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ACCEPTANCE LETTER

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Title : Copyright Protection for Information Management Society
Author : Rahmi Jened
Affiliation : Department of Private Law, Law Faculty, University of Airlangga, Surabaya-Indonesia

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Copyright Protection for Information Management Society

Rahmi Jened

*Department of Private Law, Law Faculty, University of Airlangga, Dharmawangsa Dalam Selatan,
Surabaya 60286, Indonesia*

rahmijened@fh.unair.ac.id, jenedjened@yahoo.com

Keywords: Copyright, Information Management Society, Intellectual Property, Intellectual Creation, Digital, Digital Information, Digital Era, Digital Environment, Digital Form, Electronic Form, Multimedia, Communication, Information Technology.

Abstract: Nowadays convergence and development of information and communication technology, namely in the field of digital information, has fundamentally altered pre-existing notions of Intellectual Property Rights (IPRs), which traditionally are related to physical embodiment of ideas or intangible goods. Today's digital information poses enormous challenges to the conventional intellectual property law in general, and copyright law in particular. In the era of digital information, there are needs for what is called the "information management society". This paper aims to analyze the characteristics of information management society and to share some insights on the kinds of copyright protection that can be utilized to protect the existence or implementation of an information management society.

1 INTRODUCTION

In 1945 John von Neveoance made the First Draft of a Report on the Electronic Discrete Variable Automatic Computer (EDVAC) containing the information about electronic storage, which was one of the pioneers of technology that now we know as computer. Today, computer technology has made such significant developments. The convergence of information communication technology, such as telephone, computer and internet, has made the society pregnant with information. Today's digital environment has indeed fundamentally altered preexisting notions of Intellectual Property Rights (IPRs), confine as these traditionally are the physical embodiment of ideas and intangible goods (Mc Keough and Stewart, 1997).

The convergence between information and communication technology establishes a society with multifaceted information environment. It is not only the largest but the most complex structure ever created, in which not only a single entity that gets involved. In theory, any piece of information can move through the entire system, may it be the telemetry of spacecraft, the detailed of banks statement, or the harmless gossipy phone calls and in theory, all this information, given the connection is

available, can be accessed at any point (Angus and O'Shea, 1996). Such an information system needs people to manage it. Thus, the births of information management societies are inevitable. In relation to that, this paper will discuss two matters:

- a. What constitutes an information management society?
- b. What kinds of copyright protection that can be utilized to protect an information management society?

2 DISCUSSIONS

The history of information advancement started from war industry that finally reached business. Information technology initial development was in 1945 when electronic storage was created by John von Neveoance. The technology is now known as computer, which is "... a set of technology consisting of hardware, software, and memory storage" (Angus and O'Shea, 1996). In 1957, computer-powered space shuttle Sputnik was launched as the establishment stake of Department of Defence of the United States of America and in 1964, computer technology was combined further with telecommunication technology invented by the

Advanced Research Project Agency (ARPA), which originally was the idea of Paul Baran. Next in 1969, computer-based communication network with 4 connection control points (nodes) was developed and in 1972, the communication network was developed into 37 connection control points (nodes) (Lloyd, 2003, pp. 23-24).

One of the greatest technology developments was that of communication standards called Transmission Control Protocol (TCP) or internet Protocol (IP). The component of TCP is: "... responsible for converting messages into streams of packets", while IP is: "... responsible for addressing and routing the packets to their intended destination" (Lloyd, 2003, pp. 23-24).

Following these, in 1976, Apple Inc. was established by Steve Jobs and Steve Wozniak (Rosenoer, 2000). In 1983, a US military project named Advanced Research Project Agency Network (ARPANET) was developed by adopting TCP/IP Protocol technology (Lloyd, 2003). Later on, such technology started to be able to be used by non-military people by directly accessing to super computer existing in universities and so, the network expanded and ARPANET became INTERNET (Purwadi, 2012). In 1991, a user-friendly navigation tool named "Archie, Gopher, and Veronica" was introduced and that was far different from the use of computer and internet at that time. It required a quite high level of engineering competence that it could only be performed by academics. In the same year, the National Science Foundation (NSF) that developed internet infrastructure in US was established, but was constrained by prohibition of the use of internet. Following that, World Wide Web (www) was introduced in 1992 by Tim Berner, a physicist from the European Organization for Nuclear Research (*Organisation Europeenne pour la Reserche Nucleaire/ CERN*) (Lloyd, 2003).

Since then, various kinds of computer technology-based and information-contented applications have occurred, for example: in 2004 Mark Zuckerberg created Facebook, inspired by a dating site Hot or Not, in 2006 Skype was launched by Niklas Zennstrom and Janus Friis and in 2009 Whatsapp was founded by Brian Acton and Jan Koum (Purwadi, 2012).

These developments of technology, mainly in the field of communication and information technology, created an environment that needs to be organized and needs people to organize them. Here is when the significance of an information management society comes forward. Further, since all these developments of technology are the fixations, the

manifestations of intellectual creations, they cannot be separated from intellectual property laws that exist to protect them. In this specific case, information management societies are also a part of subject matters that can enjoy the benefits of intellectual property protection, especially copyright.

2.1 Characteristics of an Information Management Society

One method to describe characteristics is to derive them from the definition of the term/ phrase itself. We can analyze the features contained in the definition and make a conclusion based on the analysis.

Using this method, analyzing the characteristics of an information management society will have to start with understanding the meaning of technology. There are various definitions of technology, for example, the United Nations Industrial Development (UNIDO) defines technology as "...a composite of techniques, constituted of craft skills (welding, shopping, assembling) requiring primarily the dexterity of hand and eye and conceptual skills (knowledge and information), such as operating data, design engineering, construction, production and maintainance" (Drahos and Braithwaited, 2002, p. 48). According to Edwin Mansfield, a scholar of the economics of technology, technology is: "... the society pool of knowledge used regarding the principles of physical and social phenomena...the application of production" (Mansfield, 1979, p. 10), while in a perspective, technology has almost the same meaning with experiment (Boorstin, 1979, p.viii).

Then, the meaning of information comes forward. Fundamentally, it means knowledge that you get about someone or something (Merriam-Webster, 2019). This is different from data, while data *is* information it is information arranged in such a way that is accurate and timely, specific and organized for a purpose, and presented within a context that gives it meaning and relevance and can lead to an increasing understanding and decrease in uncertainty (BusinessDictionary, 2019).

Today's use of information technology, including the internet network, holds a potential to create a new hegemony because, deliberately exaggeratedly stated here, the party controlling information can control the world. It may sound hyperbolic but it is stated that way to emphasize the importance that information can hold over things and people. For instance, for a company, information is its resources and tangible asset,

besides work force, money, materials and energy. Information distinguishes itself from other resources, because all other resources can be calculated and measured quantifiably. While all resources are a unity to be utilized well in the good operation of a company, information is arguably the most important and valuable resources that can facilitate the duties of managers and prompt them to act efficiently in order to produce profits for the company.

Information technology reflected in internet activities is usually called as digital technology or multimedia. It has a diverse capability to convey in many forms, such as in sounds, in images, in sounds and images, and in other characters, besides the content of information presented. Information can also be categorized as a commodity that does not have obsolescence and constitutes an expensive commodity for the reason that implementing information technology development in a form of organization and management requires quite complex knowledge and expertise (Makarim, 2007). That is why information is recognized as a part of human intellect creation and thus, is an intellectual property commodity (Makarim, 2007).

The term "management" means the organization of the activities of a business in order to achieve defined objectives (BusinessDictionary, 2019). According to Henri Fayol, there are five elements of management, they are: planning (looking ahead, creating plan of action, is said to be the most difficult among the five elements), organization (good operating system), command (clear orders and clear working instructions), coordination (harmonized communication) and control (making sure the activities carried out according to plan) (Wood and Wood, 2002) (Toolshero, 2019).

The word 'society' is defined as an association or company or persons (generally unincorporated) united together by any mutual or common purpose mutual consent in order to deliberate, determine and act jointly for same common purpose (Thelawdictionary, 2019), or people in general thought of as living together in organized communities with shared laws, traditions, and values (Merriam-Webster, 2019).

The development of society can be categorized to four-going five phases: from pre-history society, moving on to agrarian society (first wave), then to industrial society (second wave), and to the phase we are now, the information society (third wave). We are also carefully moving forward to becoming knowledge society (potential fourth wave) (Makarim, 2007, p. 23). The phrase 'information

society' refers to a long journey the use of information by the military and government and developed by business, that have now become a regular presence in people's lives (Morton and Scott, 1999).

Some main activities using information technology are (Silverstein, 2000, p. 82):

- a) Communication ;
- b) Resources sharing;
- c) Software application;
- d) Resources discovery
- e) Community forming
- f) E-commerce business.

And, generally, virtual communities (VCs) access information through internet in such way in order to (Andreatos, 2007, p. 39):

- a) download articles from their modes;
- b) participate in for a and pose questions;
- c) read FAQs and search for keywords;
- d) use the site search engine;
- e) contact sage members.

The research conducted by Japan International Cooperation Agency (JICA) in 2000 showed that economy value of information technology-related businesses had been really remarkable (JPO, 2003, p. 3):

- a) film (US \$67,7 Billion)
- b) video (US \$ 120,2 Billion),
- c) TV program (US\$ 107 Billion),
- d) TV transmission service (US\$ 151 Billion),
- e) recorded music (US\$3,84 Billion),
- f) karaoke (US\$ 240 Billion)
- g) magazines (US \$83,7 Billion),
- h) books (US \$ 85,3 Billion),
- i) newspapers (US \$1555,2 Billion),
- j) radio and billboard advertising (US \$47, Billion)

With how information technology is used nowadays there is a need for an information management society that centrally manages and shares incorporates policies and procedures of information among different individuals, organizations and/or information system, so that people can access all types of information fairly, and legally.

2.2 The Kinds of Copyright to Protect Information Management Society

2.2.1 Copyright and Neighboring Rights (Related Rights to Copyright)

Indonesia ratified Agreement on Establishing the World Trade Organization (WTO) Act Number 7 of 1994 including all the WTO agendas, among others,

the Agreement on trade Related Aspects of Intellectual Property Rights including trade in Counterfeit Goods (TRIPs). TRIPs Agreement applies The Berne Convention for the Protection of Literary and Artistic Works as a minimum standard of copyright protection as well as the Rome Convention for the Protection of Performer, Producer of Phonograms and Broadcasting Organization.

Copyright protection is given for the creation in the field of science, arts and literature if the creation meets the Standards of Copyrightability, which consist of (Kintner and Lahr, 1983, pp. 346-349):

1. Fixation: A work is fixed in a tangible medium of expression when its embodiment in a copy or phonorecord by or under the authority of author, is sufficiently permanent or stable to permit to be perceived, reproduced or otherwise communicated for a period of more than transitory duration. A work consisting of sound imager or both, that are being transmitted is fixed for purpose of this title is a fixation of the work is being made simultaneously with its transmissision.
2. Originality: the word "originality"... or the test of "originality", is not that the work to be novel or unique. Even a work based upon something already in public domain may well be original;
3. Creativity as a standard of copyrightability is to great degree simply measures originality. Although a work that merely copies exactly a prior work may be held not to be original , if the copy entails the independent creative judgment of the author in its production, that creativity will render the work original.

While these three are essentially the elements of copyrightability, on a personal level I believe originality should be at the top position when considering whether a creation is copyrightable, and creativity and fixation elements come next. This thought is in line with the way that Indonesia, as a country with Civil Law Tradition, is influenced by G. W Friedrich Hegel. Related to copyright, Hegel taught the personality theory, which means that a creation must be 'an intellectual personal creation with high level of originality and creativity' (Ginsburg and Treppoz, 2015).

An Intellectual Personal Creation (the work) embodies the personality of the creator (the author). It should reflect the originality and creativity that the author has. Nevertheless, originality for the purpose of Copyright does not necessarily mean original ideas, but instead, original execution of a particular form required to express such ideas (Lahore, 1997).

For instance, people may have the idea to make a dog to be the main character of a movie story, rather than the usual people-centric stories. Some titles, like, Benji (1974), Homeward Bound (1993), Hachiko (2009), or A Dog's Purpose (2017) are examples of this idea. Perhaps, it can give the impression that the very first person thinking it would be the only original thinker. But it is not being the first thinker that matters; it is the execution to express the idea that does. Do these movies infringe each other's copyright? Based on the execution, they do not. The execution contains sufficient creative judgment in its production and it is fixated in a way that is different from one another. It makes every single of these titles original for its own worth.

The word 'fixation' basically means information conveyed in tangible form (Kintner and Lahr, 1983). Fixation in Copyright means that Copyright protects original work of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived reproduced or otherwise communicated, either directly or with the aid of machine or device (Strong, 1993). The term is also in line with the phrase 'material form' (Mc Keough and Stewart, 1997, p. 134), in that it is,

"... not only something of corporeal form composed of matter, but as including those form of storage where a work or adaptation of a work exist in a form that would not normally be regarded as material, such as electronic and magnetic form storage. ... Material form in relation to a work or an adaptation of a work, include any form (whether visible or not) of storage from which the work or adaptation ... can be reproduced. ...".

Copyright duration of protection is of the life of the (last surviving) author and seventy years after such author's death. Copyright has an automatic protection system. Article 5 Paragraph (2) of Berne Convention provides that:

"The enjoyment and the exercise of these rights shall not be subject to any formality; such enjoyment and such exercise shall be independent of the existence of protection in the country of origin of the work. Consequently, apart from the provisions... the extent of protection... shall be governed exclusively by the laws of the country where protection is claimed".

Copyright is similar to human rights in a way that the protection can be exercised starting from the moment a work fulfilling the Standards of Copyrightability is created by the author.

From the perspective of Indonesian Law, there is an article that can potentially cause confusion regarding the automatic nature of copyright protection. Article 64 Para (1) of Act Number 28 of 2014 on Copyright provides,

“The Minister administers the recordation and the Invalidation of Works and Related Rights products”.

However, this article in no way intentionally implies that copyright protection in Indonesia requires a recordation. As can be seen, Para (2) provides,

“The Recordation of Works and Related Rights works as referred to in Paragraph (1) is not a requirement to obtain Copyright and Related Rights”.

The biggest reason that it is provided in the Act Number 28 of 2014 is because if a dispute occurs in the future, the recordation can be a solid evidence of ownership.

Similar thing is mentioned by William C. Holmes (Holmes, 1983, p. 8),

“Although recording of works product of related rights is not mandatory, it is highly desirable for a number important reasons. Registration of the copyright is a statutory prerequisite to instituting an infringement action. It is also a prerequisite to recovering special statutory damages... In addition, a certificate of registration or Letter of Works Record constitutes 'prima facie' evidence of the validity of the copyright. Finally, registration is necessary for a transfer of ownership to provide constructive notice to third parties of the transferee's interest”.

With regards to neighboring rights, also known as related rights to copyright, these are exclusive rights for performers, phonogram producers, or broadcasting institutions.

Related to this, Indonesia has ratified, through Presidential Decree Number 19 of 1997 and Number 74 of 2004, on the Accession of the World Intellectual Property Organization Copyright Treaty (WCT) and World Intellectual Property Organization Performances and Phonograms Treaty (WPPT) respectively, which in unison is also known as the Digital Agenda.

According to Silke von Lewinski (Lewinski, 2004, pp. 8-9),

“Copyright Law in Digital Era, TRIPs, the Berne Convention and the Rome Convention protect copyright and related right holders, whereas WCT and WPPT and are widened economic substantive rights of the author's or copyright holder's as well as the related right holder's”.

WCT is a special agreement under the Berne Convention which deals with the protection of works and the rights of their authors in the digital environment. In addition to the right recognized, they are granted certain economic rights. The treaty also deals with two subject matters to be protected by copyright (i)computer programs whatever the mode or form of their expression and (ii)compilation of data or other material (database). While WPPT deals with two kinds of beneficiaries, particularly in the digital environment, (i)performers, (ii)producers of phonograms, that is a person or legal entity that takes the initiative and has the responsibility for the fixation of sounds.

2.2.2 Three Layers of Protection for Information Management Society

There are three layers of protection for information management society. There are three layers of rights that can be utilized to protect the existence/ implementation of an information management society. These layers have to be applied in accordance with the aforementioned legal instruments as a very beneficial addition. These layers are (Lewinski, 2004, pp. 8-9):

- 1) Copyright and neighboring right protection (also having been touched upon in the previous section);
- 2) Technical measures to block unauthorized access;
- 3) Legal protection against circumvention.

The first layer for information management society protection is Copyright and Related Right law. Related to this matter, Indonesian Act Number 28 of 2014 on Copyright (replacing Act Number 19 of 2002 on Copyright), Article 1 Point 1 states,

“Copyright means an exclusive right of the author vested automatically on the basis of declaratory principle after Works are embodied in a tangible form without reducing by virtue of restrictions in accordance with the provisions of laws and regulations”.

Further, Article 40 Para (1) point a. and b. provides that,

- (1) Protected Works which include scientific, artistic, and literary Works, comprise:
 - a. books, pamphlets, typographical arrangement of published written work, and all other written works;
 - b. talks, lectures, speeches, and other similar Works;

Copyright and neighboring rights (related rights to copyright) protect all creations, not only those in

tangible forms but, but now also those in the digital forms/ electronic media.

According to James Lahore copyrighted works in digital form including (Lahore, 1997, p.21):

- a) Literary Work, namely all form of work based on texts with forms that obtain copyrights. Literary work here includes poems, books, articles, and so on expressed in a number of words, symbols, and others;
- b) Database, namely a set of data, normally obtains copyrights as a set. It is in form of data (as long as not related to fact) such as price list, URL address for sites, private and public keys used for encryption or digital signature and database in form of compilation and collection of data;
- c) Characters, namely fictional characters in visual form, such as Mickey Mouse and Superman, and in literature form, such as Sherlock Holmes, Hardy Boys, or James Bond. Fictional characters exist in visual form, story texts; animations in form of video and audiovisual works, films, video tapes, video discs or videograms, TV programs;
- d) Musical Works, namely musical works that obtain copyrights. Protection of copyrights for musical works includes both things: words and music. Musical works in form of music with or without texts, musical instrument digital interface (MIDE). Sound recording works in form of recording of sounds, natural sounds, or special sound effects;
- e) Sound Recording, namely sound recording produced from recording, such as serial music, talks, and other sounds;
- f) Photographs and Still Images, namely images and graphical works that obtain copyrights, including: comic, strips, advertisements, technical drawings, and diagrams. Photographs and still images are in form of graphical and pictorial works including advertisements, cardboards, images, paintings, designs, games, maps, mosaics, patterns, montage photos, art multiplications and printing results, technical drawings, design patterns, architectural building design patterns, blueprint of mechanical drawings, and diagrams;
- g) Motion Pictures and Other Audiovisual Works, namely motion pictures, videos, and audiovisual works that obtain copyrights;

h) Software, namely software that obtains copyrights. Software in form of source code and object code;

i) Compilation and Derivative Works. Compilation is a work formed by collection, installation, procurement of material or data that is then selected, coordinated/arranged that then produces work as the whole original work of the author, such as magazines and catalogs;

j) Derivative Works, namely a work based on one or more works, such as translations, fictions, motion picture versions, and so on. Multimedia Works, namely general works that combine one or two of the existing categories into single medium.

An author (creator of copyrighted work) or a copyright holder has exclusive rights comprising moral rights and economic rights (Article 4 of Act Number 28 of 2014).

On moral rights, Article 5 states that:

(1) The moral rights as referred to in Article 4 are rights that are eternally inherent to the Author to:

- a. continue to include or to exclude their name on the copy with respect to the public use of their Works;
- b. use an alias or pseudonym;
- c. change their Works to comply with appropriateness in society;
- d. change the title and subtitle of their Works; and
- e. defend their rights in the event of a distortion of Works, mutilation of Works, modification of Works, or other acts which will be prejudicial to their honor or reputation.

On economic rights, Article 8 and 9 regulate that, "Article 8

Economic rights are the exclusive right of the Author or the Copyright Holder in order to gain economic benefits from the Works.

Article 9

(1) The Author or the Copyright Holder as referred to in Article 8 has the economic rights to engage in:

- a. Publication of the Works;
- b. Reproduction of the Works in all its forms;
- c. Translation of the Works;
- d. Adaptation, arrangement, or transformation of the Works;
- e. Distribution of the Works or their copies;
- f. Performance of the Works;
- g. Publication of the Works;

- h. Communication of the Works; and
- i. Rental of the Works”.

With the way the Indonesian Act on Copyright is arranged, Indonesia is trying, however subtly, to accommodate the continuous development of technology and its relation to copyright protection. The mention of ‘and all other written works’ and ‘other similar works’ is a method to facilitate the later developed types of works that may be protected by copyright.

Observing today’s information technology development, it can be seen that the right of communication to the public (as regulated by Berne convention) has widened, which now includes in the forms of texts and images. It also can be seen that the right of making available to the public has widened, which used to depend solely on the author/right holder, now can also depend on the users (the internet users determine when and where they would like to access a work from as opposed to the author/right holder solely decides when and where they will make their work available to the public). On top of these shifts, there is also an introduction of the right on database as exclusive rights to a legal person who makes substantial investment of database development in order for them to authorize or prohibit the extraction or utilization of such database. (Lewinski, 2004)

There are also exception and limitation rules under Article 13 of TRIPs Agreement,

“Member shall confine limitation or exception to exclusive rights to certain special cases which do not conflict with a normal exploitation of the works and do not unreasonably prejudice the legitimate interest of the right holder”,

as well as those under Article 9 Par (2) of the Berne Convention for the Protection of Literary and Artistic Works,

“It shall be a matter for legislation in the countries of the Union to permit the reproduction of such works in certain special cases, provided that such reproduction does not conflict with a normal exploitation of the work and does not unreasonably prejudice the legitimate interest of the author”.

Such exceptions and limitations are also provided in Indonesian Copyright Law, mainly under Article 43 to 51 of Act Number 28 of 2014, which regulate, among others, about compulsory license (also known as fair dealing or fair use in Common Law Tradition).

The second layer for information management society protection is the technical measures to block unauthorized access. Regarding

this, Article 11 of the WCT regulates the obligation of Contracting Parties to provide satisfactory protection and effective legal remedies against the circumvention by copyright owners,

“Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law”.

As for definition, Directive 2001/29/EC of the European Parliament and the Council (of May 2001) on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society attempts to provide it. Article 6 Para (3) of the Directive contains,

“For the purposes of this Directive, the expression ‘technological measures’ means any technology, device or component that, in the normal course of its operation, is designed to prevent or restrict acts, in respect of works or other subject-matter, which are not authorized by the right-holder of any copyright or any right related to copyright as provided for by law or the *sui generis* right ...”

Technological measures protect against any action of technology misuse and is considered effective where (Article 6 Para (3) of the Directive continued),

“... the use of a protected work or other subject-matter is controlled by the right-holders through application of an access control or protection process, such as encryption, scrambling or other transformation of the work or other subject-matter or a copy control mechanism, which achieves the protection objective”.

Technological measures can be in the form of Digital Right Management (DRM) and Rights Management Information (RMI). These technologies protect information from being accessed without authorization.

The Rights Management Information (RMI) is, “... information that identifies content protected by copyright or related rights, the rights owners in such content and the terms and conditions of use associated with it” (IFPI, 2003),

whilst Digital Rights Management (DRM) is,

“... a systematic approach to copyright protection for digital media. The purpose of DRM is to prevent unauthorized redistribution of digital media and restrict the ways consumers can copy content they’ve purchased. ... Although

digital content is protected by copyright laws, policing the Web and catching law-breakers is very difficult. DRM technology focuses on making it impossible to steal content in the first place, a more efficient approach to the problem than the hit-and-miss strategies aimed at apprehending online poachers after the fact", (Sachdeva, 2010, p. 14).

RIM and DRM technologies give power for the author/ right-holder to control how users use their work, control what can and cannot be done with their work. They can limit the number of multiplications that can be seen, what media the work can be transferred to, etc.

The principle of RIM and DRM technologies is contained in Article 52 and Article 53 Para (1) of Act Number 28 of 2014,

"Article 52

Every person is prohibited from damaging, destroying, eliminating, or disabling the function of technological protection measures used as a safeguard of the Works or Related Rights products as well as the safeguard of the Copyright or Related Rights, except for State defense and security purposes, as well as other reasons in accordance with the provisions of laws and regulations, or as agreed otherwise.

Article 53 Para (1)

Works or Related Rights products using information technology-based and/or high technology-based means of production and/or data storage must satisfy the licensing regulations and production requirements established by relevant authorities".

There are groups of people who understand fully the objectives of having these technologies and implementing the protection system and they do not mind the overall system. Since, they deem it a form of appreciation for the author and a form of support for the author to be able to create better works in the future. In the case of users wanting to make sure about accessing content legally, there is a basic first step that can be done: checking whether the access is a 'free access' or whether there is a 'fee for access'. If there is a fee-for-access, at the very least it can be used as an element of defense for allegedly copyright infringement. With that said, being smart users is a must with such rapid technology development. The bottom line is that, to avoid infringement allegation, before accessing anything we should carefully research whether the access is legal because nowadays there are a lot of free-of-charge contents legally accessible and at the same

time, a lot of paid-platforms that provide contents illegally.

There are also groups of people, usually users/ consumers who think that RIM and DRM constrain normal operation of technological devices and limit the technology development itself for such excessive obligations the technologies require. On the top of these concerns is the one of abuse of exclusive rights. It is completely reasonable that there is fear for this for intellectual property is a property. It is subject to other related-laws, such as competition law, where the problem of abuse of exclusive rights could also arise. To prevent this from happening, one remedy established under Indonesian law would be through compulsory license (also known as fair dealing or fair use in Common Law Tradition) or through other methods appropriate for establishing just and balanced rights and obligations between intellectual property rights holders and users. This subject matter needs another discussion on another day.

Then again, since intellectual property is a property, an author's work resulted from their intellectual creation, their intellectual ability, is a property. Using a property of someone else's require an exchange of performance, some give-and-take of obligations. So, it is understandably within the author/ right-holder's right to determine how much access the users/ consumers can have with their work. And in return, it is fairly the right of the users/ consumers to use and enjoy the work for their purpose, notwithstanding the limitations by the author/ right-holder.

The third layer of information management society protection is the right against circumvention or anti-circumvention. It protects against any action of deletion or elimination of electronic information management rights attached to copyright (related to technological measures). This standard is also implemented for creation of show and sound recording presented digitally or via internet media. Member countries shall provide an adequate legal protection (such as punishment) against circumvention of effective technological measure by those have knowledge or suspected to have knowledge about the goal of technological measure implementation.

Every such conduct is a violation against the law, including producing, importing, or renting any tools designed specifically to eliminate technology control facility or to prevent or to limit multiplication of a creation, circumvent privacy and surveillance, computer fraud, hacking, and virus.

In relation to Indonesian Law, anti-circumvention is regulated under Article 54 to 56, which state,

“Article 54

To prevent the infringement of Copyright and Related Rights using media based on information technology, the Government is authorized to conduct:

- a. supervision on the production and dissemination of Copyrights and Related Rights infringing contents;
- b. cooperation and coordination with various parties, either domestic or international in the prevention of production and dissemination of Copyrights and Related Rights infringing contents; and
- c. supervision on the acts of recording Works and Related Rights products using any media in performance venues.

Article 55

- (1) Every Person who is aware of an infringement of Copyright and/or Related Rights through electronic systems for Commercial use may report to the Minister.
- (2) The Minister verifies the reports as referred to in section (1).
- (3) In the event that sufficient evidence is found based on the verification of the reports as referred to in section (2), upon request of the complainant the Minister will recommend the minister administering government affairs in the field of telecommunications and information to block in part or in whole the Copyrights infringing the content in the electronic system or make the services of the electronic system inaccessible.
- (4) In the event of the blocking of Internet sites as referred to in section (3) is done entirely, within a period of 14 (fourteen) Days after the blocking, the Minister is obligated to request a court provision.

Article 56

- (1) The Minister administering government affairs in the field of telecommunications and information pursuant to the recommendations as referred to in Article 55 section (3) may block the content and/or user's access right that infringes Copyrights and/or Related Rights in the electronic system and renders the electronic system services inaccessible.
- (2) Further provisions regarding the implementation on blocking content and/or user's access right that infringes Copyrights and/or Related Rights in the electronic

system or rendering the electronic service system as referred to in section (1) are stipulated by a joint regulation of the Minister and the minister holding the duties and responsibilities in the field of communication and information”.

Other Indonesian relevant legal instruments related to anti circumvention are Act Number 19 of 2016 on the Amendments of Act Number 11 of 2008 on Information and Electronic Transaction, Article 382bis of Criminal Code regarding criminal responsibility for content and defamation, and Circulars of Head of Indonesian National Police No. SE/0/X/2015 on Handling of Hate Speech and Defamation. However, the way to effective enforcement of anti-circumvention in Indonesia has not been without challenges.

3 CONCLUSIONS

An information management society is a society that centrally manages and shares incorporates policies and procedures of information among different individuals, organizations and/or information system, so that people can access all types of information in the way that is most fairly, and legally.

There are three layers of protection that can be applied to information management society, they are:

- 1) Copyright and neighboring right protection (also having been touched upon in the previous section);
- 2) Technical measures to block unauthorized access;
- 3) Legal protection against circumvention.

There are a lot of challenges to the efforts of enforcing intellectual property law in general, and enforcing the protection of information management society in this specific case. How successful these enforcements will be would depend on high they are considered as priority in the eyes of Indonesian Government. And that is precisely why so more researches in these areas are essential. They can become the sources that will make the Government pay more attention to these matters. Even so, there are fundamental changes in the laws establishing intellectual property rights, and also, information management society related-rights (Act Number 28 of 2014 is one example). These changes, no matter how incremental, are something to be excited about.

REFERENCES

- Andreatos, A., 2007. *Virtual community and their importance for informal learning*, International Journal of Computers, Communications and Control Vol. II No. 1, pp. 39-47. Available online at: <http://univagora.ro/jour/index.php/ijccc/article/view/2335/804>
- Angus, L. C., O'Shea, 1996. *Protecting intellectual property in an emerging digital environment*. Queanbeyan. New South Wales.
- Boorstin, D.J., 1979. *The Republic of Technology*, Harper and Row. New York.
- Drahoš, P., Braithwaite, J., 2002. *Information feudalism: Who owns the knowledge of economy?*. Earthscan. London.
- Ginsburg, J.C., Treppoz, E., 2015. *International copyright law: US and EU perspectives: Text and cases*, Edward Elgar. Cheltenham.
- Hart, M., 1997. *Copyright Law*. Training of Trainers in Intellectual Property at the University of Technology Sydney. Sydney.
- Holmes, W.C., 1983. *Intellectual Property and Antitrust Law*. Clark Boardman. New York.
- International Federation of the Phonographic Industry (IFPI), 2003. *The WIPO Treaties: Protection of Rights Management Information*. IFPI. London. Available online at: <https://www.ifpi.org/content/library/wipo-treaties-rights-management-information.pdf>
- Japan Patent Office, 2003. *IP and multimedia*. IP Training for IP Practitioners. Japan International Cooperation Agency (JICA) dan Association Overseas Training Center (AOTS). Tokyo.
- Jened, R., 2014. *Hukum Hak Cipta*. Citra Aditya Bhakti, Bandung.
- Kintner, E.W., Lahr, J., 1982. *An Intellectual Property Law Primer*. Clark Boardman. New York.
- Lewinsky, M., 2004. *Copyright law*. Teaching material of Intellectual Property Training Course by European Community and ASEAN IP Cooperation Program (ECAP II). Max Planck Institute for IPR, Competition and Tax Law, Munich Intellectual Property Law Center (MIPLC). Munich.
- Lloyd, I., 2003. *Legal aspects of the information society*. Butterworths. London.
- Makarim, E., 2003. *Kompilasi hukum telematika*, Raja Grafindo Persada. Jakarta.
- Mansfield, E., 1979. *The production and application of new industrial technology*. Norton. New York.
- Mc Keough, J., Stewart, A., 1997. *Intellectual property rights in Australia*. Butterworths. Sydney.
- Morton, M., Scott, S., 1999. *The corporation of the 1990s: information technology and organizational transformation*. Oxford University Press. Oxford.
- Purwadi, D.H., 2012. *Mengenal internet jaringan informasi dunia*. Elex Media Komputindo. Jakarta.
- Quinn, F., 2009. *Law for journalist*. Pearson Longman. London, 2nd edition.
- Rosenoer, J., 2000. *Cyberlaw: The law of the internet*. Springer, New York.
- Sachdeva, G., Kr., 2010. *A Digital Right Management and IPR in the Information Age*. International Journal of Librarianship and Administration Vol. 1, No. 1, pp. 13-24. Available online at: http://www.irphouse.com/ijla/ijlav1n1_02.pdf
- Silverstein, B., 2000. *Business to business internet marketing: seven proven strategies for increasing profits through internet direct marketing*. Maximum Press. Florida, 3rd edition.
- Strong, W.S., 1993. *The Copyrights Book A Practical Guide*. The NIRP Press. Cambridge.
- Wood, J., C., Wood, M., C., *Henri Fayol Vol. 1*. Routledge. Abingdon. Preview available online at: https://books.google.co.id/books?id=splJ8h0z3oC&pg=PA87&redir_esc=y#v=onepage&q&f=false
- The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- The Berne Convention for the Protection of Literary and Artistic Works.
- Directive 2001/29/EC of the European Parliament and the Council (of May 2001) on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society.
- Indonesian Act Number 7 of 1994 on the Ratification of Agreement Establishing the World Trade Organization.
- Indonesian Act Number 28 of 2014 on Copyright.
- Indonesian Presidential Decree Number 18 of 1997 on the Accession of Berne Convention for the Protection of Literary and Artistic Works.
- Indonesian Presidential Decree Number 19 of 1997 on the Accession of WIPO Copyright Treaty.
- Indonesian Presidential Decree Number 74 of 2004 on the Accession of WIPO Performances and Phonograms Treaty.
- WIPO Copyright Treaty.
- WIPO Performances and Phonograms Treaty.
- <https://thelawdictionary.org/society/>
- <http://www.businessdictionary.com/definition/information.html>
- <http://www.businessdictionary.com/definition/management.html>
- <https://www.merriam-webster.com/dictionary/information>
- <https://www.merriam-webster.com/dictionary/society>
- <https://www.out-law.com/page-5698>
- <https://www.toolshero.com/management/five-functions-of-management/>
- <https://www.wipo.int/treaties/en/ip/wct/>
- <https://www.wipo.int/treaties/en/ip/wppt/>