before the courts. In this situation, when compared to the case of *His Girl Friday*, it is fairly easy to understand that failure to fulfil them would only cause these works cannot get to the U.S court, not in other parts of the world. The U.S. local formalities would take on international effect if it is inconsistent with the Berne Convention.

This research emphasizes that there is some space in international copyright law. Contracting states are allowed to create conditional on formalities, as long as this does not in any way affect the enjoyment and exercise of copyright. An illustration of this is that the law could provide that transferred rights will revert to the transferor if the recordation is not made within a

¹¹⁴ Tresise, Goldenfein and Hunter (n 112).

 $^{^{113}\,}WIPO\,Summary\,\,(n\,\,25).$

¹¹⁵Copyright Registration (n 32).

 $^{^{116}}$ Van Gompel (n 78).

specified period without affecting the enforcement of copyright. Alternatively, Berne member countries can set up rules encouraging the metadata-tagging of digital content. Notwithstanding, it must not be forgotten that, in practice, the laws of many countries have not yet generated metadata-tagging of digital content for copyright clearance. In other words, there is no harmonize registration system for metadata.¹¹⁷

Besides, the explosion of digital content and the ease at which works can be shared across jurisdictions on the internet raises hard questions of who owns what, from when and how to organise remuneration. Therefore, this research points that copyright registration systems based on blockchain platforms could overcome these difficulties because it can operate across jurisdictions, eliminating the territorial complexity, and reciprocal relationships. They can also be linked to real-time content distribution networks, and automated licensing agents. This could give an immense boost to enhancing the public accessibility of rights management information. It is undoubtedly evident that it can motivate copyright owners to submit additional rights management information.

However, the issues of funding and resources would need to be raised: what is the benefit for WIPO or a state government to invest and operate the blockchain registry if it is not a mandatory requirement to the function of copyright law?¹²¹ Hence, this research proposes a move from voluntary to mandatory formalities using Blockchain as a tool to for compulsory recording of copyright ownership. This could help to deal with the challenges that copyright is facing today and the coming decade and most importantly, it needs to change Article 5(2) of the Berne Convention or international copyright law surrounding it. The suggested blockchain approach seems possible within the foreseeable future.

¹¹⁷ Van Gompel (n 88).

¹¹⁸ Tresise, Goldenfein and Hunter (n 114) 147.

¹¹⁹ Ibid.

¹²⁰ Ibid.

¹²¹ Ibid

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