A Comparative Law Perspective on Intermediaries' Direct Liability in Cloud Computing Context -- A Proposal for China

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A COMPARATIVE LAW PERSPECTIVE ON INTERMEDIARIES’ DIRECT LIABILITY IN CLOUD COMPUTING CONTEXT—A PROPOSAL FOR CHINA

SHI XU

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DEDICATION

To my beloved Dad and Mom,
Mr. Xu Wenguang and Mrs. Liu Li.
I love you deeply in my heart.
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ABSTRACT

This dissertation is motivated by two questions: How does the emergence of cloud-computing technology impact major countries' copyright law regarding the issue of intermediaries' direct liability? What should Chinese legislature body learn from those countries regarding this issue? Answering the first question lays a foundation for answering the second question.

Usually, a cloud-computing intermediary's specific activity may possess risk of violating a copyright holder's right of reproduction, right of communication to the public and right of distribution. Comparatively, that intermediary can raise defenses under the exhaustion doctrine and the fair use doctrine. Analysis on these two topics consists of two parts. The first part examines copyright law in major countries or regional organizations such as the U.S., Japan or the European Union. The second part is an analysis of current related Chinese legislation and a proposal for China. This dissertation examines relevant international copyright treaties, major countries’ related legislature documents and related cases.

This dissertation offers a thorough legal analysis how cloud-computing technology affects copyright worldwide. The proposal at the end consists of two parts. The first part provides four general legislature advices for China. The second part focuses on how China's legislature should adjust copyright owner's exclusive rights and intermediaries’ defense theories to react the impact brought by the cloud-computing technology.
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Chapter 1: Introduction

In the last two decades, the increasing digitization of copyrighted content and the growth of Internet created lots of challenges to copyright law area. For instance, copyrighted works’ digital copies’ quality was approaching a near-perfect condition, which leads to copyright infringements become easy and cheap by making unlawful digital copies of copyrighted works. Data transmission and storage technologies were also thoroughly reformed, which resulted in a spread of both authorized and unauthorized copies of copyrighted work. 1

Public users increasingly demand storing, transmitting, accessing and sharing digital content via the Internet at anytime and anywhere with less cost. Emerging of Cloud computing technology then satisfies public users’ growing need. Cloud computing is a broad term in describing a kind of technology services through the Internet. It is a general term for the numerous of protocols, applications and transmission techniques users can use to store, process, manage and stream data via remote servers—which often controlled by third party providers.(Hereafter ISPs)2 Cloud computing technology provides convenient, easy operated, less-expensive but more-expansive service. For instance, after drafting a document by “Microsoft Word,” one could directly save that file in OneDrive, a cloud service also provided by

2 ISPs in this dissertation specifically indicate the cloud computing service providers.
Microsoft. One can also directly store photos in iCloud, which is another cloud service provided by Apple. Common users are also getting used to watch TV programs on computers or other devices instead of televisions. There’s no need for them to follow the TV programs’ schedule or have to purchase a cable system, they just need access to the Internet buffering by the cloud computing technology. All they need to do is clicking a single button and then enjoying the streaming video/audio contents even without downloading. Cloud computing service is changing people’s daily life silently but drastically.

However, emergence of cloud computing services actually mounted the existing challenges to copyright law and created even more legal loopholes. For instance, through the cloud streaming service, users can enjoy music, TV programs or movies before the entire file being transmitted to users’ computers. This process will create temporary copies of the streaming works in the cloud server or in the RAM of end user’s computer. Thus ISPs may be under the risk of directly infringing the streaming copyrighted works’ right of reproduction by creating such temporary copies since the existing copyright laws around the world have not contoured the scope of protected copies. Further, a new used market for digital files is generated

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3 OneDrive, WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/OneDrive (“OneDrive (previously SkyDrive, Windows Live SkyDrive, and Windows Live Folders) is a file hosting service that allows users to sync files and later access them from a web browser or mobile device. Users can share files publicly or with their contacts; publicly shared files do not require a Microsoft account to access them.”)

4 iCloud, WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/iCloud (“The service provides its users with means to store data such as documents, photos, and music on remote servers for download to iOS, Macintosh or Windows devices, to share and send data to other users, and to manage their Apple devices if lost or stolen. The service also provides the means to wirelessly back up iOS devices directly to iCloud, instead of being reliant on manual backups to a host Mac or Windows computer using iTunes.”)
by the ISPs because of the expansion of cloud computing software such as ReDigi allowing consumers resell their “used” copyrighted works which were uploaded to their cloud lockers by digital distribution.\textsuperscript{5} This market caused new challenges, especially regarding the application of the first sale doctrine (exhaustion doctrine) and the fair use doctrine. The appearance of this second hand market is inevitable, because people are getting used to purchase digital music recordings or e-books online. It’s important for the law to keep up with the development of technology, especially in the field of copyright law. A new proposal for copyright law must be considered as soon as possible.

Copyright owners will definitely protect their interests via lawsuits where copyright infringements exist—when users upload, stream or share the videos, music or e-books via the cloud service provided by ISPs. Individuals are difficult to identify or located, so that it is not easy for copyright owners to file lawsuits against them. There’s no doubt that a big war between copyright owners and ISPs had already begun, for instance, the U.S. ReDigi Case. All countries that involved in the Internet world are currently involving or going to involve in this war. And this war will not be settled easily, because the current statutes in all countries are not clear enough in solving the issues of copyright infringement. Thus, clarification of the relevant legal uncertainties is necessary in ending the war between copyright owners and ISPs.

\textsuperscript{5} ReDigi, WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/ReDigi ("ReDigi is an online marketplace for pre-owned digital music and the only cloud storage service that verifies whether each music file uploaded for storage was legally acquired from an eligible source.")
There’s no doubt that China is also drifting in the war between copyright owners and ISPs. There are lots of cloud-based services in China that actually are infusing in people’s daily life. For instance, NetEase music, which is a cloud-based music locker, enables users to stream music files without downloading simply via devices as mobile phones through the Internet. Baidu Cloud or Sina vdisk provides storing, sharing and other functions online. Under the existing Chinese Copyright Act, there are also too many legal uncertainties in deciding copyright infringements relevant to the cloud services due to the legislature vacancy regarding this issue. For example, when apply the right of dissemination to information networks (the right of communication to the public), Chinese literature currently holds two standards to decide whether there’s an act of providing files, the server standard and the users’ perception standard. However, the Chinese Copyright Law does not provide a clear guideline for this issue, and thus such legislature vacancy result in courts’ different decisions based on similar facts. Further, Chinese ISPs may not only face domestic copyright owners’ accusation but also International copyright owners’, since numerous people are enjoying free foreign countries’ TV programs, movies or e-books simply via the Chinese cloud services. All in all, it’s necessary to provide a reasonable proposal for China to cope with these existing and potential copyright challenges.

In order to solve the challenges and fill legal loopholes brought by cloud computing technology, this dissertation will identify problem arising from

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enforcement of copyright in this cloud computing era, describe the present viability of major countries’ copyright law enforcement through analyzing recent copyright cases, and discuss viable solutions regarding this issue proposed by major countries. This dissertation will take the U.S., EU and other countries as examples, then connect the former discussion with the specific situation (such as traditional culture of Sharing) in China. Finally, this dissertation will try to make a reasonable proposal for copyright law legislation for the facing cloud computing technology’s China in the end.

Chapter 2 will present general idea of cloud computing technology. What is the different kinds of business models using this technology such as music locker service (iTunes), video sharing service (Youtube) and provide background information on these similar services. How it relates to our daily life.

Chapter 3 will analyze the ISPs’ direct liabilities. When using the cloud computing technology, the ISPs are under the risk of infringing the copyright owner’s right of reproduction, the right of communication to the public and the right of distribution because of the application of cloud computing service. This chapter will illustrate traditional definition and the common applications of these three exclusive rights by analyzing statutes and cases from various countries, then analyze how cloud computing may affect them in those countries. This chapter will eventually provide the author’s proposals for China.

In Chapter 4, I will discuss ISPs’ potential defenses when facing direct copyright infringements: the first sale doctrine (exhaustion doctrine) and the fair use doctrine. As the same of chapter 3, this chapter will also first analyze statutes
and typical cases in the U.S., EU and other countries and come up with a potential proposal for China based on the Chinese specific situation.

Finally, chapter 5 will generate a proposal for copyright legislation regarding cloud computing based on former summaries for China.
Chapter 2: Defining Cloud Computing

Cloud computing technology refers to approaches to diffuse computing power across more that one physical computer.\(^8\) With the use of cloud computing, the boundaries of computing will be determined by economic rationale rather than technical limits alone. The name of “cloud computing” was derived from telecommunications companies who changed their services from point-to-point circuits to Virtual Private Networks in the 1990s.\(^9\) Thus, it’s clear that cloud computing is based on the virtualization technology. Virtualization means that an application named as hypervisor creates one or more virtual computers, whose simulations can run any software.\(^{10}\) It’s the virtualization technology provides the basic nature of cloud computing: “e-mail, Web, or file servers (or anything else) can be conjured up as soon as they’re needed; when the need is gone, they can be wiped from existence, freeing the host computer to run a different virtual machine for another user.”\(^{11}\) With the help of readily-developed virtualization technology, cloud computing has been growing in size – a global scale.

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\(^8\) See Melzer, supra note 1, at 403-04.
Virtual Private Networks, WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/Virtual_private_network (VPN is a private network that extends across a public network or internet. It enables users to send and receive data across shared or public networks as if their computing devices were directly connected to the private network.)
\(^11\) \textit{Id.}
However, as to common users of the Internet, the concept of “cloud computing still remain vague. The National Institute of Standards and Technology (NIST) defines cloud computing as: “A model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.” To common people, cloud computing enables users to access to numerous resources, such as remote storage. The users no longer need to prepare infrastructures or supports for such infrastructures in order to obtain such service.

According to the NIST definition, the model of cloud computing has five essential characteristics: (1) on-demand self-service, which allows a consumer to unilaterally provision server time and network storage as needed without requiring human interaction with every service provider; (2) broad network access, which emphasizes the network availability and the ability of users to access the information or service through any platform with a broadband connection, including “mobile phones, laptops, and PDAs;” (3) resource pooling, which means the providers pooled computing resources and to dynamically assign resources by using a multi-tenant model based on customers’ demand. The customer has no control or knowledge over the exact location of the provided resources; (4) rapid elasticity,
which means computing capabilities, can be elastically and automatically be provisioned and released based on consumer’s need; (5) measured service, involving automatic optimization of system resources.\textsuperscript{14}

Based on the needs of end users, the provider’s frame work, and the goal of the service exchange,\textsuperscript{15} there are three different versions of cloud computing service. The NIST refers them as the three “service model”: Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). \textsuperscript{16} These service models are deployed in four ways—as private, community, public, or hybrid cloud.\textsuperscript{17} All these four may be controlled by a third party provider. A private cloud’s infrastructure is provisioned for use by a single organization, especially for internal use by employees within an organization. On the contrary, a community cloud’s infrastructure is limited to consumers from a group of organizations with same concerns. Then, a public cloud is generally open to the public, for free or with certain payments. A hybrid cloud combines two or more of these deployment models.

As to common users, the most familiar clouds in place nowadays should be public SaaS models. Under this model, Facebook, Yahoo! Mail, YouTube, Twitter and Gmail are all included. Basically, the most common examples of SaaS model is web-based e-mail and social networking websites. It should be known that common cloud storage service, such as dropbox, Baidu Cloud Storage, that provides to normal

\textsuperscript{14} Id.
\textsuperscript{16} NIST Definition, supra note 13.
\textsuperscript{17} Id.
users is also included. The capability of SaaS model provided to the consumer is to use the provider's applications running on a cloud infrastructure.  

Users of SaaS model do not need to have technology skill since they don't need to manage or control the infrastructure including networks, servers, operating systems, or storage. Users can simply access provided applications with Internet browsers. For instance, an user of Gmail, that provided by Google, does not need to download or install anything on his personal computer. He can simply access to Gmail via Internet browser through networks. Users embrace the SaaS model that leads to “rapid development of other cloud-based applications, including calendars, contact management, word processing, and digital photo applications.”

The second model PaaS basically allow programmers to deploy their own applications, “created using programming languages and tools supported by the provider.” It can be read into three parts: (1) A PaaS model provides hardware, operating systems and other tools; (2) users should have modest technological skills; (3) users can develop their own applications through the basic hardware, operating systems and other tools provided by the provider. However, there's one more element here: programmers only have “limited control over the software so long as it does not interfere with the physical infrastructure of the provider’s network.”

18 Id.
19 Id.
20 GMail, WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/Gmail (“Gmail is a free, advertising-supported email service provided by Google.”)
22 NIST definition, supra note 13.
For instance, Google App Engine is within the PaaS model. It enable users to build a website application. And Google App Engine is free on certain level and fees are “charged for additional storage, bandwidth, or instance hours required by the application.”

The third model takes the PaaS model a step further. IaaS model provides users the capability to provision processing, storage, networks, and other fundamental computing resources. Users are able to control all the fundamental computing resources, including “operating systems, storage, deployed applications, and possibly limited control of select networking components (e.g. host fire walls).” Along with the instance of Gmail, the application of Gmail definitely requires infrastructure such as storage space to store all data or operating system to process all data. The provider of Gmail, Google may choose to interface the Gmail with a provider offering the required infrastructure in the cloud.

The development of Internet had already revolutionized data transmission, which directly challenge the current copyright law since such transmission will not be limited by geographic or time. Users are getting used to enjoy fast online transmission and quality digital copies of copyrighted works. Further, Cloud computing is designed to fully meet consumers’ demand for digital contents in less time, with less effort and pay less money. With the unbelievable data storage technology, cloud computing undoubtedly expands online digital content. Because of the easy process of the three service models, more and more companies are

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25 NIST Definition, supra note 13.
26 Id.
getting involved to provide “users’ prefer” cloud computing service. In order to attract more users to gain benefit, they need to provide more contents. Then, users are able to enjoy copyrighted works even not only without preparing infrastructures as before but also without downloading. All users need is a basic device, which is able to get to the Internet. Users may not consider the issue of copyright infringements, all they want are enjoy works. They may be attracted by those cloud-based websites that provide more contents. One side need more contents at meanwhile ignoring copyright issue, the other side attempt to attract more users to gain economic benefits by providing more contents. Under such circumstance, there’s no doubt that the issue of copyright infringement become serious. This dissertation latter will analyze how cloud computing effect and cause copyright infringement in details in latter chapter.
Chapter 3: Intermediaries’ Direct Liability of Copyright

Infringements

I. Infringe the Right of Reproduction

The last chapter had already provided technological details of cloud computing service. An analysis of how those details affect the ISPs’ direct copyright liability will be discussed in this chapter.

Under the traditional circumstances, people need to get tangible copies of the copyrighted work before they enjoy it, and such tangible copies are products of the “printing” technology. Copyright owners can gain reasonable interests via distributing the tangible copies of their copyrighted works. Copyright Law is enacted to protect copyright owners’ such interests. However, the “printing” technology keeps developing, that causes uncertainties for copyright owners to gain interests from the tangible copies made via such “printing” technology. As a matter of fact, to protect copyright owners’ interests, the copyright law enacted and amended because of the development of “printing” technology. Therefore, the right of reproduction no doubt is the core of any copyright acts. With the development of technology, people are getting used to reproducing a work on a computer hard drive, a mobile hard disk or a remote hard disk space as an invisible copy. Therefore no more tangible copies are needed. As a consequence, the right of reproduction has been changed to adapt the new technology.\(^\text{27}\) Then, the cloud computing makes even

\(^{27}\) See White-Smith Music Pub. Co. v. Apollo Co., 209 U.S. 1 (1908). (The Supreme court of U.S. concluded the music rolls were parts of a machine which can produced music tones when properly operated, but were not copies within the meaning of copyright act.) See also Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3rd Cir. 1983). (The 3rd
the invisible copies stored in the hard drive or portable hard disk in computers unnecessary. People are able to have a giant feast of works as novels, TV programs, movies, music and others online without downloading any content of these works. All they need is high speed Internet and a simple tablet or cellphone. However, if there’s no tangible or invisible copy, how could the copyright owner control their work via the right of reproduction? So, there is no doubt that the cloud computing technology challenged the core status of the right of reproduction in copyright law area.

In each country, courts make judgments based on their countries’ relevant acts. As for the right of reproduction, all courts have to explain its scope for purpose of determining whether there are infringements of this exclusive right of copyright owners. This makes the scope of the reproduction right significant. Technology is challenging the reproduction right, this situation causes more uncertainties of the scope of the reproduction right. For instance, lots of “temporary copies” that existed in the random access memory of computer are created by users as results of launching a software application, browsing the Internet or doing other activities on a computer. Are such temporary copies fall within the scope of the right of reproduction? Moreover, it’s getting harder to tell whether there is a copy exists when people stream video or audio directly from the cloud, because the “copy” is replaced by new data in a very short time or even do not include the whole work. In order to figure out the contour of the right of reproduction, this dissertation needs to analysis each element of the definition of reproduction, and review landmark

Circuit of U.S. concluded that copyright could exist in computer programs expressed in object code –computer operating system and ROM—Read-Only Memory Device.)
cases to understand the basic principle behind them. We can only solve the problems arising with the cloud computing in such method only. By analyzing different countries’ understanding of the scope of the reproduction right and the Chinese now existing acts and applications, this section will provide a proposal for China in lining the contour of the right of reproduction.

i. THE U.S. PART — From the Case Law Relevant to The Right of Reproduction

This section will start with the right of reproduction in the U.S.. In the U.S. Copyright Act, the reproduction right is an exclusive right granted to copyright owners by the copyright law; they can reproduce a copyrighted work in copies or phonorecords. To reproduce a copyrighted work, copyright owners have to fix it in a tangible medium of expression – a copy or a phonorecord—“now known or later developed,” from which it “can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.”

As mentioned above, there’s no doubt that “copy” is the central concept in the copyright system, it remains crucial to both the establishment and infringement of copyright interests. Although we’ve already known the definition of “copies,” it remains inevitable to an analysis of the elements of reproduction right and a review

30 Aaron K. Perzanowski, Fixing RAM Copies, Faculty Publication, Paper 46, at 2 (2010), http://scholarlycommons.law.case.edu/cgi/viewcontent.cgi?article=1045&context=faculty_publications
31 17 U.S.C. § 101. (“Copies, material objects, ...fixed...”; “ a work is fixed in a tangible medium of expression when its embodiment in a copy... by or under the authority of the author, is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.”)
the case law. Because the contours of these elements are still unclear that need to be defined. For instance, a defendant does not infringe the copyright law if he/she has not reproduced the copyrighted work in fixed form.\textsuperscript{32} But what is a “fixed form”? This fixation requirement contains two elements: embodiment requirement and duration requirement according to 2nd circuit in Cablevision II case.\textsuperscript{33} Between these two elements, the contour of duration requirement stay indistinct, which constantly causes legal uncertainty in deciding whether there’s a copyright infringement or not, especially towards identifying “temporary copies.”

In order to understand how the US courts deal with the temporary reproductions issue under the Copyright Act, we shall look back into the former cases to clarify the existed relevant rules and locate the relevant principles. The following sections will analyze this issue base on a timeline.

\textit{A. Before the RAM Copy Doctrine: Elektra v. Gem\textsuperscript{34}, Basic Book v. Kinko’s\textsuperscript{35} AND Priceton University v. Michigan Document Service\textsuperscript{36}}

These three cases happened before the RAM copies appeared. But the U.S. courts’ attitude towards the issues caused by new reproduction technology could be implied from them.

In the Elektra case, Defendant provided supplies as bland and pre-recorded tapes and cartridges but also a new electronic invention, the “Make-A-Tape” system – which allowed users to duplicate tapes in 2 minutes by coins. Although the

\begin{footnotesize}
\begin{itemize}
  \item \textsuperscript{32}\textsc{Marshall A. Leaffer}, \textit{Understanding Copyright Law} 48 (5th ed. 2010).
  \item \textsuperscript{33} Cartoon Network, L.P. v. CSC Holdings, Inc., 536 F.3d 121 (2d Cir. 2008). [hereinafter Cablevision II]
  \item \textsuperscript{34} Elektra v. Gem 360 F. Supp. 821 (E.D.N.Y. 1973).
  \item \textsuperscript{35} Kinko’s 758 F. Supp. 1522 (S.D.N.Y. 1991).
  \item \textsuperscript{36} Princeton Univ.Press v. Mich. Document Service. 99 F.3d 1381 (6th Cir. 1996)
\end{itemize}
\end{footnotesize}
defendant’s employees did not perform in the actual copying, and they insisted the “Make-A-Tape” system had the nature of “individual and self-service,” which should be treated same as photocopiers in a public library, the court disagreed with this comparison for 3 reasons: (1) Make-A-Tape system duplicated the entire tapes instead of “a part” of the tape; (2) Make-A-Tape system allowed users to duplicate the entire tapes in less time and less cost than the original; (3) “The duplicated tape is a true copy essentially identical and equally desirable.” All in all, the court ruled that the defendant held direct liability because it gained financial profits from the infringements. The development of “reproduce” technology began to affect the court’s judgment. Due to the convenience and quality of this new technology, the court completely ignore the “volitional conduct,” and held the shop provide equipment directly liable for copyright infringement.

Then come the Kinko and Priceton case, in both of these two cases, the defendants reproduced the copyrighted materials without copyright owners’ permissions, then they bund the copied materials up, sold them as “coursepacks” to students for financial profit. The students who bought the coursepacks use them as class reading assignments. Both the Southern District court of New York and the 6th Circuit held that the defendants directly liable for the copyright infringements, fair use doctrine could not be granted because the defendants did use the infringing materials for a commercial purpose and would effect the potential market. As we

37 Elektra v. Gem, supra note 34 , at 824.
38 Id.
39 Volitional Conduct, WIKIA, http://itlaw.wikia.com/wiki/Volitional_conduct_doctrine. (“To be liable for direct copyright infringement, a person must have committed some voluntary act that caused the infringement to occur.” This dissertation will further analyze this volitional conduct in the Netcom Case.)
will discuss later, the EU directives use the condition of “economic benefits” in deciding whether temporary copies fall within the scope of the right of reproduction. But although the US court brought into consideration here in these two cases, they further ignored the condition of economic benefits totally in the future cases.

B. MAI v. Peak

Unlike the above-mentioned precedents, cases thereafter are all about a doctrine still playing an important role even nowadays. That is the RAM doctrine. RAM is the abbreviation for Random-access memory (RAM), which is a form of computer data storage that allows data items to be read and written in approximately the same time when users access data items in computers. A computer operates by reading information stored from permanent storage (as hard disk), then translating it into electrical pulses in RAM, and finally transferring it to the CPU, which actually performs the calculations and answers. This means whenever a user wants to view a picture or read a PDF file on a computer, read a novel on a Kindle device or listen to a song on an iPod, a copy of the file will be placed in temporary storage—RAM. But the RAM will not keep the copy forever, the former copy in it will soon be replaced by new data and all data will be erased when the computer is turned off. Then, the question arises: should we consider the copy temporarily stored in the RAM as an ordinary copy?

40 MAI Systems Corp. v. Peak Computer Inc. 991 F.2d 511 (9th Cir. 1993) [hereinafter MAI v. Peak].
43 Leaffer, supra note 32, at 306.
The 9th Circuit and other courts gave us an answer: yes, the data temporarily stored in RAM qualifies a “copy,” because the data is “fixed” in the RAM.\(^{44}\) In MAI v. Peak case, the defendant had to run the plaintiff’s built-in operating system software to do the repair and maintenance process. According to the 9th Circuit, this caused a “copy” automatically be transferred from the hard drive to the RAM. The 9th Circuit’s ruling based on two reasons: (1) it’s a general rule that “loading of software into a computer constitute the creation of copy;” and (2) the copy created in the RAM can be “perceived, reproduced, or otherwise communicated.”\(^{45}\)

Although the 9th Circuit’s decision (the Ram Copy Doctrine) had been followed by lower courts for almost 15 years without challenges\(^{46}\) and had been

\(^{44}\) MAI v. Peak, \textit{supra} note 40. See also Stenograph v. Bassard case; Sony Computer v. Connectix Corp case. But some courts reject the rule that temporary storage in RAM qualifies a reproduction. See Hogan v. Cybersource.

\(^{45}\) 17 U.S.C. § 101. See also MAI v. Peak, \textit{supra} note 40, at 520.

endorsed by the Government’s NII White Paper Report as settled law,47 there are still many critics. As mentioned by Professor Leaffer, these critics can be grouped into two categories: (1) MAI decision was inconsistent with both the prior case law and the intent of congress;(2) MAI decision will have troubling policy implications of temporary instantiations as browsing the Internet, reading files, viewing photos and others.48

The 9th Circuit gave its ruling relied on CONTU's assertion,49 Nimmer's statement50 and the rule of Apple Computer v. Formula case.51 But all these three authorities are questionable. The CONTU Reports is quite ambiguous, because: (1) it did not clarify whether it refers to ROM or RAM; (2) it lacks authoritative weight; (3)

Supp. 2d 1148 (N.D. Cal. 2010) (The court ruled that unauthorized loading of software into RAM constitutes copying).

47 See Information Infrastructure Task Force, Intellectual Property And The National Information Infrastructure: The Report Of The Working Group On Intellectual Property Rights 64 (1995), https://www.uspto.gov/web/offices/com/doc/ipnii/ipnii.pdf (This WHITE PAPER cited Peak case, asserted that it has "long been clear under U.S. law" that RAM copies of copyrighted works, as well as any other incidental copies made during the transmission of such works through the Internet, implicated the copyright owner's exclusive right of reproduction. It then further suggested "minor clarifications and limited amendments" to copyright law that would merely reinforce the settled view.)

48 See Leaffer, supra note 32, at 302-03; see also,Perzanowski, supra note 11, at 9-14.

49 See NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT 49 (1979)[hereinafter CONTO]. (The introduction of a work into a computer memory would...be a reproduction.)

50 See Melville B. Nimmer & David Nimmer, Nimmer On Copyright (1992). § 8.08[B][2], at 8-105. (“Inputting a computer program entails the preparation of a copy.” The NIMMER was relied on the language of CONTU.)

51 Apple Computer, Inc v. Formula Int'l, Inc., 594 F. Supp. 617, 621 (C.D. Cal. 1984). (The Peak Court (9th circuit) insisted that the use of "copy" and "fixation" in Apple court's holding can support its own decision. However, in the Apple case, the court held that the defendant infringe copyright because it copy and sell ROM chips containing Plaintiff’s software. The court clearly announced that § 117 cannot be applied, since copying in ROM was not “essential”(copying into RAM was an alternative). The court also stated that “...copy into RAM. This would only be a temporary fixation.”) See Bradley J. Nicholson, The Ghost in the Machine : Mai Systems Corp. v. Peak Computer, Inc. and the Problem of Copyright in RAM, 10 BERKELEY TECH. L.J.147 (1995).
it contradicted with the statements about the scope of “fixation” by the Congress.\textsuperscript{52} Nimmer’s statement was made based on CONTU Reports, which made it questionable either. Further, the 9th Circuit undercut the decision of the Apple case. Most importantly, the Congress had already concluded that a copy in RAM is not a “copy” for purposes of the Copyright Act via giving definition to “fixation.”\textsuperscript{53} This decision also extended the exclusive right of copyright owner and created extreme limitation towards the public’s traditional right to read, view, and listen to copyrighted work.\textsuperscript{54} When we use the digital service everyday, storing data in RAM buffer is inevitable. The RAM Copy Doctrine practically makes everyone a copyright infringer.

The RAM Copy Doctrine still plays an important role. Due to its transparent intrinsic logic conflicts, it is problematic. The following sections demonstrate later courts’ attempts to restrict it.

\textsuperscript{52} Perzanowski, \textit{supra} note 30, at 10.
\textsuperscript{53} H.R. REP. No. 1476, 94th Cong., 2d Sess. at 52-53 (1976). (“The definition of ‘fixation’ would exclude from the concept purely evanescent or transient reproductions such as those projected briefly on a screen, shown electronically on a television or other cathode ray tube, or captured momentarily in the ‘memory’ of a computer.” “under the bill it makes no difference what the form, manner, or medium of fixation may be—whether it is in words........magnetic, or any other stable form.”)
C. Religious v. Netcom\textsuperscript{55} -- An Limitation Attempt: "volitional conduct"

The Netcom case brought the “volitional conduct” to limit the Internet Service Providers’ liability. In this case, RTC, owner of copyrighted work sued against a bulletin board service operator and its Internet service provider (Netcom) for direct copyright infringement. When a subscriber posted RTC’s copyrighted work on the online forum, there were RAM copies created and stored in the BBS’s and Netcom’s storage device. Because the 9th circuit decision is binding on the Netcom district court, it quickly concluded that the messages were sufficiently “fixed,” even though the messages remained on the system for maximally 11 days.\textsuperscript{56} However, the Netcom court created a volitional conduct requirement to limit the potential monopoly effect of the RAM Copy Doctrine. The court decided that the RAM copies “fixed” in the BBS's and Netcom's system were “incidentally” operated by the infringer’s activity.\textsuperscript{57} So Netcom itself did not make the copies. Netcom's decision of direct infringement been further strengthened by the House Report: “Liability is ruled out for passive, automatic acts engaged in through a technological process initiated by another.”\textsuperscript{58}

\textsuperscript{56} Id., at 1368. (reasoning that due to MAI v. Peak that “the loading of data from a storage device into RAM constitutes copying because that data stays in RAM long enough for it to be perceived”).
\textsuperscript{57} Id., at 1370. (“Although copyright is a strict liability statute, there should still be some element of volition or causation which is lacking where a defendant’s system is merely used to create a copy by a third party.”) Volitional conduct is an element in deciding the problem: who create the copy?

D. DMCA’s amendments—exceptions to the RAM Copy Doctrine

In 1998, the DMCA amended §117(c) of the Copyright Act in response to the MAI v. Peak case by creating a safe harbor for computer service (maintenance and repair). Further, it also adopted the Netcom’s decision of “volitional conduct” by setting out §512: Internet Service Providers are not directly liable in cases where an infringer uses an automated system that the ISP implemented. Both §117 and §512 from the DMCA can be regarded as exception to liability created by the RAM Copy Doctrine.

While the Congress did not explicitly approved the RAM Copy Doctrine, it indeed implicitly endorse of the RAM Copy Doctrine without defining its boundaries. Lots of scholars and commentators criticized the DMCA as a result of it. Besides, the DMCA neither legislate exceptions for Non-Internet Service Providers and Individual users.

60 *Id*, § 117: “(c) Machine Maintenance or Repair.— Notwithstanding the provisions of section 106, it is not an infringement for the owner or lessee of a machine to make or authorize the making of a copy of a computer program if such copy is made solely by virtue of the activation of a machine that lawfully contains an authorized copy of the computer program, for purposes only of maintenance or repair of that machine, if—

(1) such new copy is used in no other manner and is destroyed immediately after the maintenance or repair is completed; and

(2) with respect to any computer program or part thereof that is not necessary for that machine to be activated, such program or part thereof is not accessed or used other than to make such new copy by virtue of the activation of the machine.”

61 *Id*, § 512.

62 JESSICA LITMAN, DIGITAL COPYRIGHT 176 (2006). (Prof Litman contends that the DMCA “cede to copyright owners control over looking at, listening to, learning from, or using copyrighted work.”)

63 *Id*. (The DMCA “cedes to copyright owners control over looking at, listening to, learning from or using copyrighted works”) see also U.S. COPYRIGHT OFFICE, DMCA SECTION 104 REPORT, at cover letter (Aug. 2001). (§ 512 doesn’t provide enough protection to companies who operate on a network-based system but do not fall within the ISP definition.)
E. CoStar Group, Inc. v. LoopNet, Inc.—qualitative/quantitative components of fixation’s transitory duration requirement

The court further provided fixation’s transitory duration requirement in directly limiting the RAM copy doctrine. The defendant LoopNet allowed subscribers to post listing of commercial real estate on its website, if the subscriber agreed its “Terms and Conditions”—prohibit post infringing photos. LoopNet’s employers will manually review posted photos to make sure that they were commercial real estate and to block photos which clearly were copyrighted by others. CoStar owned copyright of plenty of commercial real estate photos. After acting the process of take-down notice and take-down, there were still infringing photos. CoStar sued LoopNet for direct and contributory infringement.

The 4th Circuit rejected CoStar’s argument that LoopNet directly liable since it could not be protected by DMCA §512 safe harbor rules. Thus, the 4th Circuit had to decide whether there’s an ordinary copy exist. The court determined the fixation requirement of an ordinary copy by expanding analyzing two components of “transitory duration”: (1) qualitative—who made the copies and for what purpose; (2) quantitative— for how long did the copies existed. Under this theory, no copy

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64 Costar Grp., Inc. v. LoopNet, Inc., 373 F.3d 544, 548 (4th Cir. 2004).
65 Id, at 547.
66 Id.
67 Id.
68 Id, at 548.
69 Id, at 510. (“The term ‘copy’ refers to ‘material objects...in which a work is fixed. A work is "fixed" in a medium when it is embodied in a copy "sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than 'transitory duration.'”)
70 Id, at 551. (”‘Transitory duration’ is thus both a qualitative and quantitative characterization. It is quantitative insofar as it describes the period during which the function occurs, and it is qualitative in the sense that it describes the period during which
was created because LoopNet's act of reviewing and blocking photos cannot qualify the “fixation” of infringing copies.\textsuperscript{71} The 4th Circuit did make a huge improvement in analyzing the fixation requirement, because the quantitative/qualitative approach indeed preserve the fixation's duration requirement instead of determining how long qualifies the duration requirement. The 4th Circuit actually analyzed the volitional conduct requirement together with the fixation requirement via the qualitative/quantitative components. Unfortunately, not only the 4th Circuit did not provide analysis of the qualitative/quantitative components in detail, but also other courts in following case did not actually follow the 4th Circuit's improvement—quantitative/qualitative approach, they still stuck by the duration requirement, such as the courts in Cablevision cases mentioned in the next section.\textsuperscript{72}

\textit{F. Cablevision case—introduced transitory duration requirement besides the RAM Copy Doctrine}

This is actually a series of Cablevision cases, including Cablevision I,\textsuperscript{73} Cablevision II,\textsuperscript{74} and Cablevision III.\textsuperscript{75} These cases further discussed the transitory duration requirement. These cases’ background remained the same. The defendant, the function occurs, and it is qualitative in the sense that it describes the status of transition. Thus, when the copyrighted software is down-loaded onto the computer, because it may be used to serve the computer or the computer owner, it no longer remains transitory.”) \textit{See} Melissa A. Bogden, \textit{Fixing Fixation: The RAM Copy Doctrine}, 43 ARiz. St. L.J. 181,201 (2011).

\textsuperscript{71} Id. (The ISP only provides a system “that automatically transmits users’ material....“ And the temporary electronic copies may only exist in the transmission process, thus they are not “fixed” in the sense they are “of more than transitory duration.”)

\textsuperscript{72} Cablevision cases. (The 2nd circuit still treated the volitional conduct and the fixation requirement separately.)

\textsuperscript{73} Twentieth Century Fox Film Corp. v. Cablevision Sys. Corp., 478 F. Supp. 2d 607 (S.D.N.Y. 2007). (Cablevision I)

\textsuperscript{74} Cablevision II, supra note 33.

\textsuperscript{75} 129 S. Ct. 985 (2009)(08-448)(inviting Solicitor General to file brief); On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Second Circuit No. 08-448 (Nov.5.2008)(Cablevision III)
Cablevision, a traditional cable TV services provider, provided a new service – Remote Storage DVR (RS-DVR) in 2006. This RS-DVR is different from traditional DVR, since programs recorded by users are centrally located in Cablevision’s hard disk instead of users’ individual set-top DVRs. After Cablevision gather content from content providers, it then split the single stream into two. The first directly send content to consumers as before and the other routed to Broadband Media Router (“BMR”) which uses 1.2s to buffer data stream and reform it. Then the data transmit into Arroyo Server, which has two buffers and several hard disks. All the data stay in the first primary ingest buffer for 0.1s to determine whether Cablevision customers requested a recording. If customer did requested to record, the data transmitted into the second buffer and then into a hard disk. The data in the first primary ingest buffer are automatically erased and replaced every tenth of a second.76

In Cablevision I, the district court held that by operating the RS-DVR77 will create infringing copies of the Plaintiff’s programming in the Arroyo servers’ hard disks and in buffer memory, and the Defendant violated the Plaintiff’s reproduction right.78 The copies of Plaintiff’s programming stored in the hard disks are ready to be play back by the customers under their request, so there are copies fixed in the defendant’s hard disk without questions. The district court decided it’s Cablevision made these copies by considering two main reasons. First is the relationship between Cablevision and its customers. Cablevision stays an ongoing relationship with its customers, for instance, it has to keep operating and maintaining equipment

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76 Cablevision II, supra note 33, at 124-25.
78 Cablevision I, supra note 73, at 622.
that makes RS-DVR’s recording process available, and monitoring the programming streams. This “on-going relationship” is different from Sony case,\(^\text{79}\) since once Sony sells its VCR, it has not further service for the VCR to record. Second is that Cablevision is the designer of this volitional design of the system to copy content, and it has “unfettered discretion” over the content available for recording.\(^\text{80}\)

The district court also concluded there are “copies” in the buffer, whereas even if a very small portion of programming is capable of being read or reproduced from the buffer, by following the RAM Copy Doctrine from the MAI v. Peak case.\(^\text{81}\) The court then used copyright office’s 2001 report on the Digital Millennium Copyright Act to support itself.\(^\text{82}\)

However, the 2nd Circuit denied the district court’s decision in Cablevision II. The Supreme Court asked the Solicitor General to file a brief expressing the opinions of the U.S. courts concerning the issues in this case, but the Supreme Court then denied the writ for a petition of certiorari.\(^\text{83}\) The Solicitor General sided with the 2nd Circuit’s decision.\(^\text{84}\) Thus the following part will focus on analyzing Cablevision II’s decision.


\(^{80}\) Cablevision I, supra note 73, at 619-20.

\(^{81}\) Id. (Buffering copy was not de minimis, because its "aggregate effect of the buffering" was to reproduce the entirety of the work.)

\(^{82}\) See U.S. Copyright Office, DMCA Section 104 Report, at 107-17 (Aug. 2001), available at http://www.copyright.gov/reports/studies/dmca/sec-104-report-vol-1.pdf (the report indicated that buffer copies are copies within the meaning of Copyright Act.)

\(^{83}\) 129 S Ct (Took no part in the consideration or decision of this petition)

When the 2nd Circuit decided whether Cablevision did make copies that violate the plaintiff’s reproduction right, it also needed to analyze two issues that relates to how the RS-DVR operates: 1) whether RAM copies stored in BMR and the first primary ingest buffer were “fixed”; 2) who created the copies located in the secondary buffer and hard disk.  

The 2nd Circuit brought a two prongs test to the first issue “fixed.” The first prong is the embodiment requirement and the second prong is the duration requirement. The 2nd Circuit noticed that the district court only focused on the embodiment requirement in considering “fixed” issue. For its duration requirement, the 2nd Circuit came up with three steps in proving the need of “transitory duration” requirement. First, the District court followed the 9th Circuit’s decision in the Peak case; however, the 9th Circuit referenced the “transitory duration” language but did not discuss or analyze it. The 2nd Circuit thought the parties in the Peak case did not dispute the duration requirement simply because it was satisfied, but in this case the transitory duration should be analyzed. Further, the 2nd Circuit found that the Copyright Office’s 2001 DMCA Report (which the district court relied on) only deserved Skidmore deference, “deference based on its

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85 Id, at 127.
86 Id. (“Copyright Act also provides that a work is ‘fixed’ in a tangible medium of expression when its embodiment... id sufficiently permanent or stable to permit to be ...reproduced... for a period of more than transitory duration.”)
87 Id. (“Unless both requirements are met, the work is not ‘fixed’ in the buffer, and, as a result, the buffer data is not a ‘copy’ of the original work whose data is buffered.”)
88 Id, at 128.
89 Id.
'power to persuade.'”

90 Because the interpretation of “fixed” from the report reads the “transitory duration” language out of the status. At last, the 2nd Circuit used the 4th Circuit’s holding in CoStar case to backing the duration requirement. 91 Thus in this case, the 2nd Circuit held that the work was embodied in the buffer, but 1.2s could not qualify duration requirement, so the copies in the buffer were not “fixed.”

To the second issue: who create the copies, the 2nd Circuit believed that there is no volitional conduct, since the RS-DVR system automatically response to users’ recording requests. Though the 2nd Circuit did not draw lines “between direct infringement, contributory infringement, and vicarious liability,” it clearly notified that “copies produced by the RS-DVR system are made by the RS-DVR customer.”

92 However, the 2nd Circuit did allow that “a case may exist ‘one’s contribution to the creation of an infringing copy is so great that it warrants holding that party directly liable for the infringement, even though another party has actually made the copy.”

93 The 2nd circuit in Cablevision II case precisely demonstrated that copies “fixed” in buffer need to meet the “transitory duration” requirement by analyzing from DMCA reports to precedent cases. This transitory duration requirement even

90 Skidmore v. Swift & Co., 323 U.S. 134, 140, 65 S. Ct. 161. 89 L. Ed. 124 (1944)(Rulings, interpretations and opinions of the Administrator do not control judicial judgment, they indeed constitute a body of experience and informed judgment to which courts and litigants may resort for guidance.)

91 Cablevision II case, supra note 33, at 129.(“while temporary reproductions may be made in this transmission process, they would appear not to be ‘fixed’ in the sense that they aren’t more than transitory duration.”) See also Costar v. LoopNet, supra note 64, at 551.

92 Id, at 133.

been recognized by the Copyright Office in 2008. The 2nd circuit did have
deficiency in its logic of that 1.2s does not fulfill transitory duration requirement. It
construed the duration requirement strictly on a time line, however it did not give
further pragmatic guidance for future courts, developers or copyright owners in
settling the duration problem, since it simply announced copies in Cablevision’s
RS-DVR buffers are not fixed rather than providing the exact legitimate duration
metric. This deficiency also generated that the duration requirement could not
break the RAM Copy Doctrine entirely, since copies in the RAM in MAI v. Peak case
stayed there for hours compare to 1.2s in Cablevision. However, somehow the
2nd Circuit did free courts from bounded by the MAI v. Peak’s RAM Copy Doctrine,
by bringing the duration requirement into discussion of temporary copies.

G. Flava Works, Inc. v. Gunter. — Implicitly reject the RAM Copy Doctrine

After the 2nd Circuit provided a more flexible judgment in Cablevision II case,
the 7th Circuit implicitly rejected the RAM Copy Doctrine in its decision. The
Plaintiff Flava maintains a website that provides videos across a pay wall – access to
those videos are limited without proper payments. The Defendant Gunter, operated
a website called myVidster, which enable users to post “bookmarks” (which is
actually the link) of online resources that make them available for other users of

94 U.S. Copyright Office, PUBLIC HEARING: SECTION 115 NOTICE OF PROPOSED
RULEMAKING, transcript at 6 (Sept, 19, 2008)
http://www.copyright.gov/docs/section115/2008/rm_2000-
7_hearing_transcript_9.19.08.pdf (“The fixation requirement does require an element of
duration.”)
95 See SimplexGrinnell LP V. Intergrated Sys. & Power, Inc. 642 F. Supp. 2d 189 (S.D.N.Y.
2009). ( The district court directly bypassed analysis of RAM copy question, and concluded
that copies which lasting from several minutes to several hours were fixed.)
96 Flava Works, Inc. v. Gunter, 689 F. 3d 754 (7th Cir. 2012).
myVidster. MyVidster automatically required the video’s “embed code” from the server it stored, and then embed the video into its website. Users could easily click the video embedded and begin to enjoy. Although it seems the video is from myVidster website, actually the transmission of the video is between the user’s computer and the server which the video originally stored in. The user makes no copies of the copyrighted video that he is watching, so he does not violate copyright owner’s exclusive right. Further, although the defendant provides the connection between the video and the computer, it does not qualify as a contributory infringer. Because the user does not copy the video from its website.

The 7th Circuit seemed implicitly reject the MAI v. Peak’s RAM Copy Doctrine by deciding that the end-users are not liable for down-streaming videos. There’s no doubt that down-streaming will create RAM copies either in users computer or in server. However, the 7th Circuit determined that users do not copy, which means there are no copies exist.

**H. Capital Records, LLC v. ReDigi Inc.**

The ReDigi case explicitly provided the court’s judgment towards the copies stored in the cloud. This decision is important because it’s guidance for applying the “volitional conduct,” but it is not include the scenario where the copies are temporary. The defendant ReDigi permits its users to re-value on some of their unwanted music—by reselling them, their “Media Manager” analyzes uses’ computer and makes a list of digital music that are ready to sell (only files

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97 Id, at 756.
98 Id, at 757.
99 Id.
purchased from iTunes or from other ReDigi users’ are eligible). A user may upload any eligible music file to ReDigi’s “Cloud Locker” based on this list, and after this process, the uploaded music file is no longer on the user’ personal computer. With the help of ReDigi system, there’s only one file exists before and after the transfer of a digital music file via upload to the cloud or download to personal computer hard disk.\textsuperscript{101} Although ReDigi try to use “migration” of the music file as defense,\textsuperscript{102} the Court brought in the “material object” requirement when analyze the reproduction right,\textsuperscript{103} and the court held the same: no matter the original digital music file still existed or not, when “a file has moved from one material object to another, means that a reproduction has occurred.”\textsuperscript{104} Therefore the court ruled ReDigi infringe plaintiff’s reproduction right.

Further, to establish direct liability under the Copyright Act, there must be “actual infringing conduct” rather than conduct as “passive conduit.”\textsuperscript{105} The court found ReDigi’s conduct of building a software—which scan users’ computer and list only copyrighted music could be sold—is such a great contribution to create a

\textsuperscript{101} Id, at 648.
\textsuperscript{102} Id, at 650
\textsuperscript{103} See Id, at 648-49. (The court distinguished “sound recordings” from “phonorecords, which are the "material objects in which sounds . . . are fixed by any method now known or later developed, and from which the sounds can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.” Then the court proved that copies of sound recordings also need to be fixed on material object.:” in order to infringe the reproduction right, the defendant must embody the plaintiff’s work in a ‘material object.’” Third, when deal with P2P file sharing system, “when a user downloads a digital music file or ‘digital sequence’ to his ‘hard disk,’ the file is ‘reproduce[d]’ on a new phonorecord within the meaning of the Copyright Act.” )
\textsuperscript{104} Id.
\textsuperscript{105} See Cablevision II, supra note 33, at 130. (“There must be actual infringing conduct with a nexus sufficiently close and causal to the illegal copying that one could conclude that the machine owner himself trespassed on the exclusive domain of the copyright owner.” Quoting CoStar v. Loopnet, at 550; citing Netcom case, at 1370)
infringing copy. 106 Thus the court ruled that ReDigi’s conduct satisfied the volitional conduct requirement, it should bare direct liability even for user’s act. What if ReDigi is only an online music locker without its questionable resale function; does it still violate the reproduction right? ReDigi simply build software that can solely store and stream copyrighted music, it seems not a particular volitional conduct lead to direct infringement of reproduction right.

As we know, there are so many different types and forms of temporary copies stored in RAM—no matter whose and where the RAM is. And so far, transmission of information or other works over the Internet is only made possible through the automatic creation of RAM copies.107 It is so arbitrary and unfair to clearly make a bright line ruling that all RAM copies are fixed or not without any exemptions. For instance, if all RAM copies are fixed, ISPs who made RAM copies of web pages are liable for infringement.108 The copyright owners of website would be granted expanded exclusive right – control access to data, which is far exceed the Copyright Act afford.109 Some scholars suggest it’s time to shift the copyright act’s focus from copy to access.110 However, with this shift, copyright law will lose its

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106 See Cablevision II, supra note 33, at 133.
108 See Ticketmaster L.L.C. v. RMG Techs. Inc., 507 F. Supp. 2d 1096, 1116 (C.D. Cal. 2007). (Based on Peak Case and Cablevision I, the court explicitly determined that copies of webpages automatically stored on a viewer’s computer are “copies” within the meaning of the Copyright Act.)
original goal that is to protect original expression but not ideas. Copyright owners will undertake expanded exclusive right to control everything, which will easily cause the abuse of copyright. Or if copyright owners cannot regulate RAM copies at all, users or ISPs could reproduce copyrighted work with no limitation, which definitely is contrary to Copyright Act intent. With no limitation and proper punishment, online copyright piracy will run rampant, that will cause a great economic lose for copyright owners and devastating blow their incentive to create. Either broad or narrow reading will upset the delicate balance between the copyright owners and users. After analyzing cases and articles, it seems that the U.S. experts had implicitly reach a fundamental consensus.

In general, the US courts, scholars and experts basically adopted the conclusion of “RAM copies MAY be fixed,” even the 2nd Circuit that draw an arbitrary time-line to the duration requirement admits it. And further, they also admitted that the duration requirement of “fixed” is imperative, but using a strict but unclear timeline to measure the duration requirement will easily end by conflicts. For instance, as mention before, RAM copies that existed equal to or shorter than 1.2s were not fixed, but those existed for several minutes are fixed. It means the faster you copy, the less possibility you will infringe the reproduction right, which is quite inconceivable and ridiculous.

112 Cablevision II, supra note 14.
113 See SimplexGrinnell LP V. Intergrated Sys. & Power, Inc. 642 F. Supp. 2d (S.D. N.Y. 2009); see also Bogden, supra note 70; see also Foley, supra note 84; see also Perzanowski, supra note 30.
114 See Cablevision II, supra note 33; see also id, SimplexGrinnell LP V. Intergrated Sys. & Power, Inc.
The controversial issue is how to delineate a delicate contour for this conception— How a RAM copy is fixed—regardless the 2nd circuit unclear time-line. To begin with, the contour has to fulfill the constitutional purpose of Copyright —“to promote the Progress of Science and useful Arts”. This contour should also balance the copyright owners’ incentive of creation and economic interests and public users’ interests to use and access to the ideas. Finally, which is the most concrete one, as most scholars suggested, the purpose underlying the embodiment of data in RAM should be considered. RAM copies have several functions same as the physical copies, which includes use, access, distribution and reproduction. But the reproduction right is not equally concerned with each function. So, the contour has to distinguish what the RAM copy at issue serves for—whether it is created incidentally for non-infringing use like access and use, or it is created primarily targets to further infringing distribution or reproduction. The purpose requirement is actually first indicated by the 4th Circuit in the CoStar case—qualitative and quantitative test to the fixation. For now, 4th Circuit’s measure of fixation controversy seems to be the most reasonable and rationale one. Beyond the purpose-based analysis, there’s one more problem—volitional conduct

115 U.S. CONST. art. I, § 8, cl. 8.
116 See id, at 430, n 12.
117 See London-Sire Records, Inc. v. Doe 1, 542 F. Supp. 2d 153, 175 (D. Mass. 2008). (the court clearly indicated that RAM copies “can be varying performance... it is not clear that all of them should be treated equally under the copyright statutes.”) See Christopher Vidiksis, How to Buffer Your Way Out of A Scrape, 4 BROOK J. CORP. FIN. & COM. L. 139 (2009-2010); See also Daniel J. Buller, Copyright Infringement in the Ether: RAM Buffering and the Copyright Act’s Duration Requirement, 59 U. KAN. L. REV. 659 (2010-2011); See also Perzanowski, supra note 30.
118 See Perzanowski, supra note 30 at 34-40.
119 See CoStar case, supra note 64.
120 See Perzanowski, supra note 30.
requirement—which is considerable in deciding, “who makes the copies” if there are copies. Currently, from the ReDigi case, we could tell the U.S. courts are adopting the theory that ISPs provide online music locker services could be held directly infringe copyright owner’s copyright. However, U.S. courts did not go far enough on the volitional conduct issue, since they already stopped on the issue of “whether there are reproductions in RAM.” This issue of “who makes the copies” is relevant to analyzing of contributory infringement and vicarious infringement—which are belonging to the aspect of secondary infringement. This dissertation here will not further analyze this issue.

There is still controversy about whether the Congress officially made the amendment to the RAM copy Doctrine or left it to the front line of settling new challenges – the courts. I agree, since the U.S. is a common law country, left the delicate issue to the courts is the best solution. Some scholars indicate that the “all-or-nothing” bright line rule will result in conflicts in practice, but the courts could provide nuanced solution to RAM copy.121 We will discuss how other countries deal with the temporary copies in the following sections.

ii. The EU part

A. EU Copyright Law’s revolution

Unlike the U.S., the statutes of copyright law in EU appear in different directives. Before this dissertation going further in discussing the EU’s regulation of

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121 See Bogden, supra note 70, at 209-215. (She also argues that since there are political influences towards the Congress’s amendment, but the courts are less biases to users than legislator.) See also Litman, supra note 62, at 174 &177. (There are critics against DMCA, legislator biased in favor of copyright owner—large companies.)
reproduction right, communication right to the public and others, we need to understand EU copyright law’s revolution and the directive’s implementation impact to EU Member States.

There are generally three parts in EU copyright law’s revolution. The first one lasted from 1957 to 1987, focused on the relationship between copyright and European Community Law

Second is from 1987-2004, process of harmonization was placed (for instance, Directive 91/250 on computer program—which is the first adopted directive in EU—was a result of conflicts between new technology and Treaty of Rome.122) Thirty-one member states joined European Economic Area (EEA), and in EEA, European Union Directives are used in harmonizing the copyright law.123 Further, all European Member States are required to implement the Directives into their national laws. Thus in understanding the copyright law in EU, before we analyzing Copyright law in Member States and particular cases judged by courts in Member States, it’s logical to do research about the Directives.

Third one is since 2004 till nowadays, European Court of Justice (hereafter ECJ) played a growing significant role in answering questions arising (or not) from the legal loophole in copyright law era caused by new technology.124 ECJ’s interpretation is binding to all Member States, and it has to provide specific guidance on the terms of secondary legislation (the Directives).125

123 There are 28 EU Member States plus Norway, Iceland and Liechtenstein in EEA.
124 See EU COPYRIGHT LAW, A COMMENTARY, 7-13 (Irini Stamatoudi et al. eds., 2014).
125 See Id, at 12 & 1098-1102.
The Directives are the resolutions provided by the European Council in order to increase protection for copyright and neighboring rights, and they are the most relevant parts in analyzing the reproduction right under EU copyright law. Four of these Directives are relevant to this dissertation. There maybe some overlaps and contradictions between these Directives, since they stipulate the same rights that fall into different categories—computer programs, rental and lending, database and a general category of information society that even includes the front three parts. So, at first, we need to understand the interrelationship among these directives. According to the recital 20 of the Information Society Directive, the Directive “is based on principles and rules already laid down in the Directives currently in force in this area” – the software, rental right and others—and “develops those principles and rules and places them in the context of the information society. The provisions of this Directive should be without prejudice to the provisions of those Directives, unless otherwise provided in this Directive.” Further, Art 1(2) indicates that “this Directive shall leave intact and shall in no way affect existing Community provisions relating to” software, rental and lending. Thus, when deciding a specific issue, if there are provisions in an earlier Directive, the earlier Directive should be applied; if

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126 See TREvor COOK, EU INTELLECTUAL PROPERTY LAW 77 (2010). (We could easily learn that only Computer Program Directive, Rental Lending and Related Rights Directive, Database Directive and Information Society Directive provide statutes for the reproduction right relevant to new technology [cloud computing] from the distinct summarized form.)
128 Id, recital 20.
129 Id, art 1(2).
there are not such provisions, the Information Society Directive should be applied directly.

B. EU Directives and ECJ’s judgments

Follow the trend of these relevant Directives, we could easily realized that the EU Council had already adopted the perspective that “RAM copies” are copies of copyrighted works and need to be restricted by the copyright owner, meanwhile, the EU council also provided exceptions and limitations towards this exclusive right of copyright owner.


Being strongly influenced by the consultation of “Green Paper on Copyright and Challenge of Technology,”\textsuperscript{130} the Commission proposed and amended its proposal for a Directive in 2 years and finally got it adopted on 14 May, 1991.\textsuperscript{131} This Software Directive was adopted to balance the interests between the copyrighted works’ copyright owners, their competitors and. Art 4(1)(a) regulates the reproduction right, provides copyright owners exclusive right to control “the permanent or temporary reproduction of a computer program by any means and in any form, in part or in whole; in so far as loading, displaying, running, transmission or storage of the computer program necessitate such reproduction, such acts...” It’s clear that this statute provides the contour of reproduction: “permanent or temporary, by any means and in any form, in part or in whole.” The word “temporary” means copying lasts very short time that caused by the acts of


\textsuperscript{131} Software Directive, supra note 122.
browsing and caching on the computer. This may indicate that generating RAM copies are in the scope of reproduction. Further, the description of “by any means and in any form” means the reproduction could be made even in a different media and in object code – for instance, download a copy from an website, or load a program into machine memory. “In part or in whole” is also relevant to the reproduction relevant to cloud computing, which does not mentioned in the U.S. copyright law. Therefore, it’s unnecessary to reproduce the whole computer program to cause a copyright infringement. Even the part of the source code of the computer program itself does not qualify for a protection, once it get reproduced, the reproducer infringed the copyright law. Although there are critics towards these interpretations of “reproduction,” in the Information Society Directive and the important Infopaq case, this statue will be further illustrated.

b. Rental and Lending Directive

The Rental and Lending Directive pursues two goals: (1) “to harmonize copyright law” and, (2) “to found this harmonization on a high level of

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132 See Research Handbook on the Future of EU Copyright 413 (Estelle Derclaye ed. 2009) (The author provides various instances of temporary reproductions that may take place on computer.)
133 See Software Directive, supra note 122, recital 15. (“Transformation of the form of the code”, it’s clear converting a computer program from on language to another is restricted by this act.)
134 See EU Copyright Law, A Commentary, supra note 124, at 112-114.
135 Case C-406/10, SAS Institute v. World Programming Ltd., 2012, para. 70. (The ECJ replied to the High Court of Justice of England and Wales: “the reproduction, in a computer program or a user manual for that program, of certain elements described in the user manual for another computer program protected by copyright is capable of constituting an infringement of the copyright in the latter manual if ... that reproduction constitutes the expression of the intellectual creation of the author of the user manual for the computer program protected by copyright.”)
protection.” After several amendments to the original Directive released in 1992, the Directive 2006/115/EC are being implemented instead now. This Directive needs to be mentioned here because some scholars think it should be extended and applied to the digital world. For instance, a video on demand, where a user can choose particular program from digital storage and then enjoy it by paying. Users are getting used to streaming videos instead of getting tangible copies or downloading them. Extending this Directive to digital world is a good option for regulating the copyright issues; it’s a fantastic way in freeing people from being stuck by considering whether streaming videos is a violation of the reproduction right.

c. Database Directive

According to the Berne Convention, WCT and TRIPS, ECJ adopted that database will be protected no matter in what kind of medium they exist. And further, ECJ also required that the database have to be “fixed” to get protection. Art 5(a) of the Database Directive ensures the author of a database have the

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136 See EU copyright, a commentary, supra note 124, at 151; see also the Green Paper, supra note 130, 1.4: “the Commission will be guided by two principle here: first, the protection of copyright and neighbouring rights must be strengthened; secondly, the approach taken must as far as possible be a comprehensive one.”
141 Case C-444/02 Fixtures Marketing Ltd v Organismos Pronostikon Agonon Podosfairou (OPAP) 2004 E.C.R.I-10365, para. 20.
142 Id, para. 30.
exclusive right of performing or authorizing “temporary or permanent reproduction by any means and in any form, in whole or in part,” which follows the Software Directive Art 4(1)(a). According to Tritton, “in part” in this act means no matter how nuisance or inconsequential the reproduction is related to the original database, subject to the principle of *de minimis non curat lex*,\(^\text{143}\) one infringes the reproduction right here. But there is still the originality threshold to limit this principle. And, with the requirement of “fixed” database, will the infringing reproduction need to be “fixed” either? This question left open without answer now, since there are not such “fixation” requirements among the Member states. Thus, based on the articles from the Software Directive and the Database Directive, they clearly show the EU’s trend to treat temporary copy as common copy. In order to confirm this conclusion, this dissertation will further examine the Information Society Directive, and related ECJ’s judgments.

d. Information Society Directive

To implement the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), and answer the challenges brought by digital technology,\(^\text{144}\) the Information Society Directive finally was adopted on 22 May, 2001. This Directive and the Enforcement Directive are also known as the “second generation Directives” which will provide general harmonization to


\(^{144}\) See Information Society Directive, supra note 127, recital 15, (“While no new concepts for the protection of intellectual property are needed the current law on copyright and related rights should be adapted and supplemented to respond adequately to economic realities such as new forms of exploitation.”)
copyright and related rights, and with no prejudice to former Directives as I mentioned above. Art 2 regulates the reproduction right; it applies to works, fixations of performances, phonograms, first fixation of films and fixation of wire or wireless broadcast, all Member States are obligated to provide exclusive rights “to authorize or prohibit direct or indirect temporary or permanent reproduction by any means and in any forms, in whole or in part.”

According to recital 21, the Art 2 of reproduction right needs to be construed broadly in EU Member States.

“Indirect reproduction” here always means there are third party or third medium get involved in the process of reproduction. If a third party facilitates the reproduction, for instance, a hypertext link or search engine, it may be considered as baring contributory liability but not as undertaking direct infringement. Many Member States courts in EU supported this induction. Lately, different approaches have shown in several cases, which Google got involved, in those cases, the courts clearly ruled that Google could not provide deep link to newspaper without paying royalties.

“In whole or in part” can have an analogous explanation as Database Directive’s requirement. Partial reproductions of work can constitute

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146 See id, recital 21. (“This Directive should define the scope of the acts covered by the reproduction right with regard to the different beneficiaries. This should be done in conformity with the acquis communautaire. A broad definition of these acts is needed to ensure legal certainty within the internal market.”)
147 See Verlagsgruppe Handelsblatt GmbH v. Paperboy, Bundesgerichtshof No 1 ZR 259/00, 17 July 2003, [2005] ECDR 7. (The German Court ruled that the list of links—which are deep links—to articles on the Plaintiff’s newspaper site did not infringe, because it did not provide content access.)
148 See Newspaper Publishers Association v Newsbooster.com ApS (7 May 2002)(Denmark); See also DNPA v Google (Nov 2008)(Denmark); See also Belgian Association of Newspaper Editors v Google (5 May 2011) (Belgium); See also Decision I-20 U 42/11 Dusseldorf Court of Appeal 8 October 2011 (Germany).
reproduction.\textsuperscript{149} The case Infopaq’s court first affirmed this theory by holding that reproduction of elements of an author’s creative work at anytime causes acts of reproduction.\textsuperscript{150} And further, based on the judgments of several other courts, the reproduction right of the author has been extended to “transient fragments of the works within the memory of a satellite decoder and on a television screen.”\textsuperscript{151} For instance, the FAPL court confirmed this conclusion, if the fragments contains elements of the author’s own intellectual creation. Further in UseSoft case, the court concluded: base on the particular facts, if a third party made a copy of a work under the direction of a user, then delete the original copy, no reproduction is made.\textsuperscript{152} Thus with these broad interpretations of reproduction, the limitations towards copyright owner’s reproduction rights are necessary to protect public interests and ISPs’ interest.

\textsuperscript{149} See Case 406/10, supra note 135. (The ECJ ruled that “the reproduction, in a computer program or user manual for that program, of certain elements described on the user manual for another computer program protected by copyright is capable of constituting an infringement of the copyright in the latter manual if – this being a matter for the national court to ascertain – that reproduction constitutes the expression of the intellectual creation of the author of the user manual for the computer program protected by copyright.”)

\textsuperscript{150} See Case C-5/08 Infopaq International A/S v Danske Dagblades Forening, 2009 E.C.R. I-6569, [hereinafter Infopaq I]. (The Court held that "an act occurring during a data capture process, which consists of storing an extract of a protected work comprising 11 words and printing out that extract, is such as to come within the concept of reproduction in part within the meaning of Article 2 of Directive 2001/29, if the elements thus reproduced are the expression of the intellectual creation of their author[…].")

\textsuperscript{151} See C-403/08 Football Association Premier League Ltd and Others v QC Leisure and Others, 2011 E.C.R. I-09083.; See also C-429/08, Karen Murphy v Media Protection Services Ltd.,2011 E.C.R. I-09083. ("… provided that those fragments contain elements which are the expression of the authors’ own intellectual creation, and the unit composed of the fragments reproduced simultaneously must be examined in order to determine whether it contains such elements.”)

Interpreting the reproduction right broadly also means Art 2 cover both permanent and temporary copies.\footnote{See Infopaq case, supra note 150.} However, Art 5(1) provides exemptions to temporary reproductions and Art 5(5) provides a three-step test to limit Member State’s discretion called EU three-step test.

All the exemptions and limitations should comply with the three-step test stated in Art 5(5), which means, when the courts apply mandatory exceptions mentioned in Art 5(1) for particular temporary reproduction acts, they should use the three-step test to interpret the exception strictly at the first place According to Art 5(5), limitations should be read strictly: they shall apply in “certain special cases which do not conflict with a normal exploitation of the work or other subject-matter and do not unreasonably prejudice the legitimate interests of the right holder.” And these limitations should be “even more limited” when relates to the electronic environment.\footnote{Information Society Directive, supra note 112, recital 44. (“The scope of certain exceptions or limitations may have to be even more limited when it comes to certain new uses of copyright works and other subject-matter.”)} However, according to Recital 44, the limitations in the Directive shall “be exercised in accordance with international obligations.” As far as we know, the international three-step test, which mentions in Act 10 of the WCT\footnote{WIPO Copyright Treaty, adopted Dec. 20, 1996, WIPO Doc. CRNRIDC/94 [hereinafter WCT].} permits Contracting Parties to “carry forward and approximately extend into the digital environment limitation.” This left a question here whether the three-step test in EU should be extended to the digital world. It should be answered by the FAPL court that “the interpretation of [Art 5(1)] must enable the effectiveness of the exception thereby established to be safeguarded and permit observance of the exception’s
purpose... that exception must allow and ensure the development and operation of new technologies and safeguard a fair balance...

This means three-step test has not been applied consistently in the Member States.

Art 5(1) is the only mandatory provision and it has been explained in recital 33 in details. Recital 33 also indicates that the exemption appears to permit temporary acts of reproduction that occur when a user is “browsing” online works or acts of “caching,” including those which enable transmission systems to function efficiently as created and deleted automatically without human intervention. According to the ECJ in Infopaq case, the conditions in Art 5(1) are cumulative, which means each of the five conditions in Art 5(1) needs to be satisfied in order to get exception. The five conditions from Art 5(1) are: (1) the act is temporary; (2) it is transient or incidental; (3) it is an integral and essential part of a technological process; (4) the sole purpose of the process is enable transmission in network of a lawful use of it; (5) it has no independent economic significance. ECJ specifically explained the second condition that an act could be held as “transient” only if the duration is limited to the period necessary for the proper completion of

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156 See Case C-403/08 and 429/08 Football Association Premier League, supra note 151, paras 163-64.
157 See EU Copyright Law, A Commentary; supra note 124, at 1115.
158 Information Society Directive, supra note 127, recital 33. (“This exception should include acts which enable browsing as well as acts of caching to take place, including those which enable transmission system to function efficiently, provided that the intermediary does not modify the information and does not interfere with the lawful use of technology, widely recognized and used by industry, to obtain data on the use of the information. A use should be considered lawful where it is authorized by the right holder or not restricted by law.”)
159 See TANYA APLIN, COPYRIGHT LAW IN THE DIGITAL SOCIETY: THE CHALLENGES OF MULTIMEDIA, 103-106 (2005). (This part explains the reason of providing exemption to the act of “browsing” the internet and analyzing the implied licenses system. Further it also provides analysis of the local and proxy caching, indicates how they could get exemption from Art 5.)
160 Infopaq I case, supra note 150, para. 56-58.
the technological process at issue. Further in Infopaq II case, the Danish Court held
the third condition required temporary acts of reproduction to be carried out
entirely within the context of the implementation of the technological process. The
temporary reproduction act also need to be necessary to the correct and efficient
functioning of the process in question.161 The Court implied that the exemption
could cover acts that initiated or terminated the process, and may also cover human
intervention, since there's no explicit indication. When it comes to the forth
condition, the FAPL court gave its interpretation: since the temporary reproductions
in this case enabled the broadcasts to be received, and copyright does not restrict
the reception of those broadcasts in private, they are lawful.162 Then in Infopaq II
case, the court held that the technological process at issue was intended to enable a
more efficient drafting of summaries of newspaper articles, which was not
restricted by law, so it is lawful. For the fifth condition, we still need the two above-
mentioned cases to clarify the meaning of independent economic significance. The
FAPL court stated that “significance must also be independent in the sense that it
goes beyond the economic advantage derived from mere reception of a broadcast
containing protected works…”163 The Infopaq II court followed and supported the
FAPL court’s decision: “... an advantage derived from an act of temporary
reproduction is distinct and separable if the author of that act is likely to make a
profit due to the economic exploitation of the temporary reproductions

161 Case C-302/10 Infopaq International A/S v Danske Dagblades Forening, 2012, paras.31-
35. [hereinafter Infopaq II].
162 FAPL case, supra note 151, paras.167-173.
163 Id, para.175.
themselves.” Further, Recital 33 also states that “the act of reproduction concerned should have no separate economic value on their own” which could support the view of these courts.

e. Satellite and Cable Directive

Although this Directive seems relevant to the temporary reproduction right, but Art 1(3) of this directive explicitly states that cable transmission covered by this rule must be “simultaneous, unaltered and unabridged,” which means delay or on-demanded retransmission will not be regulated by this Directive.

With the clear statement in Art 2 of Information Society Directive, the works can be protected by copyright law in any forms, (broadcasting works need “fixation”) thus there’s no such “fixation” requirement in EU copyright laws. This idea of “no fixation requirement” is quite reasonable in the EU authors’ right system. The system of the right of the author complies with the theory from natural law philosophy—improvisation, impromptu or extemporaneous should be copyrighted ever since they were created. As a consequence, without such fixation requirement, there’s no need to consider further requirements derived from fixation. EU directives simply and explicitly adopted the idea that temporary copies are copies,

164 Infopaq II, supra note 161, para.52
166 Id, art 1(3). ("For the purposes of this Directive, cable retransmission means the simultaneous, unaltered and unabridged retransmission by a cable or microwave system for reception by the public of an initial transmission from another Member State, by wire or over the air,...")
but then use lots of exemptions in limiting authors’ right expansion. EU model seems to be rational; however the way it grants exemptions could still be improved.

What’s interesting here is the definition of the right of reproduction from the EU Copyright Code by Wittem project in 2010.\textsuperscript{167} Art 4.2 states that the right of reproduction includes temporary reproduction insofar as it has independent economic significance. Although in the footnote 43, it states that this definition is carved-out absorbs the rule of Art. 5(1) of Information Society Directive, we can still see the differences here. The EU Copyright Code delivers its opinion that only those temporary copies with independent economic significance can be treated as reproductions under EU Copyright Code. EU Copyright Code also provides a new thought: value the economic significance of temporary copy when try to determine whether it’s an infringing copy or not.

In order to understand how EU Member States apply the directives mentioned above, the following section will take UK as an example.

\textbf{C. UK}

UK’s copyright law is heavily influenced by EU Directives, so this dissertation will use UK’s Copyright, Designs and Patent Act (hereafter CDPA) as an example in understanding how EU members implement EU directives or other international Conventions, Treaties and Agreements to their own law system.\textsuperscript{168}

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Section 17 from CDPA regulates the right of reproduction. Section 17(2) mentions: “copying in relation to a literary, dramatic, musical or artistic work means reproducing the work in any material form,” and which means including “storing the work by electronic means.” Further, Section 17(6) also mentions that copying includes “the making of copies which are transient or are incidental to some other use of the work.” Several cases in UK clearly showed that a transient copy in computer RAM was a reproduction in material form, and the RAM chip itself was an “infringing copy.”\footnote{Kabushiki Kaisha Sony Computer Entertainment Inc v Ball, [2004] EWHC 1738 (Ch) at paras 15&17. \textit{See also} R v Higgs., [2008] EWCA 1324,para. 9. (Since a transient copies of the game were made in RAM, the act of playing a pirate game on a console was considered as infringe s 17(6).) \textit{See also} H LADDIE, ET AL, \textsc{THE MODERN LAW OF COPYRIGHT AND DESIGNS} (3rd ed. 2000), para 14.8.} Under this circumstance, there’s no doubt that multimedia stream via cloud computing will amount to make unlawful copy of these copyrighted works, unless a license exist or exceptions can be applied.

Indeed UK does have exceptions for the above-mentioned “temporary copy” by following the EU Directives (the Information Society Directive) requirements. Section 28A mentions that if the creation of a temporary copy, which is transient or incidental, is an integral and essential part of a technological process and the sole purpose of the process is to enable (a) a transmission of the work in a network between third parties by an intermediary; or (b) a lawful use of the work; and has no independent economic significance, then the temporary copy will not infringe copyright.\footnote{CDPA 1988, \textit{supra} note 168, s 28A.} After the Meltwater case which is decided by the UK Supreme Court, this exception should be apply to on screen and “cached” copies of copyright
protected works generated in the course of ordinary browsing.\textsuperscript{171} This guarantees that everyday end-users of the Internet will not infringe copyright through browsing websites.

iii. Other Countries- Singapore, Australia, Japan

A. Singapore

Like the EU, it seems quite clear that Singapore has already adopted the idea that “RAM” copies are reproductions, because SS15(1) states: “for the purposes of this Act, reproduction, in relation to any work, includes the making of a copy which is transient or is incidental to some other use of the work.”\textsuperscript{172} Both the High Court and the Court of Appeal held that there are reproductions of copyright owners’ program in the Record TV v. MediaCorp TV case. However, the Court of Appeal overturned a decision of the High court, that it’s the registered users who make the reproduction of copyright owners’ (plaintiffs’) program, but not the defendant who make the reproduction under its subscribers’ direction.\textsuperscript{173}

RecordTV provides Internet complimentary recording service to pre-registered users, which allows them to record programs for later viewing. The RecordTV works as the following: first, the RecordTV will identify the relevant program (which requested by its registered users) and make a reproduction while it

\textsuperscript{171} Public Relations Consultants Association Ltd v The Newspaper Licensing Agency Ltd., [2013] UKSC 18. The High Court and the Court of Appeal held that end-users need licenses from NLA since the temporary copies exceptions were not reliable for them.

\textsuperscript{172} Singapore Copyright Act 1987, SS 15(1). (“ For the purpose of this Act, reproduction, in the case of a literary, dramatic or musical work, includes a reproduction in the form of a sound recording or cinematograph film of the work, and any record embodying such a recording and any copy of such a film shall be deemed to be reproduction of the work.”)

\textsuperscript{173} RecordTV Pte Ltd v MediaCorp TV Singapore Pte Ltd [2011] 1 SLR 830 [hereinafter RecordTV case].
broadcast through its Internet-based Digital Video Recorder (iDVR) at a remote location; then the reproduction of the program will be stored in RecordTV’s online server for 15 days; further, the registered user could log in his account and enjoy this program anytime within this 15 days period; at last, the reproduction of the program will be deleted after this period.

As mentioned above, there’s no doubt that courts in Singapore already adopted the idea that temporary copy can be treated as reproduction, the issue here is who actually make the temporary reproduction. The Court of Appeal used the U.S. Cablevision case as an example, and agreed its decision. The Court of Appeal also provides its own reason for holding registered users are the copier: the court focused on the analysis of the end-result of the recording and was persuaded by the “tangible benefits” of a “more convenient and user-friendly” online time-shifting service.\textsuperscript{174}

The Court of Appeal’s decision had been criticized by lots of scholars in Singapore; most of them indicate that it’s wrong to cite the U.S. Cablevision case, since the Cablevision case itself is wrongfully decided. They criticized against the Cablevision case and the RecordTV case based on three reasons. Those three reasons are similar to the U.S. scholars’ opinions: (1) Neither RS-DVR nor iDVR should be treated as “digital version” of traditional VCR; (2) There’s no continuing relationship between the VCR seller and customers, but there’s on-going

\textsuperscript{174} See \textit{Id}, [21] -[22].
relationship between users and RS-DVR & iDVR providers; (3) the act of reproduction is not “passive conduit” but “active participant.”

B. Australia

For a very long time, as a developed country, Australia refused to adopt the idea that temporary copy is reproduction under its copyright law. For instance, High Court of Australia rejected that there are reproductions in RAM under the copyright law. This decision of High Court of Australia was based on the 2000 Australia Copyright Law. However, the United States-Australia Free Trade Agreements (FTA) states clearly "Each party shall provide that the following have the right to authorize or prohibit all reproductions, in any manner or form, permanent or temporary (including temporary storage in material form)." In order to implement the US-Australia FTA in 2005, Australia had to revise its copyright law. As a consequence, like most countries in the world, Australia adopts the concept that temporary copy is reproduction in 2005, which is directly from section 10 (the definition of “material form”). Thus the reproduction right “looms

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176 Kabushiki Kaisha Sony Computer Entertainment v. Stevens, [2005] HCA 58, (2005) 221 ALR 448; (2005) 79 ALJR 1850 (Oct. 6, 2005) para. 62-79. (“However, in the ordinary course, temporary storage of a substantial part of the computer program in the RAM of a DVD player will not involve a reproduction of the computer program in a material form.”)


178 Copyright Act 1968 (Cth) (revised 2005) s 10 (“ In relation to a work or an adaptation of a work, includes any form (whether visible or not) of storage of the work or adaptation, or a
large as the ultimate leverage of right holders to control virtually all aspects of how
[Internet intermediaries] run their businesses.”

According to Australian scholars, Internet intermediaries will face higher risks of direct liability of copyright infringement when comparing to other countries. Although Australia Copyright Act provides several exemptions for temporary copy just like EU directives, the conditions of exemptions are so strict that is hard to meet. According to s43A, ss43B, s111A and s111B the exemptions to temporary reproductions could be applied in two courses: (1) communication; and (2) use of a digital copy. The exemptions required that the temporary reproductions should be used as part of the technical process of making or receiving a communication or using a copy. However, there are still limitations toward these exemptions. In the first course—communication, exemption will not be applied when communication itself is infringement. And in the second course, exemption will not be applicable if: (1) source copy infringes; (2) source copy is parallel imported; (3) use infringes.

With the exemptions’ limitation, it’s more difficult for ISPs to survive from the exclusive right of copyright owner. For instance, under this limited exemptions, when a user browsing a website

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180 Kimberlee Weatherall, Internet Intermediaries and Copyright : An Australian Agenda for Reform (2011), available at:

181 Copyright Act 1968, supra note 178. (S 43A was introduced in 2000 via Copyright Amendment (Digital Agenda) Act 2000 (Cth). S 43A and s 111A provide exemption in the first courses. Then ss 43B was introduced in 2004 via Explanatory Memorandum to the US Free Trade Agreement Implementation Bill 2004 [671], it together with s 111B provide exemptions to the second course.) See Id, at 16-43.
which includes an infringing photo, if this website is automatically cached by the browser, the former exemption will not be applied.

When the issue comes to who makes the temporary reproduction, the Optus case concluded:

it is the service provider (Optus) who makes the copies. Optus provides its subscribers a service named “TV Now” which allows subscribers to record air football or rugby games for later viewing. TV Now system will reproduce four copies of the programs requested by its subscribers in four different formats (PCs, Apple, Android and 3G devices). Subscribers could visit their requested programs in 30 days via the video streaming service provided by Optus. The National Rugby League is the copyright owner of those TV-air game programs. It alleged that Optus infringed its copyright by reproducing the TV programs. Although Optus argued that it just made the reproductions under the direction of the subscribers, the Federal Court still held that it’s Optus (together with its subscribers) who made the copies after analyzing this case in details.

The trial court stood on Optus side, decided it was the subscriber who made the reproductions based on the comparison between Optus’s TV Now system and VCR/DVR. It further stated that Optus was in an analogous position to the university in Moorhouse case. It also mentioned the U.S. Cablevision case and the Singapore RecordTV case as references.

183 University of New South Wales v Moorhouse [1975] 133 CLR 1 (In this case, the university is not liable for the students’ copying acts via its supplies – photocopier in a library.)
184 Singtel Optus Pty Ltd v National Rugby League No 2 [2012] FCA 34.
However, the Federal Court overturned the trial court’s decision by analyzing the definition of “make” from “make copies,” rejecting the argument of “last volitional act,” and resolving the problem of “who makes copies” via classifying four potential “makers.” Since the conclusion is Optus is the “maker” of copies, this dissertation will classify the four kinds of “makers” into three. The first hypothesis made by the Federal Court is that the copies are made by Optus, as agent for subscribers. This possibility was dismissed immediately because there’s no such principal-and-agent relationship between Optus and its subscribers.185 The second one is “the subscriber as principal.” The court provides four reasons in proving its decision that subscribers themselves are not “makers”: (1) the meaning of “make” is contrived, it should convey the idea of “making” (ie creating or producing) a physical thing, which also means it’s reasonable that there’s a causative agency if a copy of a particular thing is to be made; (2) the operation of Optus system clearly show that the reproduction acts does not occur by only following the subscriber alone; (3) the analogies are not helpful since there’s ongoing relationship between Optus and its subscribers; (4) there’s different legislation between the U.S. and Australia.186 In the third part, the Federal Court clearly demonstrates that Optus makes the copies, jointly with its subscribers.187 The court recognized that Optus’s system had actually been “designed in a way that [made] Optus the main performer of the act of copying,” it “captures, copies, stores and makes available for reward, a programme for later viewing by another” rather than merely “making available its

185 National Rugby v Optus case, supra note 182, at 54.
186 Id, at 55-60.
187 Id, at 60-76.
system to another who uses it to copy a broadcast.” The court analyzing the whole role Optus played during the reproduction process and decided that Optus’ role is “pervasive,” Optus is the maker even its system is automatic.

It’s obvious that Australia follow the U.S. trend in adopting the theory that temporary copies should be treated as reproductions, but Australia had already got a total different conclusion in deciding the issue of “who makes the temporary reproductions.” Unlike the U.S. holds that the users (subscribers) are the direct infringers of the copyright owner’s right of reproduction; Australia draw its own conclusion: ISPs make the temporary reproduction and should bare the direct liability.

C. Japan

According to Japanese terminology, “copyright” only refers to the exploitation rights, such as the reproduction right, the performance right, the presentation right and others, whereas the moral rights from a separate category of rights. Section 2 (1) (xv) clearly required that reproductions need to be creation of something “in tangible form” in the copyright sense. This tangibility requirement means “a copyright-relevant reproduction must be durably fixed so as to enable the repetitive perception of the work.” Japanese scholars and courts

188 Id, at 67.
189 JAPANESE COPYRIGHT LAW: WRITINGS IN HONOUR OF GERHARD SCHRICKER, 51 (Peter Ganea et al. eds., 2005).
190 Chosakukenho [Copyright Act of Japan], Law No. 48 of 1970, Sec. 2(1)(xv). (“Reproduction means the reproduction in a tangible form by means of printing, photography, polygraphy, sound or visual recording or otherwise.”) The unofficial translation of the Japanese Copyright Act is available at CRIC (copyright research and information center), http://www.cric.or.jp/english/clj/cl1.html (last visited 2016). It’s also available in the Appendix of JANPANESE COPYRIGHT LAW, translated by Professor Yukifusa Oyama.
indicate “temporary storage” cannot be regarded as reproduction under copyright law.191 Two parts of view support Japanese version of “temporary storage.” First, theoretically, “temporary storage” will not constitute reproduction under copyright law, based on analyzing the category and the utilization of the copied copyrighted work. Second, legislatively, from the reports of Copyright Act Review Conference held by the Ministry of Education, Science and Culture of Japan, we can easily realize that Japan does not want to treat temporary storage the same as reproduction. The Report of Copyright Review Conference in June, 1973 stated: “the storage of copyrighted work inside computers’ memory system is fleeting and transitional, one cannot explained this kind of storage as “reproduction” under the copyright law.” Then in 2001, after discussing this issue of “temporary storage” for one year, the Copyright Review Conference still insisted their theory: “it’s insufficiency to interpret ‘temporary storage’ into reproduction.” As a consequence, transient caching, RAM storage does not count as copyright-relevant reproduction.192

In comparing to the reproduction right issue in U.S. Cablevision case, Japan provided its Rokuga Net case, Rokuraku II case and Yoridori-midori Case.193

191 Japanese regard “temporary storage”(or temporary copy) as “一時の蓄積”. They further state that although the temporary storage appear because of the PC technology, however, its definition cannot be limited as PC RAM copy, temporary copies made via the act of PlayStation, mobile phone or the receiver of air broadcasting programs should all be considered.

192 Tokyo District Court decision of 16 May 2000 (1057 Hanrei Jiho 221). See also JAPANESE COPYRIGHT LAW, supra note 190, at 52-53. (The author states that although this Japanese interpretation of temporary is lagging behind international trend, but due to that Japanese Copyright Act lacks a limiting rule like Art 5 of the EU infosoc Directive which exempts some kinds of temporary copies, Japan has to keep its own interpretation.)

In Rokuga Net case, FA Vision provided Rakuga Net service, which allows its customers who lived abroad to view Japanese TV programs. This service does so by allocating personal computers (named as “TV-personal computers”) together with TV tuners, which can receive and record TV programs to each its users. All equipment located in FA Vision’s office. Both the Tokyo District Court and the Intellectual Property High Court held that FA Vision infringed the Plaintiff’s right of reproduction. The court provided five reasons: (1) FA Vision provides all the equipment; (2) FA Vision controlled the scope of broadcast TV programs (which can be transmitted); (3) a customer has to access to FA Vision’s website each time to use the transmission service; (4) FA Vision continuously gives support to its customers; (5) FA Vision advertises and collects profits for its service.\footnote{See Id; see also Naoya Isoda, Copyright Infringement Liability of Placeshifting Services in the United States and Japan, 7 WASH J.L. TECH. & ART 149, 180-82 (2011).}

In Rokuraku II case, the Defendant provides service of recording TV programs by leasing subscribers its own product – recording/transmitting device(named as “Parent Device Rokuraku”, which located in the Defendant’s place, plus a “Child Device Rokuraku” set-top device which locates in each subscriber’s home). After the subscribers requests a Japanese TV programs, the device requests programs onto its hard drive and then sends the programs to subscribers.

The Tokyo District court ruled that the Defendant, but not the subscribers, violated the right of reproduction based on two main reasons from the famous
Karaoke theory\textsuperscript{195}:(1) the benefit of such service that the Defendant gained;(2) the Defendant had fully control over its service, since the device located in the Defendant’s places, the defendant set the area of recordable TV programs, and the purpose of such service remained as allowing subscribers to obtained copied TV programs from Japanese Broadcasting companies.\textsuperscript{196}

The Intellectual Property High Court reversed the district court’s decision by countering each reason provided by the district court. The Intellectual Property High Court kept reasoning that there’s no difference between the subscribers setting up such kind of recording TV programs service and the Defendant setting up the same service for subscribers. The purpose and control issue remain the same: gain recording service via certain device, no matter who set or control such device. Further the court also mentioned that the economic profits the defendant collected from its service were for maintenance its device. The Intellectual Property High Court ruled that the Defendant only supported its subscriber’s legal private use – record air programs and watch them via streaming. Subscriber’s private use is legal under Japanese Copyright Law in Art 30(1), as a result, there’s no reason to punish

\textsuperscript{195} “Karaoke Theory” is a concept used in assessing the subject of utilization while it’s hard to decide a person is the subject of the physical utilization, it focus on two elements “management (control) and profit. This Karaoke Theory is the archetype, which had been used in the March 15, 1988, in Japanese Supreme Court’s decision in re “Club Cat’s Eye Incident”. And further following this, “exceeding initial expectations, there has been a tendency to expansively apply this in a variety of cases.” See Tatsuhiro Ueno & Ryu Kojima, Keynote Report: Indirect Infringement and Provisions Restricting Rights in Copyright Law, available at http://www.zijapanr.de/index.php/zijapanr/article/viewFile/384/405

\textsuperscript{196} Tokyo Chiho Saibansho [Tokyo Dist. Ct.], May 28,2008,2029 HANREI TAIMUZU 125 (Japan). See Naoya Isoda, supra note 194, at 189 (2011). (The author listed 5 reasons for the Tokyo District Court ruling that the Defendant violate the right of reproduction. In my opinion, these 5 reasons can be classified into two main parts simply in this dissertation: purpose and control.)
the Defendant since they merely act as provide the environment and conditions to ease the legal acts of reproduction by the subscribers.\textsuperscript{197}

However, the Supreme Court of Japan reversed the Intellectual Property High Court’s decision, it held that the Defendant made the copies of copyrighted works even though the subscribers initiated the reproductions. After considering how the Defendant manage and control its service, the court ruled that the Defendant did not merely provide the “environment and conditions” for easing the reproduction, but perform conduct integral to reproduction by controlling its service. Further, without the conduct of Defendant, subscribers were not able to initiate the recording.

In Yoridori-midori case, the Defendant provides a central server that made a main copy of selected programs and then transmitted this particular copy to each room in a specific apartment building. The Defendant gains fees for providing maintenance service. The Osaka District Court ruled that the Defendant did not violate the right of reproduction under the Karaoke Theory. However, the Osaka High Court reversed the district court’s decision. The Osaka High Court held the Defendant directly infringed the copyright by reasoning as follows: (1) the Defendant’s unique system allowed all residents in the building to view one particular copy of TV programs;(2) the Defendant kept maintaining its service via remote control;(3) the Defendant gained economic benefits from its service. Based

\textsuperscript{197} See Shigenori Matsui, \textit{Don’t you Want to Watch Television Programs Aired in your Country while you are Abroad?: Broadcasting, Reproduction, Public Transmission and Copyright}, 2015 U. ILL. J.L. TECH. & POL’Y 1, 18 (2015). (“The IPHC found that this was made possible by the increased demand from viewers abroad for television programs aired in Japan and by technological developments in digitalization and Internet transmission.” Such service will be gradually accepted because of the increased benefits they offer and eventually attain the status of standard electronic devices.)
on these reason, although the Defendant did not reproduce TV programs in a physical sense, he actually technically controlled its users’ reproduction act. What’s more, the defendant continuously assisted in the users’ illegal reproduction act by providing a support service and the Electric Program Guide data to users. So the Defendant indeed infringed the right of reproduction.

These cases, especially the first two cases determined by the Japanese Supreme Court clearly show that the Japanese way in locating the copier is simple: the service provider (time-shifting, recording, transmitting service) is the one who make the copy. The courts in Japan will consider two main issues that the Karaoke theory focused: control and profit. After such detailed analysis, it’s hard to tell the service providers do not control its service or gain profit. It’s a common sense that service providers have to “control” their service and gain economic benefits. What is interesting here is that temporary copies are still being differed from normal reproductions under Japanese Copyright Law. Without a solid copy which meets the concept of reproduction under Japanese Copyright Law, there’s no way in further deciding who makes the copy. So when the ISPs provide stream video/audio service in Japan, once there are no conceptional reproductions, there are no infringements. As a consequence, we can draw a conclusion that Japan rejects the idea of adopting the temporary copy as reproduction.

When dealing with how cloud computing affect the reproduction right, above sections show major countries’ two main considerations: Is there a “copy?” and who makes the copy. The following section will discuss these two considerations together with the new technology brought by the cloud computing. Furthermore, it will also analyze the reproduction right in China and provide a proposal for China.

A. How Cloud Computing Affect the Reproduction Right?

To normal people, they basically just use two main functions of cloud computing, under the model of SaaS. The first function is storing files into cloud—use cloud computing as invisible portable disk; and the other one is streaming video and audio online — use cloud computing as on-demand channels. Due to the architecture of Cloud Storage,—which means it is constituted by many distinguished resources, but still acts as one—the data of the works uploaded by users may be stored separately in different memory. When the data are stored separately, could it still be considered as a copy of the copyrighted work? The answer is obvious: of course yes. No matter how the works are stored in remote and invisible cloud memory, the stored works will be transmitted to users as the exact same whole works without extra process. Users are still able to use the “copy” successfully. So there’s no doubt that a copy is made when users upload files to cloud storage. However, as we all know, nowadays the function of cloud storage is not limiting to store data or share with others anymore. Most cloud storage servers can provide a “play online” function, which is similar as streaming. After

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199 See In re Aimster Copyright Litig., 252 F. Supp. 2d 634, 648 (N.D. Ill. 2002) (citing NLFC, Inc. v. Devcom Mid-Am., Inc., 45 F. 3d 231, 235(7th Cir. 1995)). (This case clearly states that there’s no question that when a user uploads a song to an ISP’s servers, a copy is made.)
locating audio/video files from others’ sharing cloud space, users could directly save those files to their own cloud storage space via a simple click, and then play them without downloading. Under this circumstance, is there a copy being made before users enjoying the audio/video file? And who makes the copy? So far, before play works online, a user has to save the particular work to his cloud storage space at least. This action of “save” is just a simple click, but the data have been transferred from others’ cloud storage space to a new space. It seems that a copy has been made. Further, the user is the one who makes the decision of “saving” a file to his own cloud storage space, and he’s also the one who clicks the button. As a consequence, the user is the copier. It seems that ISPs are irrelevant in such storing and playing online activities; they simply provide basic useful services. Nevertheless, with the development of deduplication technology, when a user uploads a file to his space in the cloud server, it’s hard to tell that the copy of the file is exactly made by the specific user who uploads it. Moreover, when a user try to “save” files from others’ cloud storage space to his space, are data really transmitted between these cloud storage spaces due to the deduplication technology?

Further, the issue of streaming audio/video still needs to be analyzed. Thus, when we try to analyze how cloud computing effect the reproduction right, we need to discuss this issue based on former analysis in two parts as follow.

a. When there’s a deduplication process, who makes the copy?

Data deduplication is also known as “Intelligent Compression” or “Single-Instance Storage”. It is a technical process that compares the new data planned to be stored in the server with the data already stored there. After an analysis, redundant
data will be eliminated. This technology helps saving storage space and reducing the bandwidth and total costs. Additionally, deduplication system also use “cryptographic hash function”, to recreate the input data from its hash value alone. By using this hash function, uploaded data will be indexed into hash tables (or digital fingerprint), and then it will detect duplicate data simply based on the hash tables. For instance, when a user tries to upload a song to a music locker’s server, with the help of hash function, the server decides that this song has the same hash table as a song which already on the server, it will give the user access to the file that already on the server instead of uploading the duplicate copy.

There are mainly two methods of deduplication. The first one is ISP himself makes a single master copy for users who have right to access that file. For instance, Apple use licensed master copy for users to download. The other method is used commonly in the music locker’s service: deduplication system runs to analyze each individual bits of data from each file to determine whether any data chunk from the song is already on the server. If the song’s data is already there, the server will provide users a link to that song other than uploading the song.

It’s easy to understand that if the ISP does not use deduplication, its server makes a copy of the file from the user’s device and stores that copy on the server.

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202 See ITUNES IN THE CLOUD, https://support.apple.com/kb/PH19610?viewlocale=en_US&locale=en_US (last visited Dec. 22, 2015). (This shows before users download files from Apple store via iTunes, they have to purchase the individual file first to get right to access.)
when a user try to upload a song. This situation is similar to the U.S. Cablevision II case, the ISP becomes a “passive conduit” which allows a user directing the upload and copy act. Therefore this process creates an infringing copy following a user’s direction indeed. So, ISP should not be directly liable for its users’ actions of copy.

When a user upload a file into his cloud storage space that has the deduplication function, does he really make a copy? First, under the first method of deduplication process—when the cloud service provider maintains a master copy, if the file is already in the cloud, the specific copy of the file will be deleted before it stores in the cloud server. The user will be direct to the existing master copy of the particular file without notice. \(^{203}\) It’s clear to us there’s no such specific copy being made in the user’s private cloud storage space. But to the user, there’s no distinct difference between the master copy provides by the ISP and the particular copy he makes himself due to the advantage of digital technology. So, in my opinion, a copy indeed has been made in the cloud storage space. And since the user directs the act of uploading a file, which means he uses the ISP’s service as a “passive conduit,” the user is the copier. However, if an ISP remains master copies of copyrighted works without any licenses, the ISP also infringes the right of reproduction under copyright law. Second, when ISPs do not provide master copies, no matter ISP operates post-process deduplication or in-line deduplication, if there’s an existing copy of the specific file uploaded by the user, the user will get the existing link to it; otherwise, his file will be stored in the cloud. There’s a copy being made no matter the file uploaded by the user is stored in the cloud or not in my personal view. The

\(^{203}\) In-line Deduplication, WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/Data_deduplication
user is able to play back his file anyway. And no matter the stored file is infringing copyright law or not, the copier is the user who uploads it. ISPs literally just serve automatically under the direction of the user, and their deduplication process also operates automatically. Moreover, there’s still left a question here, when the user is the copier of illegal reproduction, will ISP bear secondary liability for infringing the right of reproduction? This question is relevant to the “knowledge” (red-flag awareness) of ISPs that is relevant to their secondary liability, but not direct liability.

The operation of deduplication process seems not necessary to be discussed a lot under the topic of the right of reproduction, but it needs to be analyzed when consider about the right of communication to the public.

b. Is there a “copy” being created?—When “streaming” a video or audio from the cloud.

“Streaming” is now very popular technology for enabling consumers to access audio or video content via Internet.\(^{204}\) The content will be received and enjoyed by the end user while still being delivered by a provider. This Stream Media technology came true by taking advantage of the computer program (software or hardware) called “codec,” which is a portmanteau of Coder and DECoder. Many multimedia data streams contain both audio and video. Further, some metadata often contains synchronization of audio and video. Different programs, processes or hardware may manage every of the three kinds. While the multimedia data being in stored or in transmission, they must by encapsulated together in a container format,

which including “.mpg”,“.avi”,“.mov”,“.mp4” or”.tta.” 205In most situations, these specific container formats would only allow certain right decoder/player in accessing the stream data. Codec could help not only in compressing the initial digital video/audio data, which would allow more efficient transmission over the Internet, but also leave no trace of the compressed file on the users’ computers (unless the content owner allowed users to download the file).206 By understanding how the codec works, we can see that there will be no copies of stream audio/video stored in the hard drives of users’ computers.

Further, online media stream have two kinds: live or on demand. For live streaming, which also known as true streaming, it can be analogous to broadcast TV programs or radios. It sends data straight to the device without saving the file to a hard disk by using the user datagram protocol (UDP), which will ignore lost packets and accepts erroneous packets.207 We still have to realize, even there’s no copy save in a hard disk, there’re still lots of video/audio frame in the memory buffer. On demand streaming usually uses a method called progressive streaming (or progressive download), it saves the file to hard disks for longer period and then play the stream from this specific location. This method allows users to enjoy audio/video immediately (when a very small amount of data is received). Most web sites (Youtube) use progressive streaming, and they also use “free, open source Web server software” other than particular streaming server (for instance, Windows

207 UDP, THE FREE DICTIONARY, available at http://encyclopedia2.thefreedictionary.com/UDP (For true, live streaming, there’s no time for retransmission of errors or dropped packets.)
As also, temporary storage of segments of the on-demanded file takes place in the RAM of the end user’s computer or streaming server.

In order to answering the issue of whether there’s reproduction exists when streaming audio/video, the only way is to understand whether temporary copy (RAM copy) fall within the scope of reproduction under copyright law or not.

Different countries’ different attitudes towards temporary copy were clearly stated in the Basic Proposal for WIPO Copyright Treaty in 1996. Proposed Article 7 provided that Article 9(1) of the Berne Convention should grant the author the right of authorizing reproduction of their works that shall include permanent or temporary reproduction. Those notes which interpret Article 7 first analyze the importance of making a uniform definition of the reproduction by illuminating how technology effected, then the notes confirmed with certainty that temporary copy shall fall within the scope of the right of reproduction and indicate this is the only

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209 Diplomatic Conference on Certain Copyright and Neighboring Rights Questions, Basic Proposal for the Substantive Provisions of the Treaty on Certain Questions Concerning the Protection of Literary and Artistic Works to Be Considered by the Conference, prepared by the Chairman of the Committee of Experts on a Possible Protocol to the Berne Convention, Article 7, WIPO Document CRNR/DC/4 (Aug. 30, 1996). (Article 7: Scope of the Right of Reproduction 1) The exclusive right accorded to authors of literary and artistic works in Article 9(1) of the Berne Convention of authorizing the reproduction of their works shall include direct and indirect reproduction of their works, whether permanent or temporary, in any manner or form. (2) Subject to the provisions of Article 9(2) of the Berne Convention, it shall be a matter for legislation in Contracting Parties to limit the right of reproduction in cases where a temporary reproduction has the sole purpose of making the work perceptible or where the reproduction is of a transient or incidental nature, provided that such reproduction takes place in the course of use of the work that is authorized by the author or permitted by law.) Available at: http://www.wipo.int/edocs/mdocs/diplconf/en/crnr_dc/crnr_dc_4.pdf
way to harmonize effectively.\textsuperscript{210} Basically, US, EU, Canada, Australia agreed to adopt this Article 7 from the Basic Proposal.\textsuperscript{211} Japan, China, Thailand, Africa Group and Caribbean Group refused to adopt it.\textsuperscript{212} Since there was no consensus on the proposed Article 7, it had been removed from the Basic Proposal in 1996. However, in the Agree Statement which proposed by the US and been adopted by the Diplomatic Conference later, the Concerning Article 1(4) provided: “...the storage of a protected work in digital form in an electronic medium constitutes a reproduction within the meaning of Article 9 of the Berne Convention.” The meaning of “storage” from Agreed Statement led serious discussion and a wide gap among countries. Because of many reasons, lots of countries questioned that whether this Agreed Statement has the legal effect in interpreting the Basic Proposal.\textsuperscript{213}Basic Proposal for Diplomatic Conference of 2000 did not bring temporary copy into discussion; instead the conference mentioned that the reproduction right fully applies in the digital environment in its note 7.04.\textsuperscript{214}

\textsuperscript{210} Id, Notes 7.10-7.17. (Note 7.17 also mentions design limitations clauses to restrict the right of reproduction to avoid problematic effects.)
\textsuperscript{211} WIPO Doc. CRNR/DC/102, Summary Minutes, Main Committee I, para 285. (Australia, Singapore required specific and detailed limitations towards the temporary copy before they adopted Article 7.)
\textsuperscript{212} Id, para 295 ( Japan thought the scope of the right of reproduction should be determine by national copyright law; China proposed that the reproduction right should include direct and indirect permanent reproduction in any manner or form, which use “permanent” to limit reproduction.) Available at: www.wipo.int/edocs/mdocs/diplconf/en/crnr.../crnr_dc_64.doc
According to Prof. Samuelson, the second sentence from Concerning Article 1(4) was passed by majority vote, however, lots of delegations were even not there for voting, and this is the issue that was adopted via majority vote instead of unanimous consent. US fully supported this Agreed Statements, but lots of countries gave their dissenting opinions.
\textsuperscript{214} Diplomatic Conference on the Protection of Audiovisual Performances: Basic Proposal For the Substantive Provisions of and Instrument on the Protection of Audiovisual
Further, as mentioned in this part earlier: US, EU member States, Canada, Australia and other developed countries mostly agree that temporary copy should be treated as reproduction under the copyright law in recent years, all their attitudes could be told from their decisions in numerous cases. The differences among these countries are their specific requirements of the scope of definition of reproduction, exemptions of being regulated as copies and the issue: who makes the temporary copy. Japan, South Korea, China and most developing countries still rejected the idea that bringing temporary copy into the scope of right of reproduction. Developing countries make such decision is because the need of economic benefit from protecting national copyright industries. Once temporary copy is considered as reproduction under copyright law, users from developing countries may face huge risks and have to pay “royalty” in accessing data from developed countries. As we all know, developed countries maintain their leadership in the network market by taking advantage of their advanced technologies and competitive culture. They are already the origin regions of useful data in the


215 See Connection Community Content: The Challenge of the Information Hightway, Final Report of the Information Highway Advirosy Council (Sep, 1995) available at: http://archive.ifla.org/documents/infopol/canada/jhacfnl.txt (Canada insisted the copyright owner should have the right to determine whether and when browsing should be permitted on the Information Highway in order to strike a balance between the interests of creators and users. This clearly indicated that Canada's attitude is protecting the copyright owners’ economic interests); See also Commission of the European Communities: Communication from the Commission, Follow-up to the Green Paper on Copyright and Related Rights in the Information Society, Brussels, p.11 (1996) (According to the Follow-up Green Paper, if the specific reproduction damage the legal interests of copyright owners, they should have the right to control such reproductions); See also Pamela Samuelson, The Copyright Grab, Wired Vol. 4 Iss. 1 (1996) available at: http://www.wired.com/1996/01/white-paper/
network world. They will gain numerous economic benefits from developing countries’ act of “access date.” As a consequence, developing countries will suffer from this “data monopoly” under such regulation.

However, with the development of technology, such as streaming online, it’s time to make a change. After clarifying these main viewpoints from the world, I will propose a proposal for China in deciding such issue by considering specific Chinese situations.

**B. The Right of Reproduction and a Proposal for China**

Article 9 (5) of the Chinese Copyright Law does not bring temporary copy into consideration, it simply states that: “the right of reproduction is the right to reproduce one or more copies of the work by means of printing ...”\(^{216}\) China’s copyright law did not consider works in digital format until Dec. 1999. National Copyright Administration of the People’s Republic of China published “Copyright Provisions about Produce Digital Products” in 1999, which clearly stated that no matter in what form the original work is fixed, when it being transformed into digital format, the original work is being reproduced within the definition of Copyright law Article 9 (5).\(^{217}\) However, based on an announcement in the Basic Proposal for WCT, we can easily find that China did not want to bring temporary copy into the scope of definition of reproduction. Several years later in 2006, although temporary copy issue had been discussed for many times, and even been

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proposed in the draft of Regulation on the Protection of the Right to Communicate Works to the Public over Information Networks, temporary copy still did not fall within the scope of the right of reproduction in China. The Spokesman of Legislative Affairs Office stated: “the action of forbid temporary copy will stop end-users from enjoying works directly online. But there’s no feasibility to stop end-users’ nonoperating use of online works. Further, the issue of temporary copy is still under discussion and has not yet reached a reasonable conclusion. China has already indicated that it does not support regulating temporary copy same as reproduction under copyright law. As a consequence, it’s inappropriate to use this regulation, which is a delegated legislation, to regulate temporary copy, which has not been admitted by the copyright law in China.”

Chinese scholars also discussed a lot about the issue of temporary copy. Professor Wang Qian rejected the idea that temporary copy fall within the scope of the right of reproduction. He provided three reasons. First, temporary copy in RAM is incidental and objective products (phenomenon) of technology. Temporary copy will exist once users try to browse the Internet, and it is unavoidable. However, users usually do not realize there are such acts of copy happened, they don't intentionally make the act of “copy.” Second, temporary copy of copyrighted works in RAM does not have independent economic value. Once traditional copies being made, copyright owners could distribute them to the public for financial benefits. But temporary copy could not be used and distribute for financial benefits. It’s

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218 Zhang Jianhua(张建华) Xinxi Wangluo Chuanboquan Baohu Tiaoli Shiye(信息网络传播权保护条例释义)[Explanation on Regulation on the Protection of the Right to Network Dissemination of Information](2006), at 107-08.
important to differ independent economic value from economic value. Users indeed could enjoy works by browsing website that will use temporary copy such as RAM and such browse action has economic value literally. However, access to temporary copy is just an incidental act and technical side effect caused by act of browsing, users has no intent to access temporary copy solely. So temporary copy does not have independent economic value. Third, it’s unable to control users’ act of browsing via legal regulations. Numerous users browse, it’s impossible to pursue each user’s liability.  

However, in my opinion, with the development of technology, Professor Wang Qian’s viewpoint seems unreliable. First, browse is not the only way to cause temporary copy, they are being made everywhere at any time. As I mentioned earlier, we are facing the challenges derived from cloud computing—online streaming. This technology of online streaming itself is a huge threat to copyright owners. Without act of download, it’s harder for copyright owners to protect their right of reproduction and their financial benefits accordingly. Second, users are now able to access temporary copies in RAM and store them in tangible medium for later use. Norton had already developed such software named as “Norton Diskedit.”

Third, nowadays, lots of temporary copies are stored on ISPs’ servers. ISPs had already gained financial benefits by providing streaming service under SaaS model. Further, ISPs are getting more capable of controlling the contents on their servers

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219 Wang Qian(王迁), Wangluo Huanjingzhong Zhuzuoquande Baohu Yanjiu(网络环境中著作权的保护研究)[Copyright Protection in the Network Environment](1st ed. 2011), at 50-67.

via new technology. So, it’s time to get temporary copies involved the scope of the right of reproduction. Whereas if copyright owners were granted such unlimited right of reproduction, it would result in abuse of the right of reproduction and restrict the public right’s to know. So, specific limitations need to be legislated at the same time.

There are usually three kinds of resolutions in solving the challenges brought by new technology. First is to create a new category of right; second is to make an expended interpretation to the existing right; third is to solve the problems in non-copyright ways. Some scholars in China suggested extending the right of rental because under the model of SaaS, when users use software or streaming service, temporary copies of such data are under control of users. When users stop using them and turn off browsers, those temporary copies will be rewrote and deleted from users’ devices and the ISPs’ servers. Then users have to ask ISPs to provide such data again when they try to use the service again. This type of extension of the right of rental seems quite reasonable, but there are legal uncertainties in this theory. The object of the right of rental includes two parts: works and the medium of works. Based on the feature of SaaS’s process, the carrier of works here is the data provided by ISPs and RAM provided by the users (or together with the ISPs, or only by the ISPs). Further, the rental object that used by users are created temporarily.

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221 For instance, the deduplication process, which uses "hash tag," is able to help ISPs in identifying lots of contents.
222 Chen Ende(陈恩德), Yunjisuan Huanjingxia Linshi Fuzhide Dingwei(云计算环境下临时复制的定位) [The role of Temporary Copy Under the Cloud Computing], Vol. 18, No.9 Changchun Jiaoyu Xueyuan Xuebao( 长春教育学院学报)[J. of Changchun Educ. Inst.](2015)(China).
and additionally, the basic number of such object owned by ISPs does not change.\textsuperscript{223} Some scholars also suggest that the right of access should be created, which means users should pay fees for accessing data every time.\textsuperscript{224} As I mentioned in the US part, such access right would not work out in the US or China because of several reasons: (1) copyright owners’ right will be overprotected, under the right of access, users will face charges or lawsuits even they simply browse the Internet via their devices; (2) once the access right been adopted by the whole world, developed countries will gain innumerable monopoly interests. Developing countries such as China, who are weak in independent technological innovations and most of time users of technology, will face heavy payment. (3) Chinese people have a tradition of “sharing,” with Cloud computing, the process of “sharing” is simple and quick. We can limit that only copyrighted works with authorization can be shared. But, if even access data is illegal, that’s totally not going to work out in China. So, adopting the right of access does not conform to China’s actual conditions.

After the publication of the draft of new Copyright Law in China, we know that China is really considering an expanded interpretation of the right of reproduction in order to solve the temporary copy issue. Article 13 (2)(1) states:

\begin{footnotesize}

\textsuperscript{224} Xiong Qi(熊琪), Lun Jiechuquan—Zhuzuo Caichanquan Leixing Huade Buzuyu Kefu(论接触权—著作财产权类型化的不足与克服)[Analyzing the Access Right— the insufficient and Conquer of the Categorization of the Copyrights], No.5 Falv Kexue(法律科学)[Sci. of Law](2008)(China).
\end{footnotesize}
“the right of reproduction, that is, the right to fix the work in tangible medium by means of printing, Xeroxing, recording, re-shooting or digitizing.” For the very first time, China brings digitizing issue into copyright law. Although there are no such specific limitations within the draft, China has already changed its attitude toward the issue of temporary copy. From my point of view, there are three reasons for such change. First, most other countries had already adopted such idea of “temporary copy is reproduction under the copyright law.” Cloud computing service has been used globally (and cloud servers are located separately all over the world), and more copyright infringements are happening between different countries nowadays. To cope with lawsuits relevant to temporary copies around the corner, China has to prepare for it. Second, streaming service or cloud storage service indeed harm copyright owners’ deserved benefits. One of the goals of copyright law is encouraging authors to create and distribute new works. If copyright owners could not gain their deserved benefits, why should they keep creating? Third, current copyright law truthfully could not balance the interests among users, ISPs and copyright owners anymore on this issue. Users pay fees in order to gain service or copyrighted works from ISPs, but in China, copyright owners would get nothing. This situation has to be changed in China. Unlike the U.S. can leave this issue unsolved to the courts rather than amend the copyright law, China as a civil law country has to regulate it by reasonable and predictable legislation.

In my opinion, it’s absolutely correct for China to take temporary copy into the scope of the right of reproduction. However, temporary copy caused by reasonable access to copyrighted work should be considered as reasonable and
lawful. According to the US and EU’s regulations, we can see they both mentioned two kinds of exceptions of temporary copy: (1) it’s an incidental temporary copy; (2) it’s sole purpose is to enable non-infringing use. Although ECJ still have many detailed conflicts in understanding these two exceptions, but the basic trend is clear and correct. What’s non-infringing use? What’s the definition of incidental? These are the questions, which cannot be answered once as a rule. We need to consider more and more cases brought to the courts, and find a reasonable discipline. Then, to me, EU’s other two exemptions seem also reasonable in China: (1) the temporary is an essential part of technical process;(2) the temporary has no independent economic value. If a temporary copy is avoidable in the technical process that means it’s optional. There’s no need of exemptions for optional temporary copy. Next, if temporary copy has independent economic value, and can be accessed and used with current technology, it should not have exemptions either. Its characteristic has already harmed the market value of the copyright owners’ works. Third, if China adopted the view of “temporary copy are reproduction under copyright law,” then who’s the copier? The US courts, EU courts did not give their explicit answer so far. Australia had already made its conclusion that ISPs should be responsible for infringing the reproduction right, so did Japan. In my opinion, although it’s users who directly direct the act of store, streaming or browse, ISPs whose technology are highly developed, can still be liable for such infringement. ISPs already have deduplicated technology in saving space in the cloud; they can also develop technology in detecting and deleting infringing materials on their

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225 US court ruled that Redigi should bear liability of infringing the right of reproduction. But that’s only one example, and the decision was made by New York District Court.
server either for sure. Moreover, ISPs could gain financial profits from infringements, no matter who initiate them. ISPs indeed affect the commercial market of copyrighted works by providing such service. Further, ISPs who simply provide music locker service or on-demand video service, they fully understand their service could cause numerous infringements, there’s no excuse for them to reject protecting copyright owners’ interests anymore. However, ISPs could not do these all by themselves. Copyright owners, who have or will gain benefits from ISPs’ service, should cooperate with ISPs. As a result, there can still be exemptions for ISPs to bear such responsibility: (1) If ISPs have such detecting and deleting software; it’s the copyright owners’ responsibility to provide “hash tag.” (2) There should be a reasonable minimum number of infringing materials, once the number met this minimum limits, ISPs then infringe right of reproduction.

II. Infringe the Right of Communication to the Public

Like the reproduction right, the next copyright owners’ important exclusive right is the right of communication to the public. There’s no doubt that cloud computing will also put the ISPs under risk of potential infringement of such right. For the first time, the right of communication to the public is regulated in Berne Convention. But it did not provide a general right. Instead it provides a collection of scattered rights and different types of protections to different types of works.²²⁶

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Every country followed the Berne Conventions regulated the right of broadcast, which is a right to publicly disseminate works by wireless or wired means. From these provisions, two main characteristics can be identified from the traditional broadcast via wired or wireless means. First is that the broadcasters remain in leading role. A broadcaster can entirely control the content and the timing of broadcasting; audiences could merely follow a broadcaster’s schedule. Second is the only point to multi-point transmission model of broadcasting. This makes its audiences unspecified. All audiences who are in the area be covered by the broadcast signal can receive the specific broadcasting at specified time. It’s clear that the Internet “interactive communication” service is different from the traditional broadcast. Because comparing to the traditional broadcast, the interactive communication has a distinct characteristic: an audience’s self-choice of the content, the time and the place of the communication. Once works have been uploaded to the Internet, copyright owner of those works can no longer control access to them. Audiences can “communicate on demand.” Therefore, interactive communication is beyond the scope of protection of the rights regulated by Berne Convention (especially the right of broadcast). However, Article 8 of WCT was

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227 For instance, German Copyright Law, Article 20 regulates: “The right of broadcasting is the right to make a work accessible to the public by broadcasting, such as radio or television transmission, satellite broadcasting, cable broadcasting or by other similar technical devices.” Available at: http://www.wipo.int/wipolex/en/text.jsp?file_id=126255
228 Interactive Communication, WIKIPEDIA.ORG, https://en.wikipedia.org/wiki/Interactive_communication
framed to specify the act of interactive communication.\textsuperscript{229} It also provides a general right of communication to the public, which offers protection to authors of all types of work.\textsuperscript{230} Article 8 did not include language states that this article attempts to regulate interactive communication, but there evidence could still be found from the WCT's Basic Proposal. Language in Basic Proposal clarified “communication” as “making a work available to the public by any means or process other than by distributing copies,”\textsuperscript{231} and “communication” could be treated as a synonym for “transmission.”\textsuperscript{232} In order to enforce Article 8 which indicates copyright owners have the right of communication to the public when there’s interactive communication, member states of WCT have two ways: first is extending the scope of existing right; second is creating a new category of exclusive right. The U.S. extends the scope of the distribution right, the performance and display rights, and makes judges use their discretion in practice. The EU countries (such as UK), created the right to make available to the public, Australia added “making a work available online” to “the right to communicate to public,” Japan uses “rights of public transmission,” and China also add “the right of disseminate works to public over information networks” to its copyright law.

\textsuperscript{229} Sari Depreeuw, \textit{The Variable Scope of the Exclusive Economic Rights in Copyright}, (2014), at 355-358.
\textsuperscript{230} WIPO Copyright Treaty, adopted in Geneva on Dec 20,1996. Article 9 Right of Communication to the Public:” ... authors of literary and artistic works shall enjoy the exclusive right of authorizing any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them.”
\textsuperscript{231} Basic Proposal for the substantive provisions of the treaty on certain questions concerning the protection of literary and artistic works to be considered by the diplomatic conference on certain copyright and neighboring rights questions, Geneva, December 2-20, 1996,44, note nr. 10.14.
\textsuperscript{232} \textit{Id}, 46, note nr. 10.15.
It’s obvious that cloud computing affect the right of communicate to public seriously. For instance, live streaming is not a kind of “interactive communication” \(^{233}\) regulated by exclusive right of authors, but it indeed is communication via information network. How could the right of communicate to the public be applied to it? Further, with the technology of deduplication that mentioned in last section, when there’s a master copy or an individual copy stay in ISPs’ storage space, is there a communication to “public?” What’s the definition of “public?” In order to answers these unresolved questions, an observation on major countries’ current solutions is needed.

i. The U.S. Part

As I already mentioned, U.S. attempts to interactive use it’s the right of distribution and the right of public performance and display in dealing with the requirement of applying the right of communicate to public by WCT. This section will discuss the right of public performance mainly, because it’s much more relevant here and we will save the right of distribution for next section. To understand the right of public performance in the U.S., it’s important to examine its law developing trend and related precedents.

Under the U.S. copyright law, the right of public performance is an exclusive right, which allows copyright owner to control when the copyrighted works is performed publicly. And a performance is “public” if it is performed in “a place open to the public or at a place where a substantial number of persons outside of a

\(^{233}\) Live Streaming, URBAN DICTIONARY, available at http://www.urbandictionary.com/define.php?term=live+streaming (To explain this notion easily, it’s a live broadcast of a TV program on the Internet. Thus users could not choose when to enjoy the work, but only the place.)
normal circle of a family and its social acquaintances are gathered,” or if it is transmitted to multiple locations through TV or radio. This shows that at the beginning, the right of public performance does not cover transmission technology that has not appeared such as cable TV. Therefore, the Supreme Court’s attempt to decide whether companies provide community antenna (cable providers) violate the author’s right of performance in two cases is then crucial. The Supreme Court sided with the cable providers, held that unauthorized retransmission of television broadcast, received by antenna then retransmitted to end-users through coaxial cable, did not violate the copyright owner’s right of performance, because the cable providers merely provide end-users a way to capture content that they could legally capture through the use of their own antennas.\textsuperscript{234} The Supreme Court even explicitly pointed out that it was the Congress’s job to “accommodate [the] various competing considerations of copyright law…”.\textsuperscript{235} Later in 1976, the Congress revised the Copyright Act, specifically added “Transit Clause” to the right of public performance, the Supreme Court’s decision still illustrated courts’ tendencies on this issue – to interpret law in a “technology-sympathetic” way.\textsuperscript{236} Later case Cablevision II and Aereo I & II are clearly followed such trend: allow a new way of public performance

\textsuperscript{234} See Fortnightly Corp. v. United Artists Television, Inc., 392 U.S. 390 (1968); see also Teleprompter Corp. v. Columbia Broad. Sys. Inc., 415 U.S. 394 (1974). The Supreme Court concluded that CATV “falls on the viewer’s side of the line,” if an individual erected an antenna on a hill, strung a cable to his house, and installed the necessary amplifying equipment, he would not be ‘performing’ the programs he received on his television set.” According to the court, “the only difference in the case of CATV is that the antenna system is erected and owned not by its users but by an entrepreneur.” Fortnightly Corp, at 399-400.

\textsuperscript{235} Fortnightly Corp case, supra note 234, at 402.

\textsuperscript{236} See Daniel L. Brenner & Stephen H. Kay, ABC V. Aereo, Inc: When is Internet Distribution a “Public Performance” Under Copyright Law?, 24 INTELL. PROP. & TECH. L.J. 12, 15 (2012) (“Policy-wise,... decisions can be viewed as technology-sympathetic—allowing new distribution systems to develop without being blocked by copyright.”)
to develop without limitation from judicial review until Congress directly address this issue. Before the Supreme Court final judgment of Aereo III case came out in 2014, most scholars and professors relied on these two cases and the Cablevision II case, made a forecast that the Supreme Court still will leave the contour of the right of public performance to the Congress.\textsuperscript{237} However, this time, the Supreme Court made their conclusion based on their understanding of the Congress intention. We will track the development of literature's understanding of the right of public performance by an important chronological case analysis.

\textbf{A. In 1976 Revised Copyright Act}

Briefly speaking, the Congress explicitly rejected the Supreme Court's decisions in the above-mentioned cases by adding the "Transit Clause." The Congress had to make such changes to adapt changes in technology area. Basically, the 1976 Copyright Act provide copyright owners exclusive right to perform publicly – limited to public performance.\textsuperscript{238} § 101 explicitly defined "publicly" as :

"(1) to perform or display it at a place open to the public or at any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered; or (2) to transmit or otherwise communicate a performance or display of the work to a place specified by clause(1) or to the public, by means of any device or process, whether the members of the public capable of receiving the performance or display receive it in the same place or in separate


\textsuperscript{238} 17 U.S.C. § 106(4)
places and at the same time or at different times.”\textsuperscript{239} The second part is the "Transit Clause," which means a public performance will happen when a work is transmitted to the public that regulated in the first clause. The most important word here is “transmit.” This word is not only significant here but also in our further analyzing of live streaming or on-demand streaming. Here, the Congress defined it as a “communication by any device or process whereby images or sounds are received beyond the place from which they are sent.”\textsuperscript{240} After considering the background of such changes by the Congress, a clear conclusion is drawn: transmit or retransmit broadcast signals that contained copyrighted works constitute a public performance.\textsuperscript{241} Further the Congress also showed its intention to extend this definition by stating “to include all conceivable forms and combination of wired or wireless communications media, including but by no means limited to radio and television broadcasting as we know them.”\textsuperscript{242} From here, it seems that copyright owners should use the right of public performance to control video/audio streaming service via the Internet because of the Congress’s intention. However, with further explanations by several courts in several landmark cases, it’s still hard to draw a concrete contour of the right of public performance. The following sections will address this issue in details.

\textsuperscript{239} 17 U.S.C. § 101.
\textsuperscript{240} Id.
\textsuperscript{241} H.R. Rep. No. 94-1476, at 63 (1976). ("A cable television system is performing when it retransmits the broadcast to its subscribers.")
\textsuperscript{242} Id, at 64.
B. **Single Copy requirement of Transmit Clause—Redd Horne case, On Command case, Nimmer’s suggestion and Cablevision II**

An important requirement had been added and been adopted widely when applying the Transmit Clause from 1976 Copyright Act – single copy requirement. It played an important role in decades in pre-Internet era. Professor Nimmer made a hypothesis: whether every consumer has to obtain a public performance license to play their legally purchased works in “theaters in which patrons occupy separate screening rooms?” The answer is obvious: no. It’s ridiculous for a consumer to do so simply because this same copyrighted work had been played at other times. Professor Nimmer then came up with a solution—which worked well in pre-Internet era, to solve such issue: “what must have been intended was that if the same copy (or phonorecord) of a given work is repeatedly played (i.e. ‘performed’) by different members of the public, albeit at difference times, this constitutes a ‘public’ performance.” Redd Horne case and On Command case’s holding then reflected Professor Nimmer’s single copy requirement, and these rules further affected following cases.

In Redd Horne case, the defendant operated a “in-store rental” business which allow consumers to enjoy video cassette in small, private booths with televisions. After a consumer selects a film to watch, a store employee will play

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244 Id. (By limiting the potential audience to those seeing a particular copy of a work, one could avoid the dilemma of defining a public performance under the transmit clause in too broad a sense. This theory of “limiting the potential audience further been adopted by the Cablevision case.)

the video cassette with a VCR and then transmit the signal to the customer’s booth. Citing Professor Nimmer, the 3rd Circuit held that “this was a public performance because the same copy of the work, namely the individual video cassette, was repeatedly ‘performed’ to different members of the public at different times.” Citing Professor Nimmer, the 3rd Circuit held that “this was a public performance because the same copy of the work, namely the individual video cassette, was repeatedly ‘performed’ to different members of the public at different times.”246 And the facts are similar in the On Command case, the defendant had a system, which consisted a bank of VCDs centrally located in the hotel’s equipment room, and then transmit signal of on-demanded film video to hotel rooms.247 It’s obvious there’s only one videotape per film, and it fits the single copy requirement mentioned above.248

This single copy requirement works well at that time, because of the technology limitation — cost of making copies, but it also create a big legal loophole. For instance, with the development of technology, smart cable TV providers and online-streaming service providers create a type of one-to-one interaction with their customers, which means there are numerous copies of a work. In doing so, they can ensure their performance are “private.” It’s not a hypothesis any longer, since they had already take advantage of such loophole in Cablevision II case—

246 Id, at 159. (Actually it was the District court who cited Professor Nimmer: “The two Maxwell’s facilities each have only one copy of a given work repeatedly. We find that Congress intended that this portion of the definition also serve as protection for copyright owners from infringing performances such as those accomplished by Maxwell’s showcasing.” Columbia Pictures Indus., Inc. v. Redd Horne, Inc., 568 F. Supp. 494, 501 (1983) )


248 See Leaffer, supra note 32, at 342.(“The definition of ‘perform a work publicly’ in the Copyright Act would cover these multiple, sequential performances of single copy of a motion picture to different members of the public even though they may be to individual rooms in the same hotel.”)
unique copy of works transmitted to one specific customer. There’re several existing cases affected by this single copy requirement.

The next significant case – Cablevision II, which was viewed by the 2nd Circuit arose in nearly a quarter-century later. The 2nd Circuit also considered the single copy requirement, but finally made a very different decision compares to the Redd Horne and On Command case. The basic facts of Cablevision case we had already mentioned in former part when discuss the right of reproduction, what we need to know here is that Cablevision transmits the program from the company’s hard drives to the subscriber’s home once he requests what he has recorded.249 The District court in Cablevision I held that there was public performance because Cablevision was transmitting the same program to public members who were simply receiving the same performance at different times in different places.250 But, the 2nd Circuit explicitly rejected those conclusions that seemed affected by the single copy requirement. The 2nd Circuit stated that the District court’s decision was based on “potential audience of the underlying work, rather than the potential audience of a particular transmission.”251 Nonetheless, Cablevision indeed stored a unique copy of each customer’s recorded programming.252 The 2nd Circuit concluded there was no public performance, because such one-to-one relationship, which means only one copy being made by and sent to one specific customer, was

249 Cablevision II, supra note 33, at 125.
250 Id, at 135.
251 Id.
252 Id, at 137.
more like a private performance. The 2nd Circuit’s using of single copy requirement is far out of line, and it also realized such decision will led to technological loophole. But as mentioned above, smart providers are already able to take advantage of such decision. That’s why so many scholars criticized this decision: they realized that this decision “appear to exclude every instance of on-demand performances, a result at odds with congressional intent and the copyright owner’s vital economic interests.” According to Professor Goldstein, the 2nd Circuit wrongfully treated “transmissions” equal to “performance” in applying the transmit clause. The 2nd Circuit again made this mistake in further case—Aereo II.

C. Zediva, FilmOn X and Aereo Case

These cases actually reflected how on-demand performance service providers tried to take advantage of the decision of Cablevision II case as mentioned

253 Id. (“Because the RS-DVR system, as designed, only makes transmissions to one subscriber using a copy made by that subscriber, we believe that the universe of people capable of receiving an RS-DVR transmission is the single subscriber whose self-made copy is used to create that transmission.”)
254 Id., at 139-40. (“This holding… does not permit content delivery networks to avoid all copyright liability by making copies of each item of content and associating one unique copy with each subscriber.”)
255 For instance, the Defendant in Warner v. WTV case argued that their “remote DVD playback transmissions” were not “to the public” because only one person was capable of receiving that transmission. Warner Brothers Entertainment, Inc. v. WTV Systems, Inc., 824 F. Supp. 2d 1003, 1011 n.7 (C.D. Cal. 2011) [hereinafter Zediva case].
256 Leaffer, supra note 32, at 344.
257 PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT (3rd ed. 2005), at 7.7.2. (Professor Goldstein firstly pointed that in § 101: “to transmit … a performance… by means of any device or process whether the members of the public capable of receiving the performance or display, receive it in the same place …,” the world “it” should refer to “performance or display,” but not transmission. Then such misreading of “performance” and “transmission” also undermine Congress’s intention in bringing individual on-demand performances within the scope of the public performance right by stating same or different place and time. However, by treating transmission equal to performance, the 2nd Circuit effectively excluded the individual on-demand performance from the scope of the public performance right.
above, and how courts, especially the Supreme Court interpret the definition of the 
right of public performance in modern technology era.

In Zediva Case, the defendant provided an online “DVD Rental” service. The 
defendant used hundreds of DVD players to play copyrighted but legally purchased 
DVDs, and converted the analog video signal from the DVD player into a digital 
signal, then transferred such signal to the requested customer via streaming service 
online. The defendant tried to cite the Cablevision II in its argument, but the 
district court clearly pointed out “defendant’s customers do not produce their own 
unique copy ...” The district court compared Zediva system to On Command 
system, and found these two systems were analogous. The district court’s decision 
is quite reasonable, because no matter how the defendant converted the signals, the 
works numerous end-users enjoyed at different places in different time were from 
the same DVD.

Then, here’s the series of Aereo case. This case went through district court, 
the 2nd Circuit and finally made to the Supreme Court in 2014. This dissertation will 
name the case sequence as Aereo I, Aereo II and Aereo III. The basic background of 
this case was the same: Aereo provided a service which allows its customers to 
watch TV programs on the Internet at the same time as the programs are broadcast 
on air. It uses small antennas for the retransmission, and once a customer selected a 
show, an antenna will dedicate to this customer alone. Aereo tried to use 
Cablevision II’s rule in defense: each performance is “capable of being received by

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258 Zediva Case, supra note 255, at 1007.
259 Id, 1011 n.7.
one and only one subscriber.” The District court in Aereo I rejected the plaintiffs’ claim—Aereo violated their right of public performance by reliance on the Cablevision II’s rule—unique copy transmit solely to only one customer. Then, in Aereo II case, the 2nd Circuit affirmed the district court’s decision relied upon its own decision in Cablevision II. The 2nd Circuit stated that the Plaintiffs’ interpretation of the transmit clause is incorrect. The 2nd Circuit held that there’s no public performance at issue based on two reasons: (1) the performance here was the particular transmission created by Aereo under the direction of specific user; (2) the “members of the public” who’s capable of receiving the performance is only one subscriber who directed the solely transmission.

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261 Aereo III, supra note 269, at 2508. Such defense is quite similar to the Cablevision II case decision: one-to one relationship, one performance sent to only one customer, this situation makes the performance private.


263 As mentioned above, according to Professor Goldstein, the 2nd Circuit concluded a wrong decision based on it wrongfully treat “transmission” equal to “performance.” Thus, here, the 2nd Circuit made a wrong decision again in the Aereo II case based on the same wrong reasons.

264 WNET v. Aereo, 712 F.3d 676 690-91(2d. Cir. 2013)[hereinafter Aereo II]. (The plaintiff argued that the court should consider each of Aereo’s transmissions via its small antenna in the aggregate in deciding whether they are public performances, because the transmissions are of the same underlying programed and received by the public members.)

265 Id. See also Goldstein, supra note 257, paras 7.168- 168.1. ( The 2nd Circuit used “four guideposts” in reasoning its conclusion. First, under the Transmit Clause, the courts have to consider the potential audience of the individual transmission. “if that transmission is ‘capable of being received by the public’ the transmission is a public performance…” Second, private transmission means the transmissions that cannot be received by the public. Private transmission should not be aggregated. Thus it’s “irrelevant to the Transmit Clause analysis whether the public is capable of receiving the same underlying work or original performance of the work by means of many transmissions.” Third, no-aggregation rule has an exception, which is under a situation of private transmissions are generated from the same copy of the work. Under this circumstance, the private transmissions “should be aggregated.” Fourth, “any factor that limits the potential audience of a transmission is relevant to the Transmit Clause analysis.”)
In 2014, the Supreme Court reversed the 2nd Circuit's rule on this issue in Aereo III.266 Joined by other 4 Justices, Justice Breyer held that Aereo did publicly perform the copyrighted work based on two reasons. (1) the Congress intended “to bring the activities of cable systems within the scope of the Copyright Act,” and Aereo’s services are “substantially similar to those of the CATV companies,”267 Aereo “performs.” (2) The Supreme Court rejected Cablevision’s “no-aggregation” rule by stating that the transmit clause suggested “one can transmit or communicate something through a set of actions.” “Thus, one can transmit a message to one’s friends irrespective of whether one sends separate identical emails to each friend or a single e-mail all at once.”268 As a result, in the Aereo case, Aereo perform the same work no matter it transmits from the same or separate copies.269 And further the underlying work was sent to subscribers who have no prior relationship with each other.270 Therefore, Aereo performs “publicly.” Here, the Supreme Court explicitly rejected “a single copy requirement” by stating that “the Clause suggests that an

266 Aereo III, supra note 260. (The Supreme Court reversed the 2nd Circuit’s “first and most important” guidepost that “if the potential audience of the transmission is only one subscriber, the transmission is not a public performance.”)

267 Id, at 2056. (Although “the language of the Act does not clearly indicate when an entity ‘perform’...and when it merely supplies equipment that allows others to do so”, if looked backed into the legislative history, we can find that the Congress amended the Copyright Act because its disagreement of two Supreme Court cases—Fortnightly Corp and Teleprompter Corp case which we mentioned above. The Congress enacted new language in clarifying that to ”'perform' an audiovisual work means 'to show its images in any sequence or to make the sounds accompanying it audible” and added transmit clause that made cable TV providers as performers. And there are no significant differences between Aereo and Cable TV because:(1)there’s no important difference between their system;(2)their “commercial objective” are the same;(3)the users"viewing experience” is not “significantly altered”.)

268 Id, at 2509.

269 Id. (“...it shows the same images and makes audible the same sound. Therefore, when Aereo streams the same television program to multiple subscribers, it 'transmits.... a performance' to all of them.”)

270 Id, at 2509-10.
entity may transmit a performance through multiple, discrete transmissions."\textsuperscript{271} Justice Scalia and 2 other Justices dissented; they accused the majorities of adopting "an improvised standard (‘looks-like-cable-TV’) that will sow confusion for years to come."\textsuperscript{272}

The Supreme Court indeed limited its holding to “cable companies and their equivalents,”\textsuperscript{273} which means it left the issues open under cloud computing context. According to the Supreme Court’s decision here, the technology developers just need to avoid developing “Cable-TV-alike-system.” Then they can avoid violation of the copyright owners’ the right of public performance.\textsuperscript{274} Aereo now is taking such actions to avoid infringements.\textsuperscript{275} Scholars criticized the Supreme Court’s rule for three reasons: (1) This decision relied largely on legislative history and congressional intent, so it ignored key doctrinal concerns – volitional conduct—as

\textsuperscript{271} \textit{Id.}
\textsuperscript{272} \textit{Id}, at 2512-17. (Scalia, J., dissenting). (Justice Scalia mainly gave three opinions: (1) the majorities did not consider the “volitional conduct”, it was Aereo’s customer who selected the copyrighted content, Aereo simply “offers access to an automated system... lies dormant until a subscriber activates it.” (2) The majorities’ “guilt-by-resemblance” approach reliance on no grounding in the statute; (3) The majorities “distort the Copyright Act to forbid” what Aereo is doing. It’s the Congress’s job to decide whether the Copyright Act needs an upgrade.)
\textsuperscript{273} \textit{Id}, at 2510.
\textsuperscript{274} Lee, \textit{The Supreme Court’s Aereo Decision Could Endanger Cloud Storage Services}. \textit{Vox} (Jun. 25,2014) \url{http://www.vox.com/2014/6/25/5841820/the-supreme-courts-aereo-decision-could-endanger-cloud-storage} (Grimmelmann states:” the Court is sending a very clear signal that you can’t design a system to be the functional equivalent of cable. The Court also emphasizes very strongly that cloud services are different. But when asked how, it says ‘they’re just different, trust us’“.)
\textsuperscript{275} Emily Steel, \textit{Aereo Concedes Defeat and Files for Bankruptcy}, \textit{N.Y.TIMES} (Nov. 21, 2014) \url{http://www.nytimes.com/2014/11/22/business/aereo-files-for-bankruptcy.html?_r=0}; \textit{see also} Aereo, “A Letter to Our Consumers: The Next Chapter.”( Although Aereo suspended its service and filed for bankruptcy in November 2014; it still reconsidered other business and technology options in making a comeback. And it indeed came back, but in support of an another stuff— TiVo Bolt.)
Justice Scalia mentioned\textsuperscript{276} Further the “looks like cable” analysis does not neatly comport with the statutory text.\textsuperscript{277} (2) The Supreme Court cannot provide further guidance to lower courts by its “reason by analogy” approach, since it did not articulate what level of similarity is sufficient.\textsuperscript{278} And what’s more, since the Supreme Court provided a “limited ruling,” which only applied to “Cable TV and equivalents.” It caused the right of communication to the public under other technologies’—cloud computing, remote storage, deduplication—context unsolved. The Supreme Court stepped back on this issue made the Aereo III case less important. What’s interesting here is that these criticisms had already been echoed in cases judged by lower courts in 2015.\textsuperscript{279} (3) The former unclear contour of the right of public performance is “unpredictability which is particularly dangerous in

\textsuperscript{276} See Aereo III, \textit{supra} note 260, at 2515 n.5 (Scalia J., dissenting); \textit{see also} Mitch Stoltz, \textit{Symposium: Aereo Decision Injects Uncertainty into Copyright}, SCOTUSblog (Jun. 27, 2014, 2:18 PM) \url{http://www.scotusblog.com/2014/06/symposium-aereo-decision-injects-uncertainty-into-copyright/} (Justice Breyer’s majority opinion… was driven by legislative history and first principles, with analysis of the statutory text an afterthought. That approach turned a pure question of statutory interpretation into something more like common law adjudication.”); \textit{see also} Copyright Act of 1976—Transmit Clause—ABC, INC. v. Aereo, Inc, The Supreme Court—Leading Cases, Harv. L. Rev. (2014).

\textsuperscript{277} See Matthew Schruers, “Aereo Copyright Decision Creates Uncertainty For The Cloud,” \textit{SCOTUSblog} (June 26, 2014, 12:55 PM) \url{http://www.scotusblog.com/2014/06/symposium-aereo-copyright-decision-creates-uncertainty-for-the-cloud/} (Because substantially similar services, including terrestrial, satellite and Internet radio, which are treated quite differently under the Copyright Act.)

\textsuperscript{278} See Mark P. Mckenna, \textit{The Limits of the Supreme Court’s Technological Analogies}, \textit{SLATE} (Jun. 26, 2014, 12:07 PM) \url{http://www.slate.com/articles/technology/future_tense/2014/06/abc_v_aereo_ruling_the_supreme_court_s_terrible_technological_analogies.html} (For instance, under this reason by analogy approach, a court may treat VCRs, RS-DVRs and others identically, regardless of technical distinction, since the users’ viewing experience remain the same and providers’ commercial objects are the same. Further, as mentioned by a commentator:” Defining the bounds of ‘similarity’ to a cable system will require much litigation, and cases comparing cloud storage systems and other new technologies against cable systems will be complex and expensive”.)

\textsuperscript{279} Fox TV Stations, Inc. v. AereoKiller, 115 F. Supp. 3d 1152 (C.D. Cal. 2015).
the technology sphere, in which predictability breeds innovation.”280 As mentioned above, new technology providers are running their industry by using existing legal loopholes; for instance, Aereo itself was built on loophole created by Cablevision II case. Without a clear holding as guidance, it’s harder for innovators to start up new business with their new innovations without violate copyright law.281

There are also scholars supported the Supreme Court’s decision in the Aereo III case. Professor Goldstein stated that the Supreme Court did not disregard Aereo’s technological arrangement—which “pivoted on transmission from individual, dedicated copies.”282 The Supreme Court emphasized the inquiry of ownership or possession: “an entity that transmits a performance to individuals in their capacities as owners or possessors does not perform to ‘the public.’”283 Professor Goldstein stated that “the line at the recipient’s ownership or possession the source copy will presumably exclude personal cloud lockers from the scope of the public performance right,” he also pointed out “more complex technologies may require more nuanced distinctions.”284 Thus, in my opinion, the Supreme Court’s decision in the Aereo III still cannot be deemed as a clear guideline in deciding cases relevant to “on-demand” service relevant to cloud computing.

280 Aereo Case Review, supra note 276, at 380. See Fogerty v. Fantasy, Inc., 510 U.S. 517, 527 (1994)(“Because copyright law ultimately serves the purpose of enriching the general public through access to creative works, it is peculiarly important that the boundaries of copyright law be demarcated as clearly as possible.”)
281 Cf. Antonin Scalia, Essay: The Rule of Law as a Law of Rules, 56 U. CHI. L. REV. 1175 (1989). (“Reliable rules with clearly delineated lines enable innovators to know where the law ends and where there is room to disrupt the status quo.”)
282 Goldstein, supra note 257, at § 7.7.2.
283 134 S. Ct. at 2510. See also id.
284 Id.
Then come the two FilmOn X cases. The FilmOn X provided a service “technologically analogous” to Aereo, which “captures the signals of multiple television channels that are broadcast over-the-air and streams them over the Internet to the public,” and further one of them was decided after the Supreme Court’s decision in Aereo. I will refer to the two cases separately as FilmOn X I and FilmOn X II in later discussion. In the FilmOn X I, the district court for the central district of California clearly rejected the 2nd Circuit’s rule that the transmission itself must be public in Cablevision II case. Further the district court also pointed out the single copy requirement, which the 2nd Circuit relied on was not expressly required by the statutes or the House Report. The district court here showed its suspect to the single copy requirement, which had dominated analysis for years. And such suspect later had been supported by the Supreme Court in Aereo III case. It seems that because of the new technology, a single copy requirement is needed to be amended.

In FilmOn X II case, the district court noticed a new thing: the Supreme Court only made it clear that “nearly-simultaneous retransmissions constitute public performance”, but it did not addressed the “time-delayed retransmission.” In

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287 FilmOn X I, supra note 285. at 1144-45. (“... the House Report did not discuss which copy of a work a transmission was made from. The statute provides an exclusive right to transmit a performance publicly, but does not by its express terms require that two members of the public receive the performance from the same transmission.”
288 Aereo III, supra note 260, at 2549.
289 FilmOn X II, supra note 286, at *83.
290 Id, at *24, n.6.
the district court’s opinion, “Aereo III’s reasoning should be extended to time-delayed retransmission.” The court gave two reasons: (1) FilmOn X’s function enabled customers “capable of receiving” the same “perceptible images and sounds” of over-the-air program, which is similar to its nearly-simultaneous transmission service. (2) The defendant is not merely an equipment supplier that operates under its customers’ directions. As mentioned above, the Supreme Court in Aereo III case avoided judging whether cloud storage of content, this FilmOn X II case followed such trend by stating that FilmOn X’s technology is more similar to the counter-part of nearly-simultaneous retransmissions than cloud storage service. Another lower court also decided a case after Aereo III. The defendant Dish Anywhere allow users to watch network programming from devices with an Internet connection by transmitting from their own home STB(Sling)/DVR or authorized recorded content on that Sling. The District court refused to extend Aereo III’s rule that “technology bearing on overwhelming likeness to cable companies publicly perform within the meaning of the transmit clause” to Dish Anywhere.

As a consequence, courts’ reaction to cases relevant to the right of public performance under cloud computing technology context is not predictable. But it seems that cloud streaming or cloud storage service providers could still take a

291 Id, at *88.
292 Aereo III, supra note 260, at 2509-510.
293 FilmOnX II, supra note 286, at *88.
295 Id, at *20-22.
296 Emily M. Lanza, Aereo and FilmOn X: Internet Television Streaming and Copyright Law, Congressional Research Service 7-5700, R 43359, at 13 (Jan. 22, 2015).
breathe, since lower courts follow Aereo III’s limited ruling and refused to extend it to their service now.

D. MP3tunes Case

Since whether the Supreme Court’s decision in Aereo III case could be extended to the cloud computing area is still being questionable, this section will discuss the only one famous case really involved cloud storage service and deduplication technology—MP3tunes case. Although this case was judged before the Aereo III case, in my opinion, its decision about the issue of the right of public performance did not go against the Supreme Court’s decision.

The defendant’s website mp3tunes provided personal online storage music locker, which allowed users to upload music to their private lockers from their personal computers or from a third party’s website by providing a useful URL.297 The plaintiff claimed that the defendant’s utilize of “master copy” to rebroadcast songs from the central “lockers” to its customers infringe the copyright owners’ right of public performance based on the Cablevision II rule. However, the district court rejected such claim by stating two reasons: (1) there’s no such master copy, it’s just the compression algorithm to determine which music files were composed of the same coding and eliminate redundant digital data.298 There are still numerous variously-coded copies of the same song remained on the defendant’s cloud

298 Id, at 634.
server.\(^{299}\) The defendant is an ISP, which is different from cable provider in Cablevision II case. Thus it’s “inapposite” to rely on Cablevision II case’s decision.\(^ {300}\)

By analyzing these cases and reading the statute of the right of public performance, we can easily understand in the U.S., the transmit clause is the key point in considering issues relevant to the right of communication to the public. Because the transmit clause covers not only the “initial rendition or showing” of a work, but also all further acts by which such “rendition or showing is transmitted or communicated to the public.”\(^ {301}\) It can regulate live streaming or on-demanded video/audio online. But, the transmit clause itself is unclear. According to these cases, we know that there are actually four elements that altogether can trigger a public performance.\(^ {302}\) But what’s under dispute are two of them: (1) what’s performance?—who performs? (2) how to define “publicly”? For the first question, the Supreme Court’s decision in Aereo III has logic defect. It proved that Aereo performed by its “looks like cable” analogy: because Cable TV is allowed to perform under the Copyright Law, Aereo’ system is similar to Cable TV’s and they probably share the same result. The missing key concern here is volitional conduct. It’s the key in deciding whether Aereo directly infringe the right of public performance. Without such analysis, one cannot tell Aereo violate such right. And there’s no

\(^{299}\) Id, at 650.

\(^{300}\) Id.

\(^{301}\) See H.R. REP. No. 94-1476, at 63 (1976).

\(^{302}\) See Emily M. Lanza, supra note 296, at 4. (Four elements are (1) a transmission or other communication, (2) of a performance of the work, (3) to members of the public who are capable of receiving the performance, and (4) where the transmission either is to a public or semi-public place, or is to members of the public who may be separated geographically or temporally or both.)
specific detail in its “looks like cable” analogy. The U.S. Supreme Court’s decision became less reliable to me because of these issues on this question. Then comes the definition of “public”. As we mentioned in the former part, almost all courts in the U.S. had adopted “a single copy requirement” for years. And now the Supreme Court made a change to it: when an entity transmits the same contemporaneously perceptible images and sounds, no matter from same or separate copies, it performs the same work.\textsuperscript{303} This change seems reasonable for now because of the technology development—deduplication. But, the Supreme Court clearly mentioned its rule limited to “Cable TV and equivalence”, could it be extended to cloud storage service with deduplication process?\textsuperscript{304} This issue will be analyzed this later in this section.

What we know now is the Supreme Court’s attitude in deciding such issues—rely on the legislative history and the Congress intent. Such attitude led to its unpredictable judgment of future cases that relevant to cloud computing, this situation is particularly dangerous in the technology sphere as I mentioned in former part.\textsuperscript{305} This question is not like the issue of whether temporary copy should fall within the scope of right of reproduction. Because most kind of temporary copies are essential in process, which cannot be, avoid. So, as mentioned above, there should be a case-by-case analysis undertaken. It’s better for the courts to

\textsuperscript{303} Aereo III, \textit{supra} note 260, at 2509.
\textsuperscript{304} Joan E, Solsman, \textit{How Supreme Court Ruling Affects Aereo, The Cloud and You, CNET} (Jun. 26, 2014) \url{http://www.cnet.com/news/how-the-supreme-court-ruling-affects-aereo-the-cloud-and-you/} (Prof. Litman: “We know what the Supreme Court intends to do, which is to say Aereo is illegal and nothing else...but there’s a bunch of ambiguity in the attempted carve-out of cloud storage services. What now happens to all of my Kindle books in Amazon’s cloud? Am I the owner of the book? Am I the owner of the digital copy? Am I the owner of the license? Whether one is the owner or possessor of content is pretty much up in the air. There will be a lot to litigate.”)

\textsuperscript{305} Aereo Case Review, \textit{supra} note 276, at 380.
decide by analyzing specific facts of each case. But whether cloud service provider “perform” or not, is decided by an examination of the contour of the right of public performance. If there’s bright line for it, cloud service provider could use their technical innovation in avoiding such kind of violations. As a consequence, in my opinion, as Justice Scalia stated, it’s the job of the Congress to decide whether the Copyright Act needs an upgrade, and it’s about the right time.

ii. The EU Part

Although EU has several directives in dealing with the authors’ right of communication to the public, they are not enough in solving the existing problems brought by new types of online dissemination of copyrighted works. For instance, when people streaming video online, are such acts of communication to the public actually being covered by the copyright owners’ exclusive right of communication to the public? To analyze such issues, we will observe how amendments to the right of communication to the public develops in these directives, and focus on the Information Society Directive since it was the latest one been changed. By following the timeline of these amendments, we will have a better understanding of what’s EU’s legislators’ intent behind such amendments and speculation of how EU will solve current legal issue as a result of developing technology.

Further, since the courts, notably the ECJ is playing a more and more important role in interpreting and drawing a clear contour of the scope of the right of communication to the public, a study of current cases in understanding how EU countries dealing with such issues at the first place is important. Lots of different
cases were submitted to the ECJ and requested its preliminary ruling. Based on several decided cases by the ECJ, four main complementary criteria for the assessment of whether a specific act of communication constitutes a ‘communication to the public’ had been distilled from them. They are: (1) the identity of the “user;” (2) definition of the “public”; (3) The profit-making nature of communication to the public; (4) the concept of “new public.”

Established by to the court, these four criteria “are not autonomous and are interdependent,” and “must be applied individually and in the light of their interaction with one another, given that in different specific situations, they may be met to varying degrees.” In my opinion, “new public” can be analyzed under the notion of “public”, since they are both notions relevant to the audiences. The following parts will separately analyze these three main criteria under different directives.

The Software Directive at first did not regulate the right of communication to the public. So we will directly start with the 1992 Rental and Lending Directive.

A. Rental and Lending Directive

This Directive is the first one deal with the right of broadcasting and communication to the public, however, such right was granted to performers and broadcasting organizations restrictedly. The exclusive right granted by Article 8

306 Case C-306/05, SGAE v. Rafael Hotels, 2006 E.C.R. I-11519. (The court set up these four basic criteria which were further being applied in FAPL case, Airfield case and others. However, these are just four main criteria, we also need to discuss other relevant issues, for instance, notion of communication, physical equipment requirement.)

307 Case C-135/10, Societa Consortile Fonografici (SCF) v. Marco Del Corso 2012.

308 Id, para. 79.

only covers the broadcasting and communication of live performances (the communication needs not be simultaneous, but it has to be the first communication following the performance itself).\textsuperscript{310}

When consider about a former fixation or broadcasting intervenes, Article 8 only grants a right to remuneration. Recently, only Article 8 from rental and lending directive is still being discussed together with Article 3(1) from Information Society Directive when analyzing the scope of the right of communication to the public. However, since the right of communication to the public in the rental and lending directive is a compensatory right, which is mainly of a financial nature; but the communication right in Information Society Directive is a right of preventive nature, the court had to have a individual assessment of such right under Article 8 in Rental and Lending Directive.\textsuperscript{311}

In SCF case, the dentist was providing the radio signals free of charge and without any active choice on the part of his patients,\textsuperscript{312} and we will analyze three criteria mentioned in this case. The first one is “identity of user”(the user is a person using a means of communication). According to the court, the users make an act of communication when it intervenes, with full knowledge of the consequences of its action, to give its customers access to a broadcast containing the copyrighted work. Without the user’s intervention, although its customers physically within the area

\textsuperscript{310} EU Copyright Law: A commentary, supra note 124, at 187.
\textsuperscript{311} See SCF case, supra note 307. C-133/12, Stichting Woonlinie, et. v. European Commission 2013 paras. 74-77.
\textsuperscript{312} Id.
covered by the broadcast, they are not able to enjoy the broadcast work.\textsuperscript{313} Further with other courts applied such notion, it seems that the notion of “user” has been defined in a very flexible way without further question. Then, the court determined “the definition of public,” it “refers to an indeterminate number of potential listeners and a fairly large number of people.”\textsuperscript{314} Further, based on the profit-making nature, it also ruled that the public is “targeted” and not “merely caught by chance.”\textsuperscript{315} But in this case, the customers of dentist generally formed “a very consistent group of persons” and thus constituted a “determined circle” of potential recipients, rather than a “public of persons in general.”\textsuperscript{316} At last, court considered the “profit-making nature” criteria, consequence thereof, there’s “no communication to public.”\textsuperscript{317} According to the court, there’s no impact on income of the dentist, without such profit-making nature, this criteria cannot be fulfilled. What we need to notice here is that the court gave its reason of considering this “profit-making nature” criteria here: “this must be all the more true in the case of the right to equitable remuneration... given its essentially financial nature.”\textsuperscript{318}

Some other cases also analyzed this criteria, the court in SGAE case reiterated the “not irrelevant” reason.\textsuperscript{319} Further it also justified its reason by referring to the FAPL Case, “it is indisputable that the proprietor transmits the broadcast works in

\textsuperscript{313} Id, para. 82. Further, the court of Case C-162/10 Phonographic Performance v Ireland, applied this criteria in 2011.
\textsuperscript{314} SCF case, supra note 307, para. 84. See also PPL v. Ireland case, supra note 313, para. 33.
\textsuperscript{315} SCF case, supra note 307, para. 91.
\textsuperscript{316} Id, paras. 95-96.
\textsuperscript{317} Id, para. 100.
\textsuperscript{318} Id, paras. 89-90. Article 3(1) in Information Society Directive does not bring the “profit-making nature” into consideration, but the court of FAPL case held that it’s not irrelevant that a communication within the meaning of InfoSoc directive is of a profit-making nature.
\textsuperscript{319} SGAE case, supra note 306, para. 204.
his public house in order to benefit therefrom and that that transmission is liable to attract customers to whom the works transmitted are of interest. Consequently, the transmission in question has an effect upon the number of people going to that establishment and, ultimately, on its financial results.”

As mentioned, neither Art 3(1) of Information Society Directive nor WCT or WPPT suggested that the communication should be motivated by profit, the SGAE court gave an explanation: “even taking the view, as does the Commission of the European Communities, that the pursuit of profit is not a necessary condition for the existence of a communication to the public, it is in any event established that the communication is of a profit-making nature in circumstances such as those in the main proceeding.”

However, the court in TVCatChup case rejected to take “profit-making nature” into consideration: “However, it has acknowledged that a profit-making nature is not necessarily an essential condition for the existence of a communication to the public.” So whether ECJ further will apply this criterion is stilled being questioned.

320 Id.
321 Id, para.44
322 Case C-607/11 ITV Broadcasting Ltd. v. TVCatchup Ltd. 2013.

(Such profit-making nature interpretation was retained, which is surprising because it seems to contradict the age-old licensing practice of collective management organizations in the area of public performance of musical works. Without considering the commercial nature that the activity pursued, CMOs grant licenses to users of musical works who perform the works in public. As a result, licenses are granted to public and social institutions as hospitals, care homes and schools. So the questions arise, whether the court's interpretation of profit-making nature would affect this traditional practice of CMOs.)
B. Satellite and Cable Directive

Standing by the authors, Satellite and cable directive initially use the right of communication to the public in regulating authors’ copyrighted works and such regulation remained unchanged since 1993. Basically, Article 2 and Article 8 regulate the right of satellite broadcast and retransmission via cable: “Member State shall provide an exclusive right for the author to authorize the communication to the public by satellite of copyright works...” and “...such retransmission takes place on the basis of individual or collective contractual agreements ...” However, since only two forms of transmission of works are covered in this directive: satellite broadcasting and cable retransmission\(^3\) of broadcast, and further the Information Society Directive provided and caused harmonization led to a more inclusive right of communication, inter alia, acts of satellite broadcasting and cable retransmission, we will not analyze this article in details here.

C. Database Directive

Database Directive was the second EU directive to regulate the right of communication to the public.\(^2\) Article 5 (c) (d)(e) states that the author shall have the exclusive right to carry out or to authorize the distribution, the communication, display or performance to the public of the copyright protected expression of the database and of its adaptations. Although it provides a more general scope (protected object, authorship) than satellite and cable directive, it only relevant to the

\(^3\)Cable retransmission is characterized as “the simultaneous, unaltered and unabridged retransmission by a cable or microwave system for reception by the public of an initial transmission from another Member States.” Hugenholtz P.B., SatCab. *Revisited: The Past, Present and Future of the Satellite and Cable Directive*, 2009 IRIS plus 7 (2009).

expression of database and its adaptations. As a consequence, we will not discuss it in
details here since it’s not relevant to our issue.

D. Information Society Directive

Following former directives, it’s clear that EU’s intent to grant copyright
owners exclusive right of the communication to the public when new technology
affects the existing copyright. As mentioned earlier, the right to make works publicly
available in Information Society Directive is the most recently inserted statutes as
required by WCT,326 in dealing with new forms of online communication of
copyrighted works.327 But, cloud computing technology, here especially streaming,
video-on-demand or webcasting are in doubt on whether they could fall within the
scope of such broader right of communication to the public under the Information
Society Directive context.

Article 3(1) of Information Society Directive grants authors an exclusive right
“to authorize or prohibit any communication to the public of their works, by wire or
wireless means, including the making available to the public of their works in such a
way that members of the public may access them from a place and at a time
individually chosen by them.”328 This is a general right explicitly covers interactive

326 WCT, supra note 230, article 8; WIPO Performances and Phonograms Treaty, Dec. 20,
327 The Commission was urged to undertake actions in dealing with digital service based on
“on demand transmissions”, since such service was new and without counterpart in the
analogue world. And because without an uniform harmonized rule, Member states may
treat these services in different or even contradictory ways. As a consequence of both
fulfilling the requirement of WCT and filling the lacunae caused by technology revolution,
Article 3(1) appeared.
328 Information Society Directive, supra note 127, art 3(1).
on-demand service online, which is the main objective of this amendment. Based on several cases, the ECJ gave its general principle in interpreting this exclusive right: “A provision of EU law must be interpreted by considering its wording, the context in which it occurs, and the objectives pursued by the rules of which it is part.” Further this right should be interpreted broadly as required by recital 23, but also “essential to achieve the principal objective of that directive.”

Actually, article 3(1) provides authors two rights: the right of communication to the public and the right of making available to the public. We will discuss these two rights separately via analyzing their different characteristics.

a. The Right of Communication to the Public

The right of communication to the public is actually an “umbrella” right, it almost provide shelter to all traditional forms of communication: “any such transmission or retransmission of a work to the public by wire or wireless means,

\[\text{329 Id, recital 25. (“The legal uncertainty regarding the nature and the level of protection of acts of on-demand transmission of copyright works and subject-matter protected by related rights over networks should be overcome by providing for harmonized protection at Community level. It should be made clear that all right holders recognized by this Directive should have an exclusive right to make available to the public copyright works or any other subject-matter by way of interactive on-demand transmissions. Such interactive on-demand transmissions are characterized by the fact that members of the public may access them from a place and at a time individually chosen by them.”)}\]

\[\text{330 Sari Depreeuw, THE VARIABLE SCOPE OF THE EXCLUSIVE ECONOMIC RIGHTS IN COPYRIGHT 421 (2014). (SGAE, supra note 306, para.33-3; FAPL, supra note 151, para. 185-19; SCF, supra note 309, para. 7; TVCatchup, supra note 322, para. 20.)}\]

\[\text{331 Information Society Directive, supra note 127, recital 23.(“This right should be understood in a broad sense covering all communication to the public not present at the place where the communication originates.”)}\]

\[\text{332 SGAE, supra note 306, para. 36. (“which ... is to establish a high level of protection of, inter alios, authors, allowing them to obtain an appropriate reward for the use of their works, in particular on the occasion of communication to the public.”)}\]

\[\text{333 EU Copyright Law: A Commentary, supra note 124, at 408, para. 11.15. (The directive does not define the “authors,” therefor “anyone who is considered an author according to the national law of a EU Member State is covered by the Directive.”)}\]
including broadcasting.”\textsuperscript{334} However, such right also does not cover all aspects. Despite the GUI and act of merely receiving, there’re two other limitations here. First, there’s a distance limitation here, which requires that the transmission originates from one place and is received in another.\textsuperscript{335} According to Recital 27, the mere provision of physical facilities for enabling or making a communication to the public does not in itself constitute a ‘communication to the public.’\textsuperscript{336} As a result, in some cases, the court also distinguished an act of communication from the “technical means of reception.”\textsuperscript{337} In SGAE case, a hotel owner installed an antenna and then used it to transmit the captured TV broadcasts to televisions set in his hotel rooms, the court ruled that such act was not just technical means of ensure or improve reception.\textsuperscript{338} According to the court’s opinion, the mere provision of physical facilities “usually, besides the hotel, companies specializing in the sale or

\textsuperscript{334} Information Society Directive, supra note 127, recital 23. (However, the right of communication does not cover the TV broadcasting of a graphic user interface as held by the court in BSA case. The court took the particular features of a GUI into account and then concluded that the public did not have access to the work’s essential element. Further, this right neither cover the act of merely receiving the privately based on the rule of FAPL case: “mere reception as such o those broadcasts – that is to say, the picking up of the broadcasts and their visual display – in private circle does not reveal an act restricted by EU legislation… and that act is therefor lawful.”) Case C-393/09 Bezpečnostní softwarová asociace – Svaz softwarové ochrany v. Ministerstvo kultury 2010 E.C.R. I-13971, paras. 52-58. See FAPL, supra note 151, para. 171.

\textsuperscript{335} FAPL Case, id, paras. 201-203. (this right should be understand in a broad sense covering all communication to the public not present at the place where the communication originates… and the court also held that Recital 23 referred only to situations in which the public was in direct physical contact with actors or performers of works.)

\textsuperscript{336} Information Society Directive, supra note 127, recital 27. (This principle is based on the rule set out in the agreed statement concerning Article 8 WCT: “it is understood that the mere provision of physical facilities for enabling or making a communication does not in itself amount to communication within the meaning this Treaty or the Berne Convention.”)

\textsuperscript{337} SGAE, supra note 306, para. 4; TVCatChup, supra note 322, para. 29.

\textsuperscript{338} SGAE, supra note 306, para. 42. (The court states: “the hotel is the organization which intervenes, in full knowledge of the consequences of its action, to give access to the protected work to its customers. In the absence of that intervention, its customers, although physically within that area, would not, in principle, be able to enjoy the broadcast work.”)
hire of television sets” and such acts do not constitute an act of communication to the public.339 Then in OSDD case, which shared a similar background with the SGAE case, the ECJ stood by it ruling in SGAE case: any technical intervention of the hotel owner that allows its customers to capture the signal in their rooms and to access the broadcast work, regardless of the concrete configuration of the installation in the hotel, is considered a communication.340 Also, in TVCatChup case, the defendant offers real-time streaming of TV broadcasts via Internet to UK citizens, the court held it does not merely provide technical means to ensure or improve reception,341 because the defendant intent was not to maintain or improve quality of the transmission by the broadcaster and it intervened to transmit works. From these cases, it seems that the notion of “communication” is extended to cover any technical intervention even without a material act of transmission or retransmission when contrasts to the “mere provision of physical facilities.”

b. The Right of Making Available to the Public

Then, we will discuss “the right of making available to the public.” As noted above, Article 3(1) grants protection for all interactive forms of exploitation—where a work is transmitted to a user who is member of public on his own demand.342 Such protection is actually provided by the right of making available to the public. As part of the “umbrella right” (the general right of communication to

339 Id, paras. 45-46.
341 TVCatchup, supra note 322, paras. 28-30. (The court ruled that technical means are “limited to maintaining or improving the quality of the reception of a pre-existing transmission and [are not] used for any other transmission.”)
the public), this right has to be interpreted consistently with the whole general right, and it is also subject to the same limitations and exceptions.343 The making available right covers the act of “providing a work to the public,”344 which offers a work through on demand services, prior to and “as opposed to the mere transmission itself” (which is protected by the right of communication).345

What is important here is that whether the work is actually transmitted is not relevant, which means the mere possibility to access the work is enough for making available to the public.346 For instance, in Svensson case, which followed the FAPL and SGAE decisions: providing a clickable hyperlink to a freely accessible work which initially published on another website constitutes an act of making the work available.347 However, the Advocate General’s opinion in GS Media BV v. Sanoma case stated that hyperlinks “which lead to protected works do not ‘make available’ the works to the public where the works are already freely accessible on another website, but merely facilitate the finding of those works.”348 According to FAPL case which emphasized the effect of intervention: “without his intervention the customers cannot enjoy the works broadcast, even though they are physically within the broadcast’s catchment area.”349 However, in this case, the innervation of

344 EU Copyright: A commentary, supra note 124, para. 11.3.30.
345 Id.
346 SGAE, supra note 306, para. 43. (Whether or not any hotel guest has actually used the antenna to enjoy the broadcast is irrelevant, the distribution of a broadcast to private hotel room suffices an act of communication to the public.)
347 Case C-466/12 Nils Svensson et al. v. Retriever Sverige AB 2014, paras.18-19.
349 Id, paras. 55-56.
the hyperlinker is not indispensable, since the public can already access the resources being hyperlinked. Thus, the advocated general conclude that “hyperlinks posted on a website which direct to works protected by copyright that are freely accessible on another website cannot be classified as an ‘act of communication.’”\textsuperscript{350}

Further, since the definition of the right of making available to the public covers the interactive transmission, it requires such transmission to be on demanded. The on demand character means a character with which a service can be controlled by users about where and when they enjoy works. A case recently decided by the ECJ had already re-emphasized this “on demand” character of “make available to the public.”\textsuperscript{351} The Court stated that “transmission broadcast live on Internet” could not fall within the scope of “make available to the public”, because the subscribers could not choose when to enjoy.\textsuperscript{352}

But as mentioned early, digital distribution technology keeps developing, and such development make services not easily classified as either broadcasting, interactive on demand transmission (making available) or other unspecified forms of communication. For instance, ISPs provide service online music streaming platforms that with mixed features. Users could not only pick songs and make their own playlist of music (on demand), but also listen to “featured radio channels,” which provides prepared playlists or “recommendations” based on users’ existing playlist.\textsuperscript{353} It’s not clear that all forms of exploitation are acts of communication to

\textsuperscript{350} Id, para. 60. (Whether the hyperlinker know the initial communication of the sources had been authorized or not is not relevant, because there’s no act of communication.)

\textsuperscript{351} Case C-279/13 C More Entertainment AB v Linus Sandberg, 2015, paras. 23-26.

\textsuperscript{352} Id, para. 27.

\textsuperscript{353} See Wangyiyun Yinyue[网易云音乐][NetEase Music], \url{http://music.163.com/}. 
the public, but the copyright owners willfully collect all remuneration by restricting these rights. From the Svensson case and C More Entertainment case, we clearly understand the ECJ would regulate different kinds of transmission online strictly fall within the contour of the right of communication to the public.\(^{354}\) Thus, we have to use the criteria mentioned above to clarify how ECJ interprets its “the right of communication to the public” and “the right of making available to the public.” By understanding the explanation of each criterion, we can see and estimate how EU deal with the issues brought by the cloud computing.

c. The Definition of “Public”

Since the notion of “user” had been analyzed in the former part and left no questions and the profit-making nature is not mentioned in Information Society Directive, this section will directly analyze the definition of public, which contains two part: the notion of “public” and the definition of “new public.”

The definition of “public” is not defined in the Information Society Directive, the follow-up of green paper clearly mentioned that “there would be no redefinition of the term ‘public’ for the new digital environment.”\(^{355}\) Although legislative scholars have emphasized the importance of the notion of “public,” the EU legislature offers

\(^{354}\) See Svensson case, supra note 347, para. 34. (The court gave negative answer to the preliminary question of whether Member States can interpret Article 3(1) of the Copyright Directive expansively. Because allowing Member States to “give wider protection to copyright holders by laying down that the concept of communication to the public also includes activities other than those referred to in Article 3(1),, would have the effect of creating legislative differences and thus, for third parties, legal uncertainty.”) See also C More Entertainment, supra note 351, paras.35-37. (Although the EJC agreed that the Member States may define a broadcaster’s right expandy, but such extension must respect the the scope of copyright protection called for by Union Law, and should not pass the bottom line that the term “communication to the public” may not be expanded beyond Article 3(1) of the Information Society Directive.)

\(^{355}\) Follow-up to the green paper on copyright and related rights in the Information Society, COM(96) 586 final, 14.
no assistance in indicating how many people constitute the “public” and how to meet the requirement of the right of communication to the public. As a result, the job to interpret the “public” was left to laws and courts of the EU Member States, and throughout all Member States, the EU indeed needs a uniform and independent interpretation of this notion.\(^{356}\) We will try to find the rationale of interpreting the notion of “public” via learning the EU courts’ decisions toward this issue.

First of all, “public” means “none private.” This view of “private” was actually brought by the green paper: a communication is public when a work is made perceptible “to persons in general, that is, not restricted to specific individuals belonging to a private group.”\(^{357}\) Thus merely “private” communications are excluded from the right of communication to the public.\(^{358}\) Then a question arises: what’s private? According to several scholars, a private circle means a narrow circle of family, friends or close relatives.\(^{359}\) In several cases, the courts adopted such interpretation. In SAGE case, the court held that if a reception of a broadcast is in a “personnel,” “private” or “family” circle, the reception does not fall within the category of the protected act of communication to the public.\(^{360}\) Further in FAPL case, the court also adopted the idea that new public will be reached if the recipients

\(^{356}\) UsedSoft case, *supra* note 152, para. 39. (Joined by other courts in other cases, the EU’s “need for a uniform application of EU law and the principle of equality require that the terms of a provision of EU law which makes no express reference to the law of the Member States for the purpose of determining its meaning and scope must normally be given an independent and uniform interpretation throughout the EU.”)


\(^{358}\) See Basic Proposal of WCT, note 10.12.

\(^{359}\) EU Copyright law; A commentary, *supra* note 124. at 416, para. 11.31. See also Depreeuw, *supra* note 330, at 448.

\(^{360}\) SGAE, *supra* note 306, para. 41.
broke the private or family circle. Such qualitative criterion (relationship among recipients) was then clearly stated by the SCF court: “public” means that make a work received by “persons in general, that is not restricted to specific individuals belonging to a private group.” Further, the EU courts provide a quantitative requirement: broadcast received by large number of people. SCF court clearly stated that “a de minimis threshold” should be encompassed by “a fair large number of people”, “which excludes from the concept groups of persons which are too small or insignificant”. The Phonographic Performance court also endorsed this criterion, and it further provided the way in determining the number of people: “account must be taken of the cumulative effects of making works available to potential audiences. In that connection, not only is it relevant to know how many people have the same access to the same work at the same time but it is also necessary to know how many of them have access to it in succession.”

The second criterion in analyzing the notion of public is “indeterminate number of potential recipients.” This criterion has been clearly defined in several cases and fulfilled the requirement of “an autonomous and uniform interpretation throughout the Community.” By referring to the MediaKabel case, the court in

361 FAPL Case, supra note 151, paras. 171 & 198.
362 SCF, supra note 307, para. 85.
363 SCF, supra note 307, para. 86.
364 Phonographic Performance Case, supra note 313, para.35.
365 SGAE, supra note 306; SCF, supra not 307; TVCatChup, supra note 322.
366 C-145/00, C-245/00, Stichting ter Exploitatie van Naburige Rechten (SENA) v Nederlandse Omroep Stichting (NOS).
367 Case C-09/04 Mediakabel BV v Commissariaat voor de Media 2005 E.C.R. I-4891, paras. 26-33. (In this case, to determine whether the service is “TV broadcasting service”, the court considered the notion of “public”. And then it stated the service would be qualified if it “consist of the transmission of television programs intended for reception by the public,
Lagardère case and in Phonographic Performance case described this criterion
as “an indeterminate number of potential listeners.” The SGAE case also brought in
this criterion: “the term ‘public’ refers to an indeterminate number of potential
television viewers,” but the court stretched its application by taking both the
transmission to the private rooms and to other parts of hotel into consideration.
Then in TVCatChup case, the court also applied this criterion to decide whether
recipients of the Internet television broadcasting service constitute “public.” The
court not only repeated that “public ...refers to an indeterminate number of
potential recipients and implies, moreover, a fairly large number of persons”, but
also reminded some relevant factors such as the cumulative effect of making works
available to potential recipients: “number of persons who have access to the same
work at the same time and successively.”

that is, an indeterminate number of potential television viewers, to whom the same images
are transmitted simultaneously.”)

368 Case C-192/04 Lagardère Active Broadcast v Société pour la perception de la
rémunération équitable (SPRE) and Gesellschaft zur Verwertung von
Leistungsschutzrechten mbH (GVL) 2005 E.C.R.1-7199, para. 30. (In this case, the court
needed to consider whether the satellite transmission reached a ‘public’, and it thought
there’s no “public” because: "that a limited circle of persons who can receive the signals
from the satellite only if they use professional equipment cannot be regarded as part of
the public, given that the latter must be made up of an indeterminate number of potential
listeners.

369 Phonographic Performance Case, supra note 313.
370 TVCatChup, supra note 322, paras..32-35. (The court also mentioned that the
circumstance that the recipient has access to the work through a one-to-one connection
should not be taken into consideration. Because such one-to-one connection does not
prevent a large number of people to access the same work at the same time. In this case, the
retransmission of the works over the Internet enabled all persons in the UK who have an
Internet connection and claimed to own a television license in that State. These people may
access the protected works at the same time, in the context of the ‘live streaming’ of
television programs on the Internet. “Thus, the retransmission in question is aimed at an
indeterminate number of potential recipients and implies a large number of persons.”)
The last part is the notion of “new public.” The court of SGAE case firstly brought this criterion into discussion. The court initially pointed out that the SGAE’s communication constitutes “a communication made by a broadcasting organization other than the original one.”\textsuperscript{372} Based on such conclusion, it further ruled that “thus, such a transmission is made to a public different from the public at which the original act of communication of the work is directed, that is, to a new public.”\textsuperscript{373} The court also found support for its rule from the Berne Convention that “when the author authorizes the broadcast of his work, he considers only direct users, that is, the owners of reception equipment who, either personally or within their own private or family circles, receive the programme.” Thus when the recipients larger than such circle hear or see the program, the work is communicated to a “new public.”\textsuperscript{374} From this case, the notion of “new public” is actually being contoured by reference to the public reached by the original broadcast, which was authorized by the author.\textsuperscript{375} Lots of courts further repeated such rule and kept interpreting the “new public” as any public that users gains access to the work and that has not been taken into account when the author has granted his authorization to the original communication to the public.\textsuperscript{376}

\textsuperscript{372} SGAE, supra note 306, para. 40.
\textsuperscript{373} Id.
\textsuperscript{374} Id, para. 41.
\textsuperscript{375} But, such reference of the Guide to the Berne Convention was not accurate since the guide indeed was explaining the additional audience of the license to broadcast covered. It clarified the provision dealing with the listening or viewing of a broadcast in public, not the retransmission of a broadcast by wire wireless means to a remote public which applied by the EC.
\textsuperscript{376} SGAE, supra note 306, para.40; FAPL case, supra note 151, para.197, Airfield, para.72. case. See also Depreeuw, supra note 330, at 461.
However, in TVCatchup case, the court said the situation here is clearly different from those former cases. The court stated that in those cases, an operator’s deliberate intervention made the broadcast which containing protected works accessible to a new public. But in this case, there were two main transmissions that are a terrestrial broadcast and to make those works available over the Internet, each of these two transmissions must be authorized individually and separately.\footnote{TVCatchup, supra note 322, paras. 24-25. (The court also rule that if there are multiple communications, and each of them use different technical means, each of them require a separate authorization.)} Because each of them was made under “specific technical condition,” used a different means (specific technology) and was intended for broadcasting to public.\footnote{TvCatChup, supra note 322, paras. 37-39.} The court states: “in those circumstances, it is no longer necessary to examine below the requirement that mere must be a new public, which is relevant only in the situations on which the Court of Justice had to rule in the cases giving rise to the judgments in SGAE, FAPL and Airfield.”\footnote{Id, para.39.} The court held it was not necessary then to examine whether a “new public” can be found. Such decision creates uncertainty to the application of this criterion in identifying separate act of communication to the public where several transmissions coexist. If different technology exists in a case, should the court still apply the “new public” criterion in deciding the issue of “new public?” Such legal uncertainty will cause more problems.

Recently, in the Svensson case, the court affirmed that it would still apply the “new public” criterion to decide whether hyperlinking technology addresses new
public since there’s only one kind of technical means in transmission of works.³⁸⁰ In this case, the defendant provided hyperlinks links the Plaintiffs’ articles that were already published in a newspaper’s freely accessible website to its own website.³⁸¹ The court admitted that the defendant did the act of communication by providing hyperlinks of those articles on its own website, but it did not communicate to the “public” since there’s no “new public.” That’s because the Plaintiffs’ works were already being communicated to the public (all Internet users) without limitations, the defendant’s subsequent hyperlinking did not change the public to whom the works were made available.³⁸² The court also determined that whether the hyperlink linking to another website or the same websites does not alter the finding even if the works has already been communicated to the public on the original website and no new technology works existed in the retransmission.³⁸³ The ECJ provided limitations to the new public criterion: a clickable link that enables users to circumvent restrictions put in place by the initial site on which the protected work appears. Those users who access to the protected work via such link should be

³⁸⁰ Svensson case, supra note 347. (This is a case of two communications by means of the same technology. The court pursued its approach in TVCatChup case and ruled that when the initial communication and the subsequent communication are made by the same technical means, it should be verified whether the latter communication is directed at a new public as an additional requirement. But if the same works is communicated by different technological means, there’s no need to verify whether a new public is targeted. However, the court did not confront a case that several means of exploitations coexist.)
³⁸¹ Id, para. 26. The court stated that it was “common ground between the parties” that the Plaintiff’s works were freely accessible on the newspaper website, because there was not subject to technical access restrictions such as a paywall.
³⁸² Id, para. 31. The court also discussed the situation of when the original website owner “restricting public access”. And it confirmed that if the original site had “subscriber only access” and a hyperlink bypassing this restriction, the subsequent hyperlinking would address to “new public” which had not been taken into account by the copyright owners when they authorized their works on the original site.
³⁸³ Id, paras. 29- 30.
deemed as a new public.\textsuperscript{384} Thus, a new public may arise, “where the work is no longer available to the public” on the initial site or “where it is henceforth available on that site only to a restricted public,” “while being accessible on another Internet site without the copyright holders’ authorization.”\textsuperscript{385}

Further in Bestwater case, the court had to decide whether embed a copyrighted work without authorizations from a third party’s website as Youtube on one’s own website qualifies communication to the public within the meaning of Article 3(1) of Information Society Directive. Applied Sevensson case’s decision, the court conclude that such activity of embedding of a protected work which is freely accessible on a third party’s website by means of a link and using the framing technology does not constitute communication to the public. Because there’s neither communication to a “new public” nor communication using a specific technical means which is different from that of the original communication.\textsuperscript{386} What we can assure now is that users are not liable for embedding or hyperlinking a video or image from a third party’s website, if the latter is accessible to the general public.\textsuperscript{387} The court did not state whether there’s requirement that the first communication need to be authorized by the copyright owner before further subsequent legal

\textsuperscript{384} Id, para. 31.
\textsuperscript{385} Id.
\textsuperscript{386} Case C-348/13 BestWater International GmbH v Michael Mebes and Stefan Potsch 2014 (not yet published) (there’s no official translation for this case) However, the court decided not to consider the origin of the YouTube upload as relevant in this case but simply considered the embedding (or framing) act at stake.
communication by hyperlinking or embedding. Later the advocated general opinion’s of Sanoma case provides some guidelines.

We can further understand how EU Member States applied the “new public” criterion in Sanoma case decided by the Netherland Supreme Court in 2015. The Dutch Supreme Court found that Svensson and BestWater cases can not provide enough guidance in deciding this case. Then it required for a preliminary ruling from the ECJ. The Netherland Supreme Court found that the ECJ’s answer in Svensson was based on that the work was already available online without specifying that the copyright owners had given permissions. And in the BestWater case, it was also unclear that whether the copyright owner had given consent to the initial communication to the public. Thus, the Netherland Supreme Court addressed its first preliminary question to the ECJ by analyzing all the foregoing: whether the

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388 BestWater case, supra note 386. See That BestWater order: it's up to the rightholders to monitor online use of their works, Oct 27, 2014 available at http://ipkitten.blogspot.com/2014/10/that-bestwater-order-its-up-to.html (The author of this comments thought the court unaddressed the issue of whether the person who embedded or hyperlinked a copyrighted work from third party's website is liable for copyright infringement if the third party communicate such work to the public without the copyright owner’s permission.)

389 GeenStijl v. Sanoma Dutch Supreme Court, 3 April 2015, 14/01158, NJ 2015/83. (In this case, the defendant provided hyperlinks to some copyrighted photos—that were meant to be published in an upcoming edition of magazine—on a third party's website. The copyright owner forced the third party to take down those photos. Since the defendant’s hyperlink were no longer useful, it found a second hyperlink to those photos on another website instead. The plaintiff filed a claim towards the defendant. The District Court of Amsterdam ruled that provided hyperlinks to the copyrighted photos violate the right of communication to the public because the photos could not be easily found at first—only small amount of people can access those photos on the two third parties' file sharing website. Then the Appeal Court of Amsterdam disagreed with the district court, because the appeal court thought that the Internet in its current form is an open communication network that is freely accessible to anyone. The appeal court found no difference between a hyperlink to a work and a footnote in a book. Further it also found that the plaintiff failed in proving that the photos on one of the third party’s website were completely private, although the photos there were hard to found by the public. Thus even the defendant extended the access to those photos, there was no new public at all.)

390 Sanoma case, supra note 348.
hyperlinking to a work on an accessible third party’s website constitute a communication to the public, where such work has been made available without the copyright owner’s consent. The Netherland Supreme Court found it’s hard for the hyperlinker to verify whether the initial communication to the public of the work had already gain consent from the copyright owner, thus, it also asked if its is relevant that the hyperlinker knows or should have known that such consent has not be given. Then, if the first preliminary question’s answer is negative, if the general public could not easily find the work, is there a communication to the public if the hyperlinker facilitates the locating of such work online? The ECJ has not answered these legal uncertainties. However, the advocate general provided their opinion: “the criterion of a new public is applicable only where the copyright holder has authorized the initial communication to the public.” Even if the court decided to apply the new public criterion where the initial communication was not authorized by the copyright owner, it would be satisfied “only if the intervention in the form of ...hyperlinks... was indispensable to the works being made available to a new public.”

Lots of EU scholars think that the “new public” criterion is in conflict with the international law. For instance, ECJ presented the “new public” criterion as if it

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391 Id, 1(a).
392 Id, 1(c)
393 Id, 2(a)
394 Sanoma case, supra note 348, para. 67.
395 Id, paras. 69-70.
396 See Association Litteraire Et Artistique Internationale, Opinion Proposed to THE EXECUTIVE COMMITTEE and adopted at its meeting (Sep. 17, 2014) available at http://www.alai.org/en/assets/files/resolutions/2014-opinion-new-public.pdf (The authors think the application of the “new public” in the Svensson decision is contrary to the
followed the Article 11bis(1)(ii) of the Berne Convention, but actually the Berne Convention only grants the authors exclusive right with a condition “when this communication is made by an organization other than the original one,” it mentions nothing about the public who receive the new transmission. Then, according to the Sevensson Court’s decision, we can draw a conclusion that once a work is made freely accessible online to all Internet users, there will be no communication to the public right where that work is hyperlinked. Because the criterion of “new public” cannot be satisfied by such. Such conclusion will cause the exhaustion of the right of communication to the public on the Internet, which is inconsistent with Article 3(3) of the Information Society Directive 2001. This Article states that the right of communication to the public is not to be exhausted by virtue of a “communication” of the work. Although the advocate general provided a neutral solution that limit the application of the new public criterion, it still had not been explicitly adopted by the ECJ. Moreover, even if the criterion of “new public” conforms to all the requirements and principles from those international laws, the Dutch Supreme


397 SGAE case, supra note 306, para.40.

398 Berne Convention, supra note 226, Article 11bis(1)(ii). See ALAI, at 13. (“It may be made to the same public; it may be made to a part of the same public, it may be made to the same public or a part thereof along with a public not covered by the original broadcast and it may be made truly to a new public.”) See also Justin Koo, Why “New Public” is the wrong ‘public’ for the Communication to the Public Right under EU Copyright Law, KSLR Blog (Jun. 17, 2015) https://blogs.kcl.ac.uk/kslreuropeanlawblog/?tag=new-public#.V8ZkmZMrLvp (The author states that the “new public” criterion was rejected under the Berne Convention when it was first discussed at the 1948 Brussels Revision of the Berne Convention.) The Art 8 of WCT does not show bias either, it provide excluded right of “any communication to the public” without distinction between primary and secondary transmission, even regardless of the difference of technology of transmissions. Further in Vienna Convention, there’s no such requirement that the right of communication by wire or by rebroadcasting only applies when the communication is directed to a “new public”.

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Court had already pointed out the legal uncertainty of this criterion. The ECJ still need to explain a lot in order to keep applying this criterion, which, from my point of view, will cause more legal loopholes when applying in the future with the development of technology. The following section will keep discussing the right of communication to the public in other countries.

iii. Other Countries

A. Singapore- The Right of Communication to the Public

In 2004, the right of communication to the public was introduced to Singapore Copyright Act 1987. It is also an implementation of Art. 8 of the WIPO Copyright Treaty 1996. It enables the copyright owners to control the communication and dissemination of their copyrighted works to the public via the Internet. Singapore adopted the Art. 8 of WCT through a fairly broad definition of the term “communicate”. It means: “to transmit by electronic means (whether over a path, or a combination of paths, provided by a material substance or by wireless means or otherwise) a work or other subject-matter, whether or not it is sent in response to a request, and includes— (1) the broadcasting of a work or other subject-matter; (2) the inclusion of a work or other subject-matter in a cable programme; (3) the making available of a work or other subject-matter (on a network or otherwise) in such a way that the work or subject-matter may be

399 Copyright (Amendment) Act, No. 52 of 2004. It came into force in 1 Jan, 2005. Singapore Copyright Act, supra note 172. The right of communication to the public covered original literary, dramatic, musical and artistic works, cinematographic films, broadcasts, cable programmes, performances, which can be found in s 26(1)(a)(vi) &(b)(iii); s 84(1)(d); s 85(1)(d); s 252(1)(g).
accessed by any person from a place and at a time chosen by him.”

By analyzing this meaning, the communication right has been separated to four distinct parts: (1) transmission of a work by electronic means; (2) broadcasting right based on paragraph (a); (3) cable-casting right based on paragraph (b); (4) making available formula in paragraph (c). But according to some scholars, there are only two broad categories. The first one is “transmission by electronic means” which includes broadcasting, cable-casting and some kind of internet transmissions. They are “push” technologies which means there’s an active communicator but with multiple passive recipients. Such right (except some kind of internet transmissions) have already been granted to the copyright holders in old Copyright Act in Singapore. The second category is “making available” of a work. It is in the form of “pull” technology that means passive communicator with multiple active recipients.

According to the Minister for Law of Singapore, this formula created a new right: “the right to control the dissemination of works on the Internet”. This second category no doubt is broad enough to cover the communication over the Internet in order to fulfill the requirement of WCT Art 8. With this knowledge, now the existing question is how to understand the right of communication to the public over the Internet under Singapore’s law system. There are basic question to answer. The first one is to

400 Cap. 63, 2006 Rev. Ed. Sing. [Copyright Act], s 7(1).
401 See Dr Mihaly Ficsor, Guide to the Copyright and Related Rights Treaties Administered by WIPO, WIPO publication (2003), at 208. (The concept of communication to the public “extends not only to the acts that are carried out by the ‘communicators’ themselves,… But also to the acts which only consist of making the work accessible to the public, and in the case of which the members of the public still have to cause the system to make it actually available to them.” See also Susanna H S Leonh & Yuanyuan Chen, The Right of Communication in Singapore, 22 SAcLj 602 (2010).
whom is the communication made – to the “public”? The second one is by whom is the communication made. It’s obvious that the first question is relevant to the contour of the definition of “public,” if there’s no “public,” there’s no violation of the right of communication to the public. Then the second question is deciding who is the infringer, is it the ISP who provide facilities or the user who directly and actually required the copyrighted work?

In order to answer these two questions under Singapore Copyright Act context, there is some guidance can from the RecordTV v. MediaCorp TV case.\footnote{RecordTV Pte Ltd v MediaCorp TV Singapore Pte Ltd [2011] 1 SLR 830.} This case had already been discussed in the section of the right of reproduction. Still, some facts of this case need to be clarified again. The defendant RecordTV provided Internet-based digital video recorder—which allowed its registered user to request to record free-to-air broadcasts for later streaming. Since more than one registered user may make a request to record the same show, the defendant also provide the deduplication technology which is known as the “Single Instance Storage” mode (SIS). Under this SIS mode, only one copy of the broadcast was stored on the defendant’s server, and only this one copy was made available to multiple registered users who required it.\footnote{Id., para. 9. (There’s also a Mixed mode of storage. Under this mode, the number of copies of the required show stored in the server corresponded with the number of requests by registered users. But once there was none sufficient storage capacity, the system shifted to SIS mode. Even in this Mixed mode, much of the streaming service to he registered users are from a singly digital copy.)} The Plaintiff indeed claimed that the defendant infringe his right of communication. As I mentioned earlier in this paragraph, this issue should be considered under the aspect of “make available” to the public over the Internet.
As a result, the above-mentioned issues of “to whom” and “by whom” should be discussed.

First, is there a “public?” According to the Court of Appeal, those registered users do not constitute “public.” V K Rajah JA firstly explained the definition of “the public” as “all members of the community or a section of the public”, further a “substantial number of persons can sometimes be ‘the public’”. 405 Although the registered users were members of the public, the judge then gave the first reason for his judgment: the registered users had valid television licenses, thus they had existing relationship with MediaCorp. To extent that a contractual relationship between the registered users and MediaCorp had been created by the licenses, the registered users were “arguably not members of ‘the public’ for the purpose of” deciding whether MediaCorp’s right of communication to the public had been infringed. 406 Then, the judge gave a second reason: because registered users could not access to “all (or any) of the MediaCorp shows already recorded by RecordTV” but only to those specific shows they had requested, the defendant did not “make available” those specific shows to the public. 407

In my opinion, although the Court of Appeal did not mention, it’s obvious that it followed the “single copy requirement” from the U.S. copyright case law. But as I mentioned early in the U.S. part, the Supreme Court had already rejected this requirement in Aereo III. This reasoning can no longer stand firmly. Even if the

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405 Id, para .24.
406 Id, para .25.
407 Id, at para 26. (“Any communications made by RecordTV to registered users who had requested the recording of a particular MediaCorp show ere made privately and individually.”)
“single copy requirement” is still applicable, the defendant still cannot fulfill such requirement. Because it provided a deduplication technology in order to save storage space. There was only one single copy being made available to multiple registered users with the deduplication technology. Most of the Singapore scholars also criticized these two reasons. For the first one, the criticizers stated that there’s no reason to draw a conclusion that registered member are not “public” if a contractual (licensing) relationship exist. Then for the second one, the scholars stated that the Court of Appeal did not inform how the conclusion of “a private communication” is reached. And further, according to the Court of Appeal, the issue of “to whom” also entailed the “precise nature and ambit of the copyright ‘subject-matter’in question.”

Then, is it by ISPs? By applying s 16(6) of the Copyright Act, the Court of Appeal concluded that the registered users were “the person responsible for determining the content of the communication at the time the communication was made.” s 16(6) was read into three elements to solve this issue by the Court of Appeal: (1) the time of the communication; (2) the content of the communication; (3) the identity of the person responsible for determining that content. The Court of Appeal gave its answers: (1) the time was the moment when the requested show was available for streaming to the registered users; (2) the content was the specific

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408 NG-Loy Wee Loon, The Whom in Online Dissemination of Copyright Works: To Whom and By Whom is the Communication Made, Sing. J. Legal Stud. 373 (2011), at 381.
409 where copyright law and technology once again cross path, at 668.
410 RecordTV V MediaCorp, supra note 403, para. 36.
411 Singapore Copyright Act, supra note 172, S 16(6). ("For the purpose of this act, a communication other than a broadcast is taken to have been made by the person responsible for determining the content the communication at the time the communication is made.")
show requested by the registered users; (3) based on two former conclusions, the registered user was the person responsible for determining the content of the communication.\textsuperscript{412} Singapore scholars also criticized this explanation from the Court of Appeal. They believed the Court of Appeal did not refer to the legislative background of s 16(6). Therefore, the conclusion of this issue is inconsistent with the legislative intent. As I mentioned, Singapore also implemented the right of communication to the public into its Copyright Act as a response to requirement of Art 8 of WCT. However, Expert Mr. Winston Chew made an intervention to the Basic Proposal that firstly brought the right of communicate to the public. Mr. Chew suggested that “innocent” carriers who merely provide facilities for enabling or making any communication should not constitute an infringer.\textsuperscript{413} This “innocent” requirement is quite important. In order to clarify this target, when Singapore brought Art 8 of WCT into its law, it also introduced s 16(6) at the same time. S 16(6) exists to ensure that “innocent carriers of information would not be liable for copyright infringements. Meanwhile, this also means a party who has some further role to play in the communication that goes beyond merely providing facilities is not exempted from being liable. For this case, Singapore scholars stated that it was the defendant who actually determined how to record the plaintiff’s shows, how those specific copies of recordings were stored on its server, and how to communicate

\textsuperscript{412} RecordTV v. MediaCorp, supra note 403, para. 35. (If the registered user did not made those specific recording requests, there would be no recording of the shows stored in the defendant’s server, nothing could be communicated.)

those recordings to the registered users.\footnote{414} Thus, it’s hard to say that the defendant merely provided facilities in this case, so the defendant should be liable for the copyright infringement.

It’s clear that the application of the right of communication to the public in Singapore being affected by the U.S. case laws. But nowadays, the relevant legal issues still remain unanswered. The following section will discuss the Japanese style of the right of communication to the public—the public transmission right.

\section*{B. Japan—Public Transmission Right}

During the period from 1970 to the mid-1980s, Japanese Copyright Law only granted the copyright owners the broadcasting right, which is the only existing right for transmitting copyrighted works to the public. But in 1986, much earlier than the establishment of Art 8. of WCT, the Japanese copyright law included a new right—“the right of interactive transmission”, in response to the developed cable TV technology.\footnote{415} And finally in 1997, to comply with the WCT and in reaction to the Internet technology, the Japanese copyright law was amended. The new public transmission right regulated by Art 23(1) in new Japanese Copyright Law covers all forms of existing transmission: the broadcasting right, the wire diffusion and the so-called “interactive transmission right”—the right to transmit works via the Internet.\footnote{416} The former two kinds of rights are limited to simultaneous reception of

\footnote{414} Supra note 409, at 675.

\footnote{415} Japan Copyright Office, Copyright System in Japan, (2005 ed Copyright Research and Information Centre (CRIC)). Based on this new introduced right, there were already three forms of transmission in Japanese Copyright: broadcasting, wire diffusion and interactive transmission.

\footnote{416} Japanese Copyright Act, supra note 190, art 2 (1) (viibis), (viii), (ixbis) and (ixquater), Copyright Law of Japan.
the identical content by the public. And the interactive transmission means to “transmit a work to the public automatically in response to a request from the public”. This new public transmission right includes both making the work transmittable in the case of automatic public transmission and other public transmission (such as transmit by the request of user).

Public transmission right under the Japanese Copyright law can be also separate into two factors: one is “making transmittable” and the other is “public.”

Art 2 (1) (ixquinques) interprets the act of “making transmittable” in details:
(a) the work stored in the internet-connected medium must be protected content;
(b) the server which stored copyrighted works must connected to the Internet.

For example, the acts of uploading music files, movie files or aired television programs to a webpage without consents from copyright owners and allow individual users of the Internet to request access and transmit the uploaded work automatically violate the public transmission right. Based on the former

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417 Id. (" however, public transmission falling within the term broadcast or wire-broadcast").
418 Id, art 23, para 1. See also THOMSON REUTERS, COPYRIGHT THROUGHOUT THE WORLD (2010), at §22:19. (Automatic public transmission refers to " the form of public transmission which occurs automatically in response to a request from the public, excluding, however, public transmissions falling within the term "broadcast" or "wire-broadcast". "Internet broadcasting," where a TV or radio program is transmitted simultaneously to the public over the Internet is regarded as automatic public transmission.)
419 In Japan, simulcasting and webcasting are regarded as making available to the public rather than broadcasting under the meaning of WCT. Not only broadcasting organizations but also performers, phonogram producers are granted the right of making transmittable to the public in Japan. It turns out that Japan has a broader scope of the right of making available to the public than other countries.
420 Peter Ganea, Christopher Heath and Hiroshi Saito, Japanese Copyright Law (2005), at 57.
(Other scholar also explained that there are three key elements to fulfill the requirement of the right of making transmittable: (a) a copyright work has been stored in a memory by direct storage or uploading; (b) the memory has been installed in a computer; (c) the computer has been connected to the Internet. See Hong Tao, Transmision of Copyrighted Works over the Internet, Rights and Exceptions, 40 http://epublications.bond.edu.au/theses/tao/
interpretation of “making transmittable”, it shows a common view in Japan: making transmittable only covers the factor of making interactive transmission possible—the act of uploading. All the other subsequent actual transmissive acts following the uploading are not covered by the right of public transmission.\textsuperscript{421}

Then comes to the other factor—“public.” According to Japanese copyright law Art 2(5) and Art 26bis(2)(iv), “public” is unspecified person or a large number of persons. Therefore, a small number or specified persons do not constitute “public”.\textsuperscript{422} As a result, even only one person could constitute a member of the “public” as long as he is unspecified. For instance, in Myuta case,\textsuperscript{423} the plaintiff provided an online storage (music locker) service, which allowed users to transfer their music files into 3G2 files in their computers then uploaded to their online storage server, and download the uploaded music files to their cellular phones at any time. Because any person could become a subscriber of the plaintiff’s service by certain subscription, and the subscriber of the service is an unspecified person, the subscriber should be regarded as the public. Japan complies with the WCT’s requirement but did not fully copy the provision of WCT.

There are several cases about how Japanese court apply the new public transmission right. First, in Yoridori-midori case, which I mentioned above, users


\textsuperscript{422} Art 2(5): “the public includes a large number of specified persons”. See also supra note 181. (According to most Japanese scholars, unspecified means a person is not within the normal circle of a family and its closest social acquaintances.)

\textsuperscript{423} Tokyo District Court, 25 May 2007, 1979 Hanrei Jiho 100.
were allowed to record TV programs for later play back.\textsuperscript{424} The entire system was designed in a way that the server always made only one copy of the recorded TV programs even when several users wanted to record the same TV program. So there was only one copy of the TV program saved on the server, which could be accessed and enjoyed by several users who requested to record it. The Osaka District Court firstly reasoned that the number of the users was large enough to be regarded as “public”. Regardless of the number of the viewers, users enjoyed the same copy of a specific TV record on the server, therefore, the subject of the reception of the transmission should be deemed as public. Further how the defendant’s system work made it a system that can “making transmittable” a copyrighted work. The Osaka High Court affirmed.\textsuperscript{425} Then, in deciding whether the defendant directly infringes the right of public transmission, the Osaka High Court reversed the Osaka District court’s decision. It held that even the defendant should not be regarded as the entity of public transmission in a physical sense; he still should be considered so in a normative sense. Because the defendant actually managed, controlled and maintained its product, it infringed the right of public transmission.

Second, in the Justonline case, the subscribers of the Video-share website (which operated and managed by the defendant) uploaded copyrighted video files without the Plaintiff’s permission. Then, such files remained in the defendant’s server, so that they could be transmitted to other users if they have accesses to the


\textsuperscript{425} Yoridori-midori case, Osaka High Court, 14 Jun 2007, 1991 Hanrei Jiho 122.
server and upon their requests. The Tokyo District court ruled that the defendant infringe the right of public transmission. The court reasoned that it not only control and manage those illegal public transmission but also gain benefit attribution through inducing and enlarging such public transmission. In 2010, the IP High Court affirmed the Tokyo District court’s decision.

The Maneki case is also a great example. In this case, the defendant provided a space-shifting service for TV programs which called “Maneki TV”. This service could be used via a product called “LocationFree”, which has a component device called “base station”. By using the base station, a user was able to watch TV programs through Internet upon his own request in the area where his base station was installed. The defendant would get 31,500 yen for the first admission service and then 5,040 yen as monthly fee for continuing service. Both the Tokyo District court and the IP High Court held that the defendant did not infringe the right of making transmittable. Because there’s no “automatic public transmission server” exist in this case. An “automatic public transmission server” must be a device which transmit programs that can be received directly by the public. But via the “Maneki TV” service, the transmission of TV programs through the base station is conducted

Justonline Appeal case, IP High Court, 8 Sep, 2010.
428 Id. A base station can “incorporate a television tuner for terrestrial analog broadcasting and functions to convert the received broadcasts into digital data and automatically transmit such data upon the request of a user.” The defendant would house the base station inside its data center, and connect the user’s device to an antenna through booster, hook up with a router, and ultimately to the Internet.
429 Id.
by the individual user, and the reception of the requested data from the base station is also conducted by the specified users. The base station is just a sole corresponding device that has already been set up. It provides function of transmitting “one to one” not to the public. Therefore, the defendant did not infringe the right of public transmission. However, in 2011, the Supreme Court of Japan reversed the Tokyo District court’s and the IP High Court’s decision in Maneki case. The Supreme Court of Japan had two holdings: (1) any device connected with the Internet open to the public that is capable of transmitting data to a recipient automatically upon request from that recipient, could be an automatic public transmission device, even if the device was only capable of transmitting data to a single recipient. As far as the transmission was performed by said device, it constituted automatic public transmission; (2) the person who creates the possibility for such a device to automatically transmit data to a recipient upon request is considered to be the party who performs transmission.\footnote{Id.} The Supreme Court of Japan explained its decision: the legislative purpose and objective of bringing the right of making transmittable to Japanese Copyright Law is to regulate the preparatory action to be carried out before performing an actual automatic public transmission. Further since anyone could subscribe to the defendant’s service by entering into a contract, users of the service are unspecified person, the public exists. Based on these, the defendant’s base station must be regarded as an automatic public transmission server, and there was automatic public transmission. Then, by analyzing how the automatic transmission server work, it’s reasonable for
the court to hold that the person who creates a condition in said server is acting like that this is the performer of public transmission. In this case, it's the defendant who connects the base station to the TV antenna under its management so that the base station can automatically covert the input information into digital data and then transmit such data through the Internet upon request by the receiver. Accordingly, the defendant performs public transmission even though the users are the owners of base stations.\(^{431}\)

Based on these cases, it clearly shows that Japan has a broader scope of the right of public transmission. The copyright owners are granted a broader right. This conclusion is drawn based on three holdings of the Japanese courts: (1) the right of making transmittable is broader, because it can regulate a preparatory action to be carried out prior to an actual automatic public transmission; (2) the definition of “public” is broader. As far as any unspecified individuals can subscribe the transmission service, the public exists; (3) Once an entity actually control, manage, provide maintenance service or gain financial advantages from its service, the entity is considered as the infringer of the right of public transmission, even if in physical it does not transmit publicly. There is a reason for the courts in Japan interpret right of public transmission strictly in protecting the copyright owners’ right. Japan is a big culture-export country; it exports thousands of animations, TV programs, movies and music every year. Japan can gain numerous financial benefits from its culture products. In order to encourage people keep creating, it's so reasonable to protect copyright owners’ benefit as best as it can. In my opinion, China now is in a

\(^{431}\) Id.
transitional period (in adopting and applying copyright law), we can transplant Japan’s regulation partly in order to keep balance between copyright owners, ISPs and users.

C. *Australia — the right to communicate to the public*

Australia implemented the Art 8 of WCT by enacting the Copyright Amendment (Digital Agenda) Act 2000, which amended the Copyright Act 1968. The Digital Agenda introduced a new exclusive, technology-neutral right – the right to communicate to the public. This new communication right replaced both the broadcasting right and the cable diffusion right. Further, this exclusive communication right is separate from the right of authorization, which means copyright owners not only have the right to communicate to the public, but also have the right to authorize other people to communicate the work to the public.

Under Section 10(1) of Australian Copyright Act, “communicate” means “make available online or electronically transmit (whether over a path, or a combination of paths, provided by a material substance or otherwise)...” With this legislative interpretation, it’s known that there are two ways to communicate: (1) make available via the Internet, and (2) electronically transmit material, “whether through material substances (for instance telephone cables and optical fibres) or otherwise (for instance, via electromagnetic waves— wireless

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433 Copyright Act 1968, *supra* note 178.
434 *Id*, s31(1)(a)(vii).
435 *Id*, s10(1).
telegraphy).436 Therefore, the Australian Copyright Act actually provides two exclusive rights of communication to copyright owners: (1) the right to make a work available online, and (2) the right to electronically transmit a work. Section 10(1) also provides the definition of “to the public”, which means “to the public within or outside Australia.”437 It means that this right only extends to communicate to the public, rather than to particular subscribers.438

The right to make a work available online is relevant in cloud computing dissertation. To understanding this right, there are several factors. First, when will the communication happen? According to Australia scholars, under the circumstance regulation of making a work available online, the communication happens once a work has been uploaded to the Internet server that can be accessed by the public.439 And second, who makes the communication? According to Copyright Act 1968 section 22(6), it’s the person who chooses the content to communicate makes the communication.440 Based on the Revised Explanatory Memorandum accompanying the Copyright Amendment (Digital Agenda) Bill 2000, carriers and ISPs are excluded from being directly liable for communicating material

437 Copyright Act 1968, supra note 178, s10(1).
438 WILLIAM VAN CAENEGEM, INTELLECTUAL PROPERTY LAW IN AUSTRALIA 46 (2010), para 91. ( Woolworths Limited v. Mark Konrad Olson and Anor [2004] NSWSC 849, where the sending of an individual email was held not to amount to a communication to the public.)
440 Copyright Act 1968, supra note 178, s22(6)(" For the purpose of this Act, a communication other than a broadcast is taken to have been made by the person responsible for determining the content of the communication.")
to the public via their service, where they do not generate these content.\textsuperscript{441} Once the ISPs choose the content of communication, they still could be direct infringers. Further, ISPs could be the direct infringer for authorizing the communication to the public, as far as they do not merely provide physical facilities.\textsuperscript{442}

There are several cases in interpreting how Australian Courts apply the right to communicate to the public. First, in Universal Music Australia v. Sharman License Holdings Ltd case,\textsuperscript{443} The defendants provide a Kazaa system enabling users to search and download digital files from Altnet Inc or other Kazza users. It’s a peer-to-peer file sharing system. The plaintiffs claimed that defendant infringe their right of communication to the public. The defendants argued that it did not communicate any copyrighted works to the public. Their users did. The court found that the defendants knew the predominant use of Kazaa was for the sharing of copyright-infringing material, and it did not prevent such use. Further the defendants also gain advertising revenue by operating Kazaa, and kept Kazaa sustaining with those revenue. What’s more important here, 6 of the defendants indeed authorized users to make copies of a specific recording and to communicate the recording to the public. However, the court didn’t ban the defendants from continuing to distribute its file-sharing software, as long as they adopted certain measures to prevent


\textsuperscript{442} \textit{Id}, at 10.

copyright infringements. This case shows that the Australia court struggled to protect the development of new technology from being destroyed.

Second, the Universal Music Australia v Cooper case\(^{444}\) shows the difference between the right of communication to the public and the right to authorize communication to the public. The defendants are the registered owner and operator of the website mp34free, and the ISPs who provide free web hosting. All the defendants gain financial benefits from the website mp34free.net. Users of this website can not only access and download infringing copyright copies of MP3 recordings via the provided hyperlinks, but also they can add and contribute hyperlinks to MP3 files on third party websites to this website. The trial court and the full court of the Federal Court of Australia held the same decision. The trial court ruled that the defendants did not infringe the right of communication to the public, because they did not make the sound recordings available to the public or electronically transmitted them to the public.\(^ {445}\) Courts provided three main reasons for this conclusion: (1) there were no sound recordings located on the mp34free website, they cannot be downloaded or transmitted from the website.\(^ {446}\) (2) It’s the third parties’ websites which allow users to download sound recordings, therefore, the third parties’ websites made the sound recordings available to the public, not the mp34free website.\(^ {447}\) (3) The electronic transmission of the sound recordings by clicking on the hyperlinks on the mp34free website started from the third parties’
The decision means that a website could not be said to be communicating a copyrighted work to the public by simply providing links to resources on third parties' websites. Further, the full court also determined the issue about who is responsible for the communication. The full court ruled that a person who is the proprietor, manager or operator of a website which provides hyperlinks to the third parties' websites (where the sound recordings are located) does not decide the content of the communication. And an ability to remove such hyperlinks from his website is not a behavior for determining the content of the communication.

However, the trial court held that these hyperlinks could amount to authorizing communication to the public. As to the defendant Cooper who owned and operated the mp34free website, he not only had the power to take down the infringing hyperlinks, but also knew that these hyperlinks may lead to infringement. He nonetheless failed to take any measures to prevent such infringement. As to the ISPs who providing web hosting service, they could have taken step to taking down the website, but they did nothing to prevent such infringements. These ISPs could not be protected by s 112E of the Copyright Act 1968, since they had performed an active role by hosting the website and assisting with its operation, which were

448 Id, para. 66.
449 Universal Music Australia Pty Ltd v Cooper (2005) FCA 972, paras. 72-75. available at: https://jade.io/article/110955/section/140833
450 Id, para. 75.
451 Copyright Act 1968, supra note 178, s112 E. ("A person (including a carrier or carriage service provider) who provides facilities for making, or facilitating the making of, a communication is not taken to have authorised any infringement of copyright in an audio-visual item merely because another person uses the facilities so provided to do something the right to do which is included in the copyright.")
necessary steps to effectively trigger the illegal downloading of the copyright material.\textsuperscript{452}

Third, the Roadshow Films Pty Ltd v iiNet Ltd case decided whether peer-to-peer (one-to-one) communication of a film through the Internet by BitTorrent was an illegal communication to the public.\textsuperscript{453} In this case, the BitTorrent is a file sharing system which was able to diffuse a file into small packets (for instance, a film). Those small packets then were downloaded to many computers. Eventually those packets were sent from those computers to different computers by the BitTorrent software. Therefore, people who wish to download a copy of the movie just need to send a request to a “swarm” of other computers which used BitTorrent software to download the movie before. The Full Federal Court reversed the trial court’s decision, it held that iiNet users were repeat infringers insofar as they repeatedly made works available online.\textsuperscript{454} “BitTorrent use is an ongoing process of communication for as long as one wishes to participate.”\textsuperscript{455}

Further in this case, the Full Federal court also held that “a communication within the meaning of s22(6) could be made by one computer to another without direct human intervention if one

\textsuperscript{452} Cooper case(full court), para. 75. See also Copyright and Related Rights Cases in the Field of Music in the Asia-Pacific Region, 33-35., available at: http://www.wipo.int/edocs/pubdocs/en/copyright/1025/wipo_pub_1025.pdf


\textsuperscript{454} Id, para. 158, paras. 322-346. See Roadshow Films Pty Ltd v iiNet Ltd (2010) 83 IPR 430. (The trial court held that iiNet did not commit a new act of infringement each and every time a computer containing an infringing film was connected to the Internet and the film. Because the electronic communication occurred between internet users and the community of peer-to-peer users as a whole but not between individuals per se.)

\textsuperscript{455} Id, para 601.
computer made a work available online.” In this case, as a conclusion, users of BitTorrent make films communicate to the public.

Following this opinion, the trial court in Optus case also draw a conclusion that the users was responsible for making any communication within the meaning of s 22(6), since the user who selected the program to be recorded was the person that determines the content to be played back to him. Therefore if a user simply communicated back the content to him, there was no communication to “the public.” However, the Full Federal Court reversed the trial court’s decision of the right of reproduction, left this behind since it’s not necessary to solve this in the appeal. In my opinion, based on the language from the Full Federal Court’s decision, Optus system was designed to make the copyrighted programs available for subscribers online by their requests. Optus did not merely provide facilities but intentionally designed and maintained its key function— capture free-to-air TV programs and channel them to the subscribers’ online device. Thus, to me, Optus made the communication to the public.

Countries are still struggling in solving the legal issues caused by new technology in respect of the right of communication to the public. The following

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456 Singtel Optus Pty Ltd v Naional Rugby League Investments Pty Ltd (No 2) [2012] FCA 34, 88. See also id, paras. 151-158.
457 Id, para 90-92.
458 Id, para 106.
459 Optus appeal, supra note 184, paras. 166-167. (“Optus is not merely making available its system to another who uses it to copy a broadcast. Rather it captures, copies, stores and makes available for reward, a programme for later viewing by another... Optus not only has solicited subscriber utilization of its service, it has also designed and maintained a sophisticated system which can effectuate the making of recordings wanted for viewing by subscribers.”)
section will firstly analyze the specific issues caused by the cloud computing technology and then analyze such issues under the Chinese situation.


Based on the former discussion of the application of the right of communication to the public in different countries, two main issues arose: what constitute “public?” and who is communicating. These two issues remain unanswered and get unclear when applying to the cloud computing technology. The following sections will analyze these two issues and provide a proposal ground on these analyzes.

A. What constitute “public”? — Deduplication Technology

Usually, people use cloud computing as storage, video/audio streaming, file sharing, email and Internet radio. Under this circumstance, this streaming service will cause communication to the specific users, or to the public if the works are accessible to everyone who are online. Once there’s a “public”, the streaming service will constitute the communication to the public and may infringe the copyright owners’ exclusive right. As a result, it’s significant to determine whether there’s a “public” or not. In most cloud storage or video/audio streaming service, the ISPs will use the deduplication technology to save spaces and lower costs. When using the deduplication technology, there’s only one copy for the same file stored in the cloud server. All the users have access to the same file through the cloud storage have to access this one particular copy. As I mentioned in the US part, the US Supreme Court
denied “a single copy doctrine” in the field of “Cable TV and Equivalents,” but should the single copy doctrine applied here? In my opinion, it depends. If the user who upload a file to his own cloud storage space and setting his space as private (which means only the user or person with the user’s authorization could access to the space), even the uploaded file has been replaced by the stored copy of the same file because of the deduplication technology, there’s no public here. Although the user access to the copy which others can also access, the user himself does not intend to be one of the “public.” From the user’s point of view, he just accesses to the file that he uploaded earlier. So, if users set their uploaded files as accessible status as private, to them, they do not constitute public. But if users set their files’ accessible status as public or “sharing,” then people access that file will constitute public. The users’ act of setting “sharing” status of copyrighted files constitute infringe the right of communication to the public. Further, if the user re-store the files to his own private cloud storage space directly from others’ sharing cloud storage space, the user constitute “public” either. Because the user is not a specified person, he belongs to the public. The user’s act of re-store enable him to access the files, and he has the intention to enjoy the files. Although the user does not further transmit the files to others, what he had done still constitute copyright infringement.

B. Who is communicating?— the Users or ISPs?

In my opinion, the two mostly used methods from deduplication technology need to be analyzed separately in this issue. As I mentioned in the last section— the right of reproduction, the first method is that the ISP himself makes a single master copy for users who have right to access the file. In my opinion, ISP who provides the
single master copy is the one who communicates. Whether the user who uploads the same file to his storage space has the authorization doesn’t matter, because the ISP will use his own master copy to replace the user’s uploaded file. The ISP initially has the master copy on his server no matter the user upload the same file or not. As a result, the difference here is whether the ISP has authorization from the copyright owner. If not, he may infringe the right of communication to the public (if there’s a public). Otherwise, he legally communicates to his subscribers. The other method is that the deduplication system runs to analyze each individual bits of data from each file to determine whether any data chunk from the file already on the server. In this situation, it’s clear the ISP himself does not provide any files, but only use his deduplication technology to delete the repeated files and keep the new one. In my opinion, if the ISP merely provides facilities for its service and simply use the deduplication technology to release room for his storage space, he should not be the one who communicates. If the files are infringing ones, he may be secondary liable for the infringement of the right of communication which base on how much he knows about the infringing files. However, if the ISP does not merely provide facilities instead he’s able to control all communications on his server, or he actually maintains and helps the infringing communications, he also gains financial benefits from such service, the ISP may still be held liable for infringing the right of communication to the public.

C. The Right of Dissemination on Information Networks and a Proposal in China

To cope with the copyright challenges brought by the developing Internet technology and strengthen copyright protection in the Internet era and to
implement Art 8 of WCT, China introduced the right of dissemination on Information Networks.\textsuperscript{460} Art 10(12) of Chinese Copyright Law grants copyright owners the right of dissemination on information networks. That is, “the right to provide the public with works by wired or wireless means, so as to make the public able to respectively obtain the works at individually selected time and place.” The Supreme People’s Court of China defined the “information networks” as “the Internet, radio and television broadcasting networks, fixed communication networks and mobile communication networks... as well as local area networks open to the public.”\textsuperscript{461} Although China does not place “to the public” in the title of this right, it’s clear that the right of dissemination is limited by “to the public” from the Supreme People’s Court’s interpretation.

To understand Chinese right of dissemination on information networks, four questions need to be answered. First, what’s the difference between the right of distribution and the right of dissemination on information networks? To answer this question, an analysis of the distribution right in the Internet is necessary. I will analyze this issue in the next section of the right of distribution. The following part will analyze the other three questions: (1)does the right of dissemination on

\textsuperscript{460} Zhuzuo Quanfa(著作权法)[Copyright Law of the People’s Republic of China (2010 Amendment)](promulgated by Order No.26 of the President of the People’s Republic of China, Feb 26,2010), Article 10 (12).

information networks regulate the non-interactive communication; (2) how to define the word “provide” in the statute; and (3) who provides.

a. Does The Right of Dissemination on Information Networks Regulate “Non-Interactive Communication?”

The definition of the “information networks” also clarify that the right of dissemination is a right to protect copyright owners in the Internet world, it fulfilled the WCT’s requirements. However, there’s an element of “individually selected time and place,” which means that public has to be able to obtain works on demand on a point to point basis. As I explained before, this is “interactive communication”. Therefore, the definition of the right of dissemination indicates that the right of dissemination on information networks in China can only regulate “interactive communication”. However, network application technology keeps developing, non-interactive communication became more and more popular. For instance, ISPs are now providing webcasting, web-TV, simulcasting, or Internet radio services. Users cannot choose the time they want to enjoy works, because there are schedule of online live webcasting. Users can only enjoy specific works by following the specific schedules. Different users can enjoy exactly the same works from the same website (which provides live webcasting service) at the same time. It’s obvious that the right of dissemination on information networks in China cannot regulate the act of non-interactive communication. Therefore, how should China regulate non-interactive communication?

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462 Legislators of the Copyright Law in China explicitly indicated that the definition of the right of dissemination on information networks was determined directly based on the statements of WCT Art 8. See Hu Kangsheng (胡康生), Zhonghua Renmin Gongheguo Zhuzuo Quanfa Shiyi (中华人民共和国著作权法释义)[ Definitions of Copyright Law of the People’s Republic of China](2002), at 56.
communication now? Lots of scholars indicate that courts should apply Art 10(17) in this issue. The whole Art 10 grants copyright owners’ moral rights and economic rights. It lists sixteen kinds of exclusive rights. And as a general provision, Art 10(17) provides “other rights which shall be enjoyed by the copyright owners.” Since there’s no accurate specific provision to regulate non-interactive communication, it’s reasonable to apply the general provision Art 10(17). In the case of Edko Film v. UUSee.com, the defendant provided “set-time broadcasting” service. It provided a copyrighted film on specific time, its subscribers had to access its website on the scheduled time to enjoy this specific copyrighted film. The Beijing 2nd Intermediate People’s Court ruled that the defendant infringed the plaintiff’s copyright— to provide works to the public by wired or wireless means on a specific schedule. Since the right of dissemination on information networks only regulate interactive communication, and in this case subscribers cannot individually choose the time they want to enjoy the specific film, the court held that the defendant violate the catch out provision—Art 10(17). Moreover, Art 10 of the Beijing Higher People’s Court’s “the Guiding Opinions (I) on Several Issues Concerning the Trial of Cases Involving Copyright Disputes in Cyberspace (for Trial Implementation)” also expressly regulated: “ISPs who provide works to the public via Internet on planned schedule, such acts do not constitute the dissemination on information network.

463 Chinese Copyright Law, supra note 460, art 10(17).
This act has to be regulated by Art 10(17) in Copyright Law.” And further in the new draft of Copyright Law, Art 13(6) provides a new “broadcasting” right, which means to broadcast or re-broadcast works by wire or wireless means, or disseminates works to the public by using technological installations.” This new broadcasting right extends the traditional broadcasting right to regulate non-interactive communication.

Based on these analyses it’s reasonable to conclude that the right of dissemination on information networks in China only regulates interactive communications. But courts can still use general provision Art 10(17) to regulate non-interactive communication for now in China. For instance, in cloud computing area, online music streaming (Internet Radio) service cannot be regulated by the right of dissemination on information networks, but it can be regulated by Art 10(17) for now.

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465 Beijingshi Gaoji Renmin Fayuan Guanyu Wangluo Zhuzuoquan Jiu Fen Anjian Ruogan Zhidaoyi (北京市高级人民法院关于网络著作权纠纷案件若干问题的指导意见) [The Beijing Higher People’s Court made “the Guiding Opinions (I) on Several Issues Concerning the Trial of Cases Involving Copyright Disputes in Cyberspace (for Trial Implementation)” (May, 2010), art 10.

466 Draft of Copyright Law, National Copyright Administration of China, Jun, 2012. This draft had been developed based on from lots of scholars and relative practitioners.

467 See Wei Wei (魏巍), Yidong Wangluo Diantaide Zhuzuoquan Wenti (移动网络电台的著作权问题) [Copyright Issues of Internet Radio, Renmin Fayuanbao (人民法院报) (People’s Ct. Daily) (2015). available at: http://rmfyb.chinacourt.org/paper/html/2015-04/22/content_96976.htm?div=-1 (In this article, the author clearly pointed out that simulcasting via Internet radio cannot be regulated by the right of dissemination on information networks, because subscribers are not able to obtain the works at the time they choose individually. And further the author also recommend to amend the copyright law in China with a new broad “broadcasting” right which can not only regulate interactive communication but also non-interactive communication.)
b. How To Define “Provide?”

The third question is: how to define “provide” in the statute? According to the Supreme People’s Court’s Provision, “if the work, performance, audio or video recording is placed on an information network by means such as uploading to a network server, file sharing settings or using file sharing software or other acts, allowing the general public to download, browse or otherwise obtain the work, ...at the time and place chosen individually, the people’s court shall determine that the network user or network service provider has committed the act of provision....”

Although the Supreme People’s Court made a big movement in defining the unclear word “provide” in Art 10(12) of Copyright Law, there are still unclear parts in this definition. First, this definition still does not clearly indicate whether the act of “provision” should be interactive or not. Base on the result of the “provide” action mentioned in this definition—“obtain work at the time and place chosen individually”, and where I reasoned that the right of dissemination on information networks should only regulate interactive communication, in my opinion, the “provide” action should be interactive. It means that providing content for online simulcasting, cloud-base Internet Radio streaming, webcasting or other services which do not allow subscribers to choose the time and place to enjoy works cannot be deemed as the act of “provide” under the right of dissemination on information networks.

Then, comes another issue, based on the language used in limiting the scope of “provision” in this art, what kind of act is really within the scope? This article lists

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468 2013 Provisions of the Supreme People’s Court, supra note 461, art 3(2).
three kinds of act of provision: (1) upload works to a network server;(2) set files to share;(3) use a file sharing software. From these descriptions, it’s clear that share copyrighted files directly via cloud storage service without authorization infringes the right of dissemination on information networks. Because in this action, a person has to upload files to the cloud server or sets the files to be shared in his cloud storage space, in either way, such actions are within the scope of “provide.” Then, using a peer-to-peer sharing software to share copyrighted works without consent also infringe the right of dissemination on information networks, since it’s an action of “using file sharing software.”

What indistinct here is whether provide deep linking, video aggregator websites/apps and links to online storage space should be considered as the act of “provision” under the right of dissemination on information networks. When use usual linking service (which links to third party’s homepage or other websites), after clicking the link, users will leave the website which provides the link and be directed to the third party’s linked website. However, deep linking\footnote{Deep Linking, WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/Deep_linking} directly link the files stored on the third party’s website, and provide the users who click the link works without leaving the visited website. So users will not realize the works they accessed are from a third party’s website, they will assume the works are provided by the service provider of the visited website. Therefore, it’s unclear whether deep linking should be regarded as the act of provision under the right of dissemination on information networks. Further, it’s reasonable to take deep linking and video

\footnote{Deep Linking, WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/Deep_linking ("Deep linking is the use of a hyperlink that links to a specific, generally searchable or indexed, piece of web content on a website(e.g., "http://example.com/path/page"), rather than the website’s home page (e.g., "http://example.com/").}
aggregator together to consideration, because the technology used in video aggregator is deep linking technology actually.\textsuperscript{470} Based on how the video aggregator functions, it seems only the deep linking process is relevant in the act of “provision.” Because of the deep linking and further embed coding technology, users can directly access video files without noticing the files are indeed from other websites. As a result, users will assume the video aggregator apps/websites they visited provide the video files. So does provide deep linking is an act of “provision” under the right of dissemination on information networks? There are two standards among Chinese scholars. First, according to Professor Wang Qian, he does not see deep linking as “provision” under the right of dissemination in China. He supports the “server standard.” The server standard means: whether an infringed works were uploaded to a server that opens to the public is the standard for deciding whether there’s an act of provision under the right of dissemination on information networks. By this standard, provide deep linking cannot be deemed as “provide.” There are reasons for this standard: (1) WCT Art 8 and Art 10(12) of Chinese Copyright Law both limits the scope of the dissemination right when dealing with “provide the

public with works”. “Provide works” is an objective action. And no matter who does the provision action, this “provide” is an established fact. Under this circumstance, even users misunderstand who actually provide works online; the court still can identify the real provider based on the known established fact. (2) The act of “provide” works results in public being capable of obtaining the works at the individually selected time and place. This result is a status that the works are “making available” to the public. So upload works to a server which can be accessed by the public can issue in this status. And this status will sustain until the works are deleted from the server or the server is shutdown (offline). In consequence, deep linking these already available works will not cause them to be available to the public for a second time. The act of deep linking will merely strengthen the communication extent of the works, since there will be more users obtain the works via clicking the deep links to access the works they already able to access via directly visiting the server. 471(3) According to the WCT basic proposal, “making available of the work by providing access to it” should counts the “initial act of making the work available, not mere provision of server space, communication connections, or facilities for the carriage or routing of signals.”472473 Professor Wang Qian’s theory had been adopted by the Beijing Higher People’s Court and Beijing IP

471 This reason is quite similar to the EU’s “new public” standard. However, the author of this dissertation reach a total different by reading “allowing the public to...obtain the work...” in Art 3 of the provision. And the author will analyze it later in this part.
472 WIPO, Basic proposal 1996, para 10.10
In 2010, the Beijing Higher Court stated: “whether ISPs’ act constitutes dissemination on information networks, the standard of this issue is whether the ISPs upload or act in other ways the works to an Internet server which open to the public. If the plaintiff claimed that the users erroneously identify the ISPs for providing the works because of the ISPs’ service type, if ISPs could prove that they merely provide service as automatic connect, automatic transmission, file hosting, search, liking or P2P, the ISPs’ act does not constitute dissemination on information networks.” Then in Apr 21, 2016, Beijing IP Court adopted the server standard in deciding whether ISPs infringe copyright owners’ right of dissemination on information networks. There are just two exceptions where ISPs could infringe the right of dissemination via providing deep linking service: (1) Copyright owners have already set up technical protection measures to protect their files;(2) ISPs provide any works jointly with others by means such as cooperation. Beijing IP court brought three cases (where issues are whether links of the works infringe the right of dissemination on information networks) to support its determination.

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474 Beijing Intellectual Property Court (Beijing IP Court), available at: http://www.spruson.com/china-new-ip-court-system-starts-first-ip-court-beijing-3/ (“IP Courts will be responsible for all first instance cases related to technical matters including invention, utility and design patents, plant variety protection rights, layout designs of integrated circuits, ownership of technical secrets and copyrights for computer software. The first instance jurisdiction of technical matter cases is independent of the IP enforcement route leading up to the filing of the case and applies to both civil and administrative cases.”)

475 Beijing Higher Court’s Guiding Options, supra note 465, art 4.

476 Wangluo Chuanbo Qinquan Rending Qiyong Fuwuqi Biaozhun [The Sever Standard being Applied in Determining Online Infringements], Beijing Ribao (北京日报) [Beijing Daily] (Apr. 22, 2016) http://bjrb.bjd.com.cn/html/2016-04/22/content_27525.htm The Second exception was also stated in Art 4, Provision of the ...infringement of the right of dissemination. Supra note 223.

477 Three noted cases relevant to whether deep linking infringe the right of dissemination, published by Beijing IP Court (Apr. 28, 2016), available at
However, there are still many scholars adopted the standard of “users’ perception” to analyze whether ISPs “provide” copyrighted works. The standard of “users perception” means users are able to continually access works from a website/plat, but actually the server of this website/plat did not store such files and the files were not uploaded from this website/plat. The basic principle of this standard is “substitute in substance principle”. The substitute in substance principle means the works provided by the suable ISPs had already substituted the access of the users to the same works on the original website in substance. Deep linking enable the suable ISPs directly provide contents of video/audio files to users, as a result, the copyright owners cannot control the dissemination of their copyrighted works, and result in substitution in the market which cause benefit lose. These scholars believe that the Art 3 of the 2013 provision of Supreme People’s Court extend the used “server standard”. Because Art 3 lists two new kinds of provide action (instead of only “uploading to a network server”): (1) file sharing settings; or (2) using file sharing software. As I mentioned above, these two kinds of provision

http://www.cnipr.com/sfsj/pljx/201604/t20160425_196459.htm (In one of the cases, the defendant produced TV set top boxes which preset a software named with “Rabbit”. By using Rabbit, which is a video aggregator software, users could enjoy the plaintiff’s copyrighted works. The Beijing IP Court ruled that the defendant did not act a “provision” action, but only an act of link. By analyzing the WCT basic proposal, the court held that the act of “provision” in the right of dissemination on information networks only refers to the primary act when upload files to a public Internet server. The defendant did not “provide” works as a result. The Beijing IP Court expressly suggested all the plaintiffs to claim all their rights –especially the right of dissemination on information networks, when they cannot decide whether the defendant “provide” copyrighted works. The courts will analyze based on facts, if the defendant’s act did not constitute “provide”, the court then will discuss whether the act of link infringe copyright.)


479 See Zhu Jianjun, supra note 470..
action indeed extend the “server standard.” And further, scholars also noticed that
the Supreme People’s Court use “place” the work on an information network, the
word “place” does not simply mean “upload.” So by extending the server standard,
“users’ perception standard” will be applied instead. There’s a case to prove the
“substitute in substance principle” of “users’ perception standard.”480 The defendant
provides a video aggregator app which enable users to enjoy TV programs, movies
and others from their cell-phones. The defendant’s app use deep linking technology,
directly enable users to enjoy works from the third parties’ website without
showing the sources of those works. Further, the defendant classified lots of video
files into different categories. The court realized that the defendant’s server did not
stored the infringing works, but provide unauthorized linking services by cracking
the plaintiff’s protective technical measures. The court held that the defendant
infringe the right of dissemination on information networks. There are two reasons:
(1) hot-linking service extend the scope of dissemination of the infringing works,
which should be controlled by the plaintiff, and also change the scope of targeted
users of the plaintiff, further break the plaintiff’s control effect of the infringing
works, and finally result in damaging the plaintiff’s interests of the infringing works.
The defendant’s act cannot be deemed as fair use. (2) The defendant not merely
provides deep linking service, but choose, collect, edit and classify those video files.
The defendant actively and subjectively destroyed the plaintiff’s protective technical

480 ShenzhenShi Tengxun Jisuanji Xitong Youxian Gongs Su Beijing Yilian Weida Keji
Youxian Gongsi(深圳市腾讯计算机系统有限公司诉北京易联伟达科技有限公司)[Shenzhen
15, 2016), available at:
http://www.pkulaw.cn/case/pal_21110623265271470.html?keywords=%E5%BF%AB%E7%9C%8B%E5%BD%B1%E8%A7%86&match=Exact&tiao=1
measures, so he had liability for fault. And further the defendant’s app enable users to enjoy works without showing the sources of the works and the defendant also has certain level of control of the scope of the dissemination of the infringing works, so the defendant’s deep linking service constitutes “substitute in substance.” In the first case of video aggregator relevant to deep linking service, the Beijing Haidian People’s District Court clearly pointed the “substitute in substance principle.”

I agree with the “users’ perception” standard because of two main reasons. First, the scope of the server standard is too narrow. With the development of technology, cloud storage and its online streaming service, video aggregator service, deep linking service and others had been fully accepted and used by

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481 Some Chinese scholars also suggest that the court should apply to the anti-unfair competition law. Because there are market competitions between video aggregator websites/apps and copyrighted video websites. The video aggregator service providers do not need to pay licensing fees or purchase servers or broadband or other basic facilities. They could enable users to enjoy those copyrighted works simply by creating deep-links. They could even block ads from those original copyrighted works by setting technical measures. These unfair actions of the video aggregator service providers break the copyright market competition orders, and also damage the copyright owners’ interests. Professor Feng Xiaqing from CUPL and Mr. Pang Zhongzheng (vice chairman of Beijing Lawyers Association) also indicated that the court could apply the anti-unfair competition law in solving the case of unauthorized online real-time rebroadcast. See Zhu Jianjun, supra note 470. see also Liu Qing & Tian Xiaojun(刘青 & 田小军),(Dec. 28,2015), China IP News, available at http://www.cipnews.com.cn/showArticle.asp?Articleid=39044

There are also cases support this theory. The plaintiff iQiyi.com provide copyrighted videos to users, the defendant VST video aggregator plat break the plaintiff’s “Key” and avoid the ads before playing the video (if users access the works on the plaintiff’s website). The defendant also use the deep linking technology. The Shanghai IP Court ruled that the defendant’s service constitute unfair competition. Because of three reasons. (1) Only the plaintiff paid the license fees of providing the copyrighted works. (2) Users prefer free videos without ads, they will access the defendant’s plat for the same videos. As a result, the plaintiff not only faces the decrease of the users amount, but also the decrease of the click rate of the ads. In consequence, the plaintiff will lose benefits. (3) the defendant knows exactly its action will cause others’ lose in benefit, it intentionally provide its service. Beijing Aiqiyi Keki Youxian Gongsu Su Shenzhen Juwangshi Keki Youxian Gongs(北京爱奇艺科技有限公司诉深圳聚网视科技有限公司)(Beijing iQiyi.com Co. Ltd. v. Shenzhen Juwangshi Tech. Co. Ltd.),(Shanghai IP Ct. May. 7, 2016). available at: http://www.chinacourt.org/article/detail/2016/05/id/1852061.shtml

482 Cloud storage service providers could also provide linking service. Since they are not the uploader of the infringing files, they could barely be directly liable of the infringement of the right of dissemination under the “server standard”.
Internet users. The ISPs of such service do not need store files or individually upload files to their servers any longer. If the Chinese courts still apply the server standard, as a result, the right of dissemination on information networks cannot regulate the former services. So the right of dissemination cannot protect the copyright owners’ interests online, that would make the right of dissemination meaningless. Second, Chinese scholars mention it above. Art 3 of the Provision does not limit the act of “provide” within the scope of “upload to a network server”, but instead lists two more actions. Further, in my opinion, the Supreme People’s Court support the “users’ perception” standard, because it used “allowing the general public to...obtain the work...” to indicate the result of the act of “provide.” It’s clear that the Supreme People’s Court pays more attention to the final result—users obtain the works, in interpreting “provide.”483 Further, when apply the users’ perception standard, in my opinion, the Australian trend should be adopted here, which means the court should consider the ISPs’ ability to prevent unauthorized links, or other measures to assist hot-linking. The court has to consider all the ISPs’ actions as a whole instead of just analyzing only one act.

c. Who Provides the Works?

The forth issue in analyzing the right of dissemination on information networks is: who provides the works? A representative case published by the Supreme People’s Court in 2014 may give a way in answering this issue.484 The

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plaintiff CCTV International has the exclusive right of dissemination on information networks of a food documentary “A Bite of China.” The defendant provided online demand service of this popular food documentary without authorizations. Although the defendant claimed it just provide online storage service, the infringing food documentary were uploaded by its subscribers, the defendant failed in proving its claim and also failed in identifying the real infringer (who uploaded the infringing works).485 As a result, the Shanghai Minhang District People’s Court held that the defendant was liable for this infringement. The Shanghai No.1 Intermediate People’s Court affirmed the Minhang District People’s Court’s decision. Although it’s all known that all subscribers of the defendant’s website can upload files, the court held the defendant infringed the right of dissemination without detailed proofs. Based on the court’s decision, the ISPs should provide detailed proofs that they only provide storage service or else. It seems the ISPs will not bare direct liability if they can provide proofs. But in my opinion, based on the background of this case, the court actually knew it is possible that subscribers of the defendant’s website upload those infringing files, the court still held the defendant liable. That’s because the court take the defendant’s ability of control of the files on its server, its business model, business scale and its profit model into consideration. The basic nature of the ISPs is important in deciding “who” provide the works. As I mentioned in the Japanese part in this section, China should adopt the Japanese approach in deciding the issue of who provides the infringing works. It means Chinese court should consider the ISPs’ ability to control its website, software or plat. Further, in those providing links of

485 The defendant deleted the infringing videos as well as the original data, which made it impossible to find out the real uploader.
works case, if deep linking service, share via cloud storage service, links to cloud storage, video aggregator service and other services could be regulated by the right of dissemination, who provides the infringing works? In my opinion, whoever provides the links of the works or sets files to be shared, provides. If an ISP provides links to a private cloud storage space without authorization, the ISP directly violates the right of dissemination.486

d. A Proposal for China

Chinese scholars have not analyzed the definition of “public” so far. The US “one copy doctrine” or the EU “public” definition is irrelevant here in China. 487 In my opinion, the reason of China does not face the issue of the definition of “public” is that there’s barely no “Cablevision”-alike service in China. Once a TV program was broadcasted, the copyright owner will place this particular TV program online on the authorized video streaming websites or his own website. Users can access to the TV program exactly whenever they want online. Under this circumstance, those works are already legally being placed online and accessible to the public. So there’s no need to analyze the definition of “public” in China for now. However, the author cannot rule out the possibility of the development of the new technology may result

486 Zhang Geng & Huang Xijing(张庚, 黄细江), Yunjisuan Huanjingxia Zhuzuoquan Weihude Jieshi(云计算环境下著作权维护的解释)[Interpretating Copyright Protection in Cloud Computing] (2013). (Most video websites stored their video files in their own cloud storage space. And recently, only paying subscribers could access to some of the videos. The ISPs of these video websites will use technical measures to block normal users access to the specific videos. But some video aggregators or deep links could evade the technical measures and enable normal users to access to the specific videos without paying. It’s clearly the ISPs who provide such service actually “provide” the works to the public and infringe the right of dissemination.)

487 The EU’s “new public” is not fully irrelevant since Chinese scholars state similar analysis in supporting the server standard.
in the uncertainty of the definition of “public” in China. So, in my opinion, China may follow the Japanese trend to define the “public” as “unspecified person or a large number of persons.” This Japanese trend is more strict than the US or EU, and since China has not face such issue yet, it’s better for us to adopted a strict standard at the first time in order to face potential claims in the future.

All in all, for the draft of new copyright law in China, I will suggest four points:
(1) Extend the current scope of broadcasting right in order to regulate the non-interactive online communication, for instance, real-time re-broadcasting service, Internet Radio service and other non-interactive services.488 (2) when deciding whether the ISP “provides” the work, the copyright law should adopted the “users’ perception” standard. By adopting such standard, the courts should consider the nature of the ISP’s service and other relevant conditions by following the Australian trend. (3) When deciding whether ISP is the provider of the works, China should follow the Japanese trend—bring the ISP’s business model, control of his service, financial benefits and other relevant conditions into consideration. (4) China should adopt the Japanese approach in defining “public”—“unspecified person or a large number of persons.”

III. Infringe the Right of Distribution

After analyzing the reproduction right and the right of communication to the public in the last two sections, the third kind of copyright owners’ exclusive right

488 Since China is a civil law country, the law has to be stated in details to be strictly applied by the courts instead of in general provisions without detail interpretations. The author here support the new draft of copyright law in China, introduced a new “broadcasting” right is the best way in resolving non-interactive communication online.
relevant to the cloud computing technology—the distribution right will be discussed in this section.

As a response to the development of cinematography, Article 14(1) of the Berne Convention introduced the concept of distribution. The Berne Convention at first only applied the right of distribution to cinematographic works.\footnote{Berne Convention, supra note 226, art 14 (1). (Authors of literary or artistic works shall have the exclusive right of authorizing (i) the cinematographic adaption and reproduction of these works, and the distribution of the works thus adapted or reproduced.)} WCT then extended the right of distribution to all categories. Article 6 of WCT indicates the right of distribution is a right to authorize copyright owner’s “making available to the public of the original and copies of their works through sale or other transfer of ownership.”\footnote{WCT, supra note 230, art 6(1).} The copyright owner and the other party have the freedom to determine the conditions or exceptions of the distribution contract, for instance, the exhaustion of the right after the first sale and other terms such as transfer of ownership of the work.\footnote{Id, art 6(2)} Accompanying with the concept of distribution, there is also another significant doctrine— the first sale doctrine (or exhaustion principle). This dissertation will analyze the first sale doctrine in next chapter.

With the development of the Internet and cloud computing, the traditional right of distribution has also been affected. After a traditional distribution activity, a copyright owner will lose his right of possessing the copies and ownerships. But via the Internet, he will still possess the original copy after the transmission of the work. And further, when people upload music files to cloud storage space for sharing, do they violate the right of distribution? If people further sold the “used” digital music

\footnote{Berne Convention, supra note 226, art 14 (1). (Authors of literary or artistic works shall have the exclusive right of authorizing (i) the cinematographic adaption and reproduction of these works, and the distribution of the works thus adapted or reproduced.)}
\footnote{WCT, supra note 230, art 6(1).}
\footnote{Id, art 6(2)}
files to others via a music locker service, would such act infringe the right of
distribution? It’s noted that some nations extend the distribution right to digital
copies, such as the U.S.\textsuperscript{492} The following section will start with analyzing the
distribution right under the U.S. copyright act.

\begin{itemize}
\item[i. ] The U.S. Part
\end{itemize}

\textsection{106(3)} of the Copyright Act provides the copyright owner an exclusive
right “to distribute copies or phonorecords of the copyrighted work to the public by
sale or other transfer of ownership, or by rental, lease, or lending.”\textsuperscript{493} The
distribution right gives the copyright owner “the right to control the first public
distribution of the work,”\textsuperscript{494} by means of sale, rental, lease or lending. Thus the right
of distribution only covers “copies or phonorecords” since they are material objects
in which works are fixed. Therefore, it will not cover performances since nothing is
fixed in a material object when a work is performed.\textsuperscript{495} And further, the act of
distribution also required to be made to the public—“a public distribution can occur
when only one member of the public receives a copyrighted work.”\textsuperscript{496}

\begin{footnotesize}
\begin{itemize}
\item[493] 17 U.S.C. \textsection{106(3)}.
\item[494] Leaffer, supra note 32, at 326.
\item[495] See id. (The distribution right will not cover a public performance. The first reason is that
a performance is not a publication; and the second reason is that “a public distribution can
occur when only one member of the public receives a copyrighted work.”)
\item[496] Id, at 326. (Citing Ford Motor Co. v. Summit Motor Prods., Inc., 930 F. 2d 277 (3rd Cir.
1991) (The 3rd Circuit held that gratuitous transfer of a single copy may be enough to
violate the right, because the liability for infringement will remain even if the damage is
limited or non-existent.)
\end{itemize}
\end{footnotesize}
The distribution right been added into the Copyright Act of 1976 by the Congress. But during the first two decades after the enactment, there were no cases solely claimed violation of the distribution right without violation of the reproduction right.\textsuperscript{497} It is because in this era, people cannot merely distribute their work without tangible copies or phonorecords. For instance, a copyright owner could sue a vendor for a violation of his reproduction right since the vendor had to make copies of the unauthorized copyrighted copies before he distributes them. As a result, once the court usually reached a conclusion that the reproduction right had been violated without delineating the issue of the distribution right. However, as mentioned repeatedly, copyright is affected by the developing technology. Cases solely sued that infringe the distribution right arouse. The upcoming section will discuss the issue of whether the U.S. adopted the concept of “digital distribution.”

\textbf{A. Digital Distribution}

With the development of the Internet, the first question arouse as whether it’s correct to adapt the right of distribution of § 106(3) of the Copyright Act to digital distribution. A small number of commenters rejected to adapt § 106(3) to digital transmissions, such as downloads or uploads. They provided three basic reasons. First, the objects of the distribution regulated in § 106(3) are “copies or phonorecords.” Refers to § 101, “copies or phonorecords” are “material objects,” and in which a work/sounds are “fixed by any method now known or later developed, and from which the work can be perceived, reproduced or otherwise 

\textsuperscript{497} 2 Nimmer on Copyright, supra note 50, § 8.11[C][1](2015). ("...few plaintiffs alleged violation of the distribution right apart from violation of the reproduction right.")
communicated, either directly or with the aid of a machine or device.”\textsuperscript{498} These commenters indicated that “transmission of bits” over the Internet does not involve the distribution of a material object.\textsuperscript{499} Second, these commenters believed that § 106(3) requires the change of ownership or possession of a material object from transferor to transferee by stating “by sale or other transfer of ownership, or by rental, lease, or lending.” But a digital transmission cannot fulfill this requirement. Because Internet transmission such as P2P transmission, cloud streaming, email or others does not eliminate the transferor’s copy of the file. Often a copy or a “RAM” copy is created at the transferee’s computer. So there’s no transfer of material objects or ownership between transferor and transferee. And the third reason is relevant to the first sale doctrine. These commenters believe the first doctrine adds a limitation on the distribution right. They argued that once the digital distribution been legally regulated by § 106(3), a digital first sale doctrine must be adopted logically. The recipients should automatically acquire the right to transmit the file to another party without the copyright owner’s permission once the file had been transferred as digital distribution.

However, in order to implicate the “making available” right brought by WCT Article 8, as mentioned above, the U.S. extended the scope of not only the right of public performance and display, but also the right of distribution. Under this circumstance, no courts in the U.S. adopted the narrow version of the right of

\textsuperscript{498} 17 U.S.C. § 101.

distribution—no digital distribution. All courts concluded that the digital transmission are within the scope of § 106(3)—copyright owners shall have the right to control the transmission of their works to the public in the form of digital downloads. \footnote{See id.} For instance, in the case of Arista Records v. Usenet, the district court held that “the delivery of articles and/or content to download at the request of subscribers can be the basis of direct infringement of distribution right.”\footnote{Arista Records LLC v. Usenet.com, Inc., 633 F. Supp. 2d 124, 147 (S.D.N.Y. 2009).} And the Supreme Court also pointed out that copies can be distributed electronically in the New York Times v. Tasini case.\footnote{See New York Times Co. v. Tasini, 533 U.S. 483, 498 (2001).} Further, the U.S. Copyright Office also concluded that the § 106(3) cover the digital transfer of copies or phonorecords in electronic formats.\footnote{See US Copyright office’s report, supra note 499, at 22.} There are reasons for the courts to adopt the digital distribution. First, Language of other provisions stated by the Congress in the Copyright Act indicated that the Congress intended that the right of distribution cover the transmission of digital files. § 115(a)(1), which regulates the compulsory license, refers to a distribution “by means of a digital phonorecord delivery.”\footnote{17 U.S.C. § 115(a)(1). (“A person may obtain a compulsory license only if his or her primary purpose in making phonorecords is to distribute them to the public for private use, including by means of a digital phonorecord delivery.”)} And according to § 115(d), “a digital phonorecord delivery” means “each individual delivery of a phonorecord by digital transmission of a sound recording which results in a specifically identifiable reproduction by or for any transmission recipient of a phonorecord of that sound recording...”\footnote{Id, § 115(d).} Second, according to U.S. Copyright
office’s opinion, the district court’s decision in London-Sire Records v. Doe 1 provides a thorough analysis. The court held that the transmission of an electronic file constitutes a “distribution” within the meaning of § 106(3). The court provided two reasons in its decision: (1) Electronic files should be regarded as “material objects.” The purpose for using the term of “material object” is to provide “a reference point for the terms ‘phonorecords’ and ‘fixed,’” and “any object in which a sound recording can be fixed is a ‘material object’.” So as a result, “the appropriate segment of the hard disk” qualified a “material object,” and there’s “no reason to limit ‘distribution’ to processes in which a material object exists throughout the entire transaction.”  (2) Electronic transmission can constitute a “transfer of ownership.” The sort of transaction regulated by § 106(3) is intended by the Congress to be reached, so “while the statute addresses ownership, it is the newly minted ownership rights held by the transferee that concern it, no matter the transferor gives up his own.” All in all, the concept of “digital distribution” had been adopted by all courts in the U.S..

B. Distributive Principle—Evidence Required to Establish Distribution

Although all the U.S. courts consent that § 106(3) should extend to the digital transfer of copies or phonorecords in electronic formats, they still have disagreement in the evidence required to establish distribution. When the court decides whether a party infringes the distribution right, should it hinge on an evidence of an “actual dissemination” such as actual download or merely an act of

507 Id, at 171-173.
making a work “available” to the public (offering a work to the public)? The U.S. Supreme Court has not yet clarified which principle should be applied. Some courts ruled that there’s no infringement of the distribution right without an evidence of actual downloading act. Other courts support that making copyrighted works available online without actual evidence of downloading activity may be sufficient to constitute infringement of the distribution. Whether the distribution right encompasses the “making available” of works is significant under the cloud computing technology now. For instance, if a user uploads a movie file to his cloud storage space the public can access, is there an act of distribution here? In understanding how the U.S. deal with this issue, this section has to review relevant cases and theories.

a. The “Actual Distribution” Requirement

Under this requirement, the courts adopted a narrower scope of the distribution right, which means the infringement of the distribution right requires an “actual dissemination” (for instance, an actual act of downloading a file from the Internet). The courts support this requirement held that merely making a work available was not sufficient for infringing the distribution right.

See The Scope of Copyright Protection: Hearing Before the Subcomm. on Courts, Intellectual Prop., & the Internet of the H. Comm. on the Judiciary, 113th Cong. 13 (2014). (Professor David Nimmer stated: “Both sides of the ‘making available’ issue recognize that copyright owners enjoy the exclusive right to control distribution of their works; their only point of disagreement concerns the quantum of proof needed to demonstrate that distribution took place (simple uploading for proponents of the right, uploading plus proven downloading for its opponents).”).
The fundamental case relied by these courts is National Car Rental System v. Computer Associates International, Inc.\textsuperscript{509} This is a case decided by the 8th Circuit in the pre-Internet era. In this case, National Car Rental and its vendor were permitted to use a computer program solely for processing its own data by the Computer Associate Inc’s software license. However, Computer Associate Inc claimed that National Car Rental breached the license by “using the programs to process the data of third parties.”\textsuperscript{510} The 8th Circuit reversed the district court’s decision and held that the claim was not preempted by the Copyright Act— the breach of contract cause of action was not “equivalent” to the right of distribution of copies of the work. The 8th Circuit held that “the copyright holder’s distribution right is the right to distribute copies,” and thus “cannot conclude that an allegation that National Car Rental ‘permitted the use’ necessarily amounts to an allegation of the actual distribution of a copy of the program.”\textsuperscript{511} The 8th Circuit cited Nimmer on Copyright Treatise to indicate that § 106(3) requires an actual distribution of copies.\textsuperscript{512} Other courts who support the “actual distribution” requirement later relied on this case to show that § 106(3) does not extend to the scope of “making available.”

After the 9th Circuit ruled that Napster, a P2P file sharing service provider, should be liable for contributory infringement and vicarious infringement of the

\textsuperscript{509} National Car Rental Sys. v. Computer Assocs. Int’l, Inc., 991 F. 2d 426 (8th Cir. 1993).
\textsuperscript{510} Id, at 428.
\textsuperscript{511} Id, at 430.
\textsuperscript{512} Id, at 434. (“the distribution right is only the right to distribute copies of the work. As Professor Nimmer has stated, ”infringement of [the distribution right] requires an actual dissemination of either copies or phonorecords.” 2 Nimmer on Copyright, supra note 33, § 8.11[A], at 8-124.1.)
plaintiff’s copyright,\textsuperscript{513} the district court had to consider whether “Napster itself directly infringed plaintiff’s distribution right by maintaining a centralized indexing system listing the file names of all MP3-formatted music files available on the Napster network.”\textsuperscript{514} The court held for Napster. By citing the 8th Circuit’s decision in National Car Rental case, and analyzing the text and legislative history of the Copyright Act of 1976, the court concluded that the decision of Hotaling case that “a mere offer to distribute a copyrighted work gives rise to liability under § 106(3)” is inconsistent with the Copyright Act of 1976.\textsuperscript{515} The court ruled that in order to establish an infringement of the distribution right of § 106(3), the copyright owner must prove that the accused infringer either actually distribute the work to the public or offer to distribute of the work for “further distribution.”\textsuperscript{516} The court fully supported the actual distribution requirement and added a purpose requirement to the making available requirement—offer to distribute.

Courts of several cases happened in 2008 held that making a copyrighted work available alone is not sufficient to violate the distribution right. First, in the case of London-Sire Records, Inc. v. Doe, the defendant use P2P file sharing software for downloading and transmitting copyrighted recordings.\textsuperscript{517} The district court held that “the defendant cannot be liable for violating the plaintiffs’ distribution right unless a ‘distribution’ actually occurred.”\textsuperscript{518} The court gave two reasons. First, the

\textsuperscript{513} A & M Records, Inc. v. Napster, Inc., 239 F. 3d 1004 (9th Cir. 2001). (This case support the making available requirement.)
\textsuperscript{514} In re Napster, Inc. Copyright Litigation, 377 F. Supp. 2d 796, 802 (N.D. Cal. 2005).
\textsuperscript{515} \textit{Id}, at 802-804.
\textsuperscript{516} \textit{Id}, at 805.
\textsuperscript{517} London-Sire Records v. Doe case, \textit{supra} note 506.
\textsuperscript{518} \textit{Id}, at 168.
court rejected and questioned the Hotaling's decision that declines to a requirement of actual distribution. The court indicated that “merely because the defendant has ‘completed all the steps necessary for distribution’ does not necessarily mean that a distribution has actually occurred.”

Second, the court observed that “distribution” and “publication” were not synonymous. Because “all ‘distributions...to the public’ are publications...not all publications are distributions to the public.”

Then, in the Atlantic Recording Corp. v. Howell, the defendant use KaZaA P2P file sharing software for downloading and transmitting music recordings. The district court ruled that infringement of the distribution right requires actual dissemination of copies or phonorecords, and offering to distribute works alone was not sufficient.

First, the court stated that the Hotaling case is inconsistent with the Copyright Act, and the “great weight of authority” supports the actual distribution requirement. Then, the court echoed the London-Sire court’s reasoning, held that “distribution” did not encompass “publication”—“It is untenable that the definition of a different word in a different section of the statute was meant to expand the meaning of "distribution" and liability under § 106(3) to include the activity of offers to distribute.”

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519 Id.
520 Id, at 168-69.
522 Id, at 984-85.
523 Id, at 983. (“The court agrees with the great weight of authority that § 106(3) is not violated unless the defendant has actually distributed an unauthorized copy of the work to a member of the public. The statute provides copyright holders with the exclusive right to distribute "copies" of their works to the public "by sale or other transfer of ownership, or by rental, lease, or lending," 17 U.S.C. § 106(3). Unless a copy of the work changes hands in one of the designated ways, a "distribution" under § 106(3) has not taken place. Merely making an unauthorized copy of a copyrighted work available to the public does not violate a copyright holder's exclusive right of distribution.”)
Third, the Capitol Records, Inc. v. Thomas case has almost the same facts as the above cases.\textsuperscript{524} The defendant downloaded alleged music recordings by the KaZaA P2P file sharing software. The Court provided a detailed analysis of whether making works available constitutes distribution of works. First, the court analyzed the plain meaning of the word “distribution” and considered relevant legislative history of Copyright Act, the opinion of the Register of Copyrights, and the use of the term “distribution” in other provisions in the US Code.\textsuperscript{525} Then the Court again compared the definition of “distribution” with the definition of “publication” and drew a conclusion same as the Howell and London-Sire courts—“simply because all distributions within the meaning of § 106(3) are publications does not mean all publications within the meaning of § 101 are distributions.”\textsuperscript{526} The statutory definition of “publication” is broader than “distribution.” Third, the court considered the National Car Rental and Hotaling decisions. The 8th Circuit’s decision in National Car Rental binded to the court, and the court also indicated that National Car Rental decision “is consistent with the logical statutory interpretation of § 106(3), the body of Copyright Act case law, and the legislative history of the Copyright Act.”\textsuperscript{527} All in all, the court concluded that “liability for violation of the exclusive distribution right found in § 106(3) requires actual dissemination.”\textsuperscript{528} It means that the plaintiff need to provide evidence of actual dissemination of the alleged works to other users in order to constitute infringement of the distribution right. However, the Court

\textsuperscript{524} Capitol Records, Inc. v. Thomas, 579 F. Supp. 2d 1210 (D. Minn. 2008).
\textsuperscript{525} Id, at 1216-19.
\textsuperscript{526} Id, at 1220.
\textsuperscript{527} Id, at 1226.
\textsuperscript{528} Id.
interestingly invited the Congress to take legislative action towards this issue, since the court had clearly notified the damage caused by such activities.\textsuperscript{529}

From the analysis of these cases, there are two basic reasons for those courts to support the actual distribution requirement. The 8th Circuit decision in National Rental Car case is binding and that “distribution” is not synonymous to “publication” under the Copyright Act.\textsuperscript{530} Although those courts adopted the actual distribution, some of them concluded that the plaintiffs are not required to offer direct proof of a download, but may prove the infringement through circumstantial or investigator’s evidence of the defendant’s activities. In the case of London-Sire, Howell and Thomas, the courts confirmed that “direct proof of actual dissemination is not required... plaintiffs are free to employ circumstantial evidence...” to prove actual dissemination.\textsuperscript{531} The Thomas court reasoned that “the implementation of Congress’s intent through a plain meaning interpretation of § 106(3) will not leave copyright holders without recourse when infringement occurs over a peer-to-peer network.”\textsuperscript{532} According to associate register of copyright, Prof. Robert Kasunic, the

\textsuperscript{529} Id, at 1227. ("The court would be remiss if it did not take this opportunity to implore Congress to amend the Copyright Act to address liability and damages in peer-to-peer network cases such as the one currently before this court.... The defendant is an individual...by using KaZaA, Thomas acted like countless other Internet users....it does make the award of hundreds of thousands of dollars in damages unprecedented and oppressive.")
\textsuperscript{530} Leaffer, \textit{supra} note 32, at 327. ("the language of the Copyright Act indicates a more restrictive reading than ‘making available’ advocates would like to include ‘an offering to distribute’ rather than an actual distribution....a legislative fix would be a more constitutionally appropriate way to proceed.")
\textsuperscript{531} Capitol Records v.Thomas, \textit{supra} note 524, at 1225. \textit{See also} Howell case, \textit{supra} note 521 ,at 983-84. ("evidence that ...in conjunction with other circumstantial evidence, support an inference that the copy was likely transferred to a member of the public.") \textit{See also} London-Sire case, \textit{supra} note 506, at 169.("... the defendant has completed all the necessary steps for a public distribution, a reasonable fact-finder may infer that the distribution actually took place.")
\textsuperscript{532} Id.
circumstance evidence varies. For instance, the court could take the nature of P2P file sharing software into consideration as a circumstantial evidence. Further the court could also consider “frequent or longstanding use of such peer-to-peer services and the number of works offered,” or the defendant’s intent in making works available and other relevant circumstantial evidence.\footnote{See Robert Kasunic, \textit{Making Circumstantial Proof of Distribution Available}, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1145 (2008).} According to the Thomas and Howell courts’ analysis, any downloads by an investigator or agent of the plaintiff will suffice to constitute an actual distribution.\footnote{Capitol Records v. Thomas, supra note 524, at 1216. ("The court holds that distribution to MediaSentry can form the basis of an infringement claim."); Howell case, \textit{supra} note 521, at 985. ("The recording companies' investigator, MediaSentry, did download 12 of the copyrighted sound recordings from Howell's computer...the 12 copies obtained by MediaSentry are unauthorized.") Both Courts cited Olan Mills case. Olan Mills Inc. v. Linn Photo, Inc., 23 F. 3d 1345, 1347-48 (8th Cir. 1994) In this case, an agent of Olan Mills asked the defendant Linn photo to make copies of the copyrighted works. The defendant argued that such reproduction act was authorized through the agent by the plaintiff. The 8th Circuit disagreed by clarifying that the plaintiff did not authorize the investigator to waive its copyright, but rather authorized its third party agent "to act as if he were a customer who owned a copy of a copyrighted work." Whether the agent was authorized was irrelevant in deciding the issue of the defendant's authority to engage in infringing acts.} This theory has not been adopted by all courts through the U.S., although it at least provides the copyright owners a minimum evidence standard to support the actual distribution requirement.\footnote{See Marc E. Mayer, \textit{Distributive Principles, the Determination of Copyright Infringement may Hinge on Whether “Actual Distribution” or Mere “Making Available” Has Occurred}, 32 L.A. LAW 35 (2009-2010).}

Lots of courts still use the actual distribution requirement, however, there’s a big error here now. As I mentioned above, the courts relied on the 8th Circuit’s decision in National Rental Car case, and the 8th Circuit draw its conclusion by citing Nimmer on Copyright Treaties. Nevertheless, Prof. Nimmer had changed his mind. He no longer supports the actual distribution requirement. Prof. Nimmer removed...
the statement from his treaties and seemingly adopted Prof. Menell’s view. He also invited Prof. Menell to co-author the revised section on the origins and scope of the distribution right. And the revised version states: “no consummated act of actual distribution need be demonstrated in order to implicate the copyright owner’s distribution right,” and “the act of making available sound recordings for downloading by the public through file-sharing networks suffices to show actionable copyright infringement.”536 The update of Prof. Nimmer’s theory makes the decision of the 8th Circuit in National Rental Car case unreliable anymore. And as a result, the whole actual distribution requirement lacks its backbone now.

b. The “Making Available” Requirement

In the contrary, some courts believe that § 106(3) should cover the making available of works to the public by downloading and there’s no need to prove that an actual download occurred. The U.S. Copyright Office also supports this view in its 2016 report.537

The Hotaling v. Church of Jesus Christ of Latter-Day Saints is a case solely involves the distribution right, and it’s also the only case to rule the issue of “making available” in the pre-internet era.538 It’s a fundamental case that supports the “making available” requirement. In this case, the church legally purchased a single copy in microfiche form from Hotaling, and added it to its main library collection. Further, the church made copies of it and sent them to its branch libraries. The church later ceased making copies and deleted unauthorized copies as required

536 2 NIMMER on Copyright, supra note 50, § 8.11[B][4][d], [D][4][c].
538 Hotaling v. Church of Jesus Christ of Latter-Day Saints, 118 F. 3d 199 (4th Cir. 1997).
by Hotaling. However, after the statute of limitation had expired, there was still one copy in the church’s library. There was no evidence of infringing acts that the church had loaned the infringing copies to the public within the limitation period. The 4th Circuit eventually held that the church distributed copies of a work within the meaning of § 106(3) when it made them available to the public at its libraries. The 4th Circuit implicitly adopted the “making available” requirement by rejecting the church’s defense that proof of actual dissemination was required. The Court’s explanation is reasonable: “When a public library adds a work to its collection, lists the work in its index or catalog system, and makes the work available to the borrowing or browsing public, it has completed all the steps necessary for distribution the work to the public. At that point, members of the public can visit the library and use the work. Were this not to be considered distribution within the meaning of § 106(3), a copyright holder would be prejudiced by a library that does not keep records of public use, and the library would unjustly profit by its own omission.”

After this back-bone Hotaling case, some courts echoed its decision by holding the distribution right was infringed when a copyrighted work is made available to the public, including over the Internet. In the Napster case, Napster facilitates the transmission of MP3 files among its subscribers via P2P file sharing software. By using Napster’s software, MP3 files stored on individual computer hard drives are available for searching and copying by other subscribers via the

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539 Id, at 201.
540 Id, at 203.
541 Napster, supra note 513.
Internet. The 9th Circuit held that “Napster users who upload file name to the search index for others to copy violate plaintiff’s distribution rights.”\(^542\) The 9th Circuit did not give further explanation for its conclusion. Based on this the 9th Circuit did not require “actual distribution.”

A few years later, the district court in Universal City Studios Productions, LLP v. Bigwood cited both Hotaling and the 9th Circuit’s Napster decisions, held that the defendant infringed the distribution right.\(^543\) In this case, the individual defendant used KaZaA, which is a popular P2P sharing network, to download digital files without authorizations and stored the files in his shared directory, which makes the files available for downloading by other subscribers of KaZaA. The district court held the defendant liable for infringing the distribution right because he is “making available to other KaZaA users plaintiff’s” works.\(^544\) And further, more courts had accepted the conclusion of making works available on a P2P network or other file sharing networks without authorization infringes the copyright holder’s distribution right. For instance, in Arista Records LLC v. Greubel Case, the defendant used an online media distribution system to download and sharing copyrighted recordings without authorizations. The defendant alleged that the copyrighted material was not actually disseminated but merely was accessible by others, and such activities should not be deemed as distribution. But the court relied on Hotaling and other cases and held that “making copyrighted works available to

\(^{542}\) Id., at 1014.
\(^{544}\) Id., at 191.
others may constitute infringement by distribution in certain circumstances.” 545 The courts accepted the plaintiff’s argument that “the right of distribution also has been identified as synonymous with the publication of a copyrighted work,” “actual dissemination of the copyrighted work is unnecessary so long as there is an offer to distribute copies.” 546

The most recent case Diversey v. Schmidly held by the 10th Circuit also implicitly indicated that making a work available to the public should constitute an act of distribution. 547 In this case, the plaintiff’s draft dissertation was deposited in the defendant’s library and was in the catalog system, which is available for public lending. By citing both Prof. Menell’s research and Prof. Nimmer’s updated Treaties, the 10th Circuit held that “the essence of distribution in the library lending context is the work’s availability ‘to the borrowing or browsing public’” by citing Hotaling case. 548

As mentioned above, more and more scholars turned to support the making available requirement, including Prof. Nimmer and Prof. Menell. By exploring the legislative history and interpreting the statutory, Prof. Menell concluded that the

545 Arista Records LLC v. Greubel, 453 F. Supp. 2d 961, 970 (N.D. Tex. 2006). See also Elektra Entm’t Group, Inc. v. Barker, 551 F. Supp. 2d 234 (S.D.N.Y. 2008). (In this case, the defendant use a P2P file sharing software to download and make available to others of the music recordings. The Court held that the distribution right was infringed by making copyrighted works available over the Internet. The courts reasoned: “Although the Court finds, using Congress’s words, that the distribution right of § 106(3) may be infringed by ‘the offering to distribute copies or phonorecords to a group of persons for purposes of further distribution, public performance, or public display’ 17 U.S.C. § 101, the Court hesitates in equating this avenue of liability with the contourless ‘make available’ right proposed by plaintiff.” At 243.)
546 Arista v. Greubel, supra note 545, at 969.
547 Diversey v. Schmidly, 738 F. 3d 1196 (10th Cir. 2013).
548 Id, at 1203.
Congress intended to add the distribution right to broaden the historic right “publication.”\textsuperscript{549} Prof. Menell already agreed that the right of publication encompasses making a work available to the public, no matter there’s an actual distribution or not. As a result, making works available is the only requirement to prove violation of the distribution right, which means, a copyright owner could prove a violation of his distribution right by merely providing evidence of his copyrighted work been placed in a sharing folder that is open to the public.\textsuperscript{550} Prof. Nimmer supported Prof. Menell’s statement and revised its Copyright Treaties.

The U.S. Copyright Office also supports the above point of views.\textsuperscript{551} The office suggests that the definition of distribution “must be read in their context and with a view to their place in the overall statutory scheme.”\textsuperscript{552} It used § 506(a)(1)(c) of Title 17, which is a criminal copyright provision\textsuperscript{553} and § 602(a)(1), which concerns the unauthorized importation of copies and phonorecords\textsuperscript{554} to prove its conclusion: the distribution encompasses the making available to the public for download. Further, the office also reviewed the legislative history and analyzed the relationship between the distribution and publication. The office rejected some

\textsuperscript{549} Peter S. Menell, \textit{In Search of Copyright's Lost Ark: Interpreting the Right of Distribute in the Internet Age}, Journal of the Copyright Society of the USA, 201 233-37(Feb 15,2012).
\textsuperscript{550} Id.
\textsuperscript{551} U.S. Copyright Office’s Report, \textit{supra} note 499, at 24-35.
\textsuperscript{553} 17 U.S.C. § 506((a)(1)(C).( A person may criminally infringe copyright "by the distribution of a work being prepared for commercial distribution, by making it available on a computer network accessible to members of the public...")
\textsuperscript{554} 17 U.S.C. § 602(a)(1).("Importation into the United States, without the authority of the owner of copyright under this title, of copies or phonorecords of a work that have been acquired outside the United States is an infringement of the exclusive right to distribute copies or phonorecords under section 106..." and "any unauthorized importer of copies or phonorecords acquired abroad, could be sued of damages and enjoined from making use of them, even before any public distribution in this country has taken place.")
courts’ view that the definition of distribution is different from the publication. The office stated that the Congress shall not “intend to preserve those protections under the distribution right.”

C. Who Infringe the Distribution Right?

In the Cloud sharing world, usually the violation format is that the users upload copyrighted files and set them in file-sharing mode. This makes the users the direct infringer of the distribution right. But, it’s also obvious, without the service provided by the ISPs, users cannot distribute any copyrighted works. Could the ISPs be liable for infringing the distribution right? Many cases relates to this issue.

The Supreme Court provided its decision in N.Y. Times Co. v. Tasini. In this case, the defendant operated an online database, and from which users could view, read or download digital copies of newspapers articles on request. The Supreme Court held that the defendant distributed copies of the copyrighted articles by selling copies of them through the database. The defendant infringed the distribution right.

In 2009, in Arista Records, LLC v. Usenet.com case, the defendant runs the USENET networks, an online bulletin boards system which subscribers may post messages and read messages posted by other subscribers. By using the Usenet.com, subscribers are able to download music recordings. The district court held the

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555 US Copyright Office’s Report, supra note 499, at 34.
556 N.Y. Times Co. v. Tasini, supra note 502.
557 Id, at 498. See also id, at 518 & n.14. (The majority rejected the dissenting opinion provided by J. Stevens. J. Stevens stated that it’s the user who actually engaged in the direct infringing activity, ”Nexis makes it possible for users to make and distribute copies.”)
559 Id, at 161-63.
defendant directly infringes the distribution right. Firstly, the district court adopted the Supreme Court’s decision in Tasini case, “delivery of articles and/or content to download at the request of subscribers can be the basis of direct infringement of the distribution right.” And then the district court rejected the Cablevision case’s holding, and held that the defendant’s behavior was a sufficient volition. Because the Usenet “took active measures to create servers dedicated to MP3 files and to increase retention times of newsgroups containing MP3 files,” it also had ability to control the infringing files, and further engaged in filtering of content. The defendant’s activities cannot be deemed as a “common carrier” delivers requested content to subscribers passively and automatically. All in all, the district court held that the defendant was liable for direct infringement of the distribution right.

In Capitol Records, LLC v. ReDigi Inc, the defendant Redigi allow its subscribers to resell their digital used music online via the “Media Manager” software. The Court held that the sale of digital music files on ReDigi’s website infringes Capitol’s distribution right, if Redigi cannot provide an affirmative defense. The court adopted the Supreme Court’s decision in Tesini, and also the Greubel case’s decision, held that distribution infringement can occur in case of electronic transmission and file-sharing, or by selling copies of electronic files. The court then concluded that the defendant actually engaged in volitional conduct since the

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560 Id, at 147.
561 Id, at 148-49.
562 Id.
564 Id, at 651.
ReDigi’s founders programmed their software to choose copyrighted content.\textsuperscript{565} ReDigi provided the infrastructure for its users’ infringing sales.\textsuperscript{566}

However, in Disney Enterprises, Inc. v. Hotfile Corp. the district court in this case held that the defendant was not directly liable for infringing the distribution right.\textsuperscript{567} The defendant provided file hosting service, whenever a user upload a file, the defendant makes copies of each file and create a URL link for each.\textsuperscript{568} The district court concluded that the reproduction act and URL link creation act are automatic conduct of software, and unaided by human intervention, so they are not volitional.\textsuperscript{569}

Based on these cases, it’s obvious the U.S. courts adopted the volitional conduct test in all these cases, and most of them follow the Cablevision case decision that a direct infringement may exist if one’s infringing distribution is so great in discussing the issue of reproduction right. In deciding the issue of what constitute “so great distribution,” the courts actually considered lots of circumstantial evidence such as the ISPs’ ability to control the infringements, the ISPs’ intention towards the infringing materials, the ISPs’ intention of developing the service which enable infringements and others.

\textsuperscript{565} Id, at 657.
\textsuperscript{566} Id. (The district court notified the Cablevision court ruled that a case may exist where “one’s contribution to the creation of an infringing copy is so great that it warrants holding that party directly liable for the infringement, even though another party has actually made the copy.” Cartoon network, 536 F. 3d at 133. So as a result, in this case, ReDigi’s conduct “transform it from a passive provider of a space in which infringing activities happened to occur to an active participant in the process of copyright infringement.”)
\textsuperscript{567} Disney Enterprises, Inc. v. Hotfile Corp. 798 F. Supp. 2d 1303 (S.D. Fla. 2011).
\textsuperscript{568} Id, at 1306.
\textsuperscript{569} Id, at 1309-10.
To sum up, it’s reasonable for the U.S. courts to adopt the theory that the distribution right encompasses “making available” of works online. But as Prof. Leaffer mentioned: “Rather than having courts artificially engraft a ‘making available’ right into the Act, a legislative fix would be a more constitutionally appropriate way to proceed.”

ii. The Right of Distribution in EU

As mentioned earlier, EU had already adopted a new exclusive right—the right of communication to the public to fulfill the requirement of Art 8 of WCT—that could regulate the online interactive communication. But with the development of technology, online distribution became more common. The issue of whether the distribution right could encompass such online digital distribution remains unanswered. There are four EU Directives regulate the right of distribution: Art 4 of Information Society Directives, Art 5(c) of the Database Directive, Art 4(1)(c) of the Software Directive and Art 9 of Rental and Lending Rights Directive. Art 4 of Information Society firstly harmonized horizontally the right of distribution to cover all types of works instead of certain types of works. Art 4 of Information Society Directives implemented Article 6 of WCT. It provides authors an exclusive right to

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570 Leaffer, supra note 32, at 327.
authorize or prohibit any form of distribution of original or copies of copyrighted works to the public.572

A. Is There A Digital Distribution Under EU’s The Right Of Distribution?

With the rise of Internet, a new problem emerged: is there a digital distribution under EU’s distribution right? According to Recital 28, this exclusive protection only refers to the dissemination of the work incorporated in a tangible article.573 The “tangible articles” requirement in Recital 28 seems to be in accordance with the Agreed Statements concerning Articles 6 and 7 of WCT, which states “copies and original ... refer exclusively to fixed copies that can be put into circulation as tangible objects.”574 And further in 1997, the commission of the European Communities also adopted this statement in its Proposal for a European Parliament and Council Directive on the Harmonization of certain aspects of copyright and related rights in the Information Society Directive, and clearly stated that “provide for a coherent level playing field for the electronic and tangible distribution of protected material and to draw a clear line.”575 Under this theory, it

572 Id, art 4(1). (“Member States shall provide for authors, in respect of the original of their works or of copies thereof, the exclusive right to authorize or prohibit any form of distribution to the public by sale or otherwise.”)
573 Id, recital 28. (“Copyright protection under this Directive includes the exclusive right to control distribution of the work incorporated in a tangible article.”)
575 Proposal for a European Parliament and Council Directive on the Harmonization of certain aspects of copyright and related rights in the Information Society, Commission of European Communities, Brussles, 10.12.1997 COM(97) 628 final 97/0359(COD), at 22,27. (“As in the acquis communautaire on this issue, the expressions "copies" and "originals and copies", being subject to the distribution right, refer exclusively to fixed copies that can be put into circulation as tangible objects.”)
seems that the distribution right regulates only tangible copies and thus cannot regulate digital distribution.

However, nowadays, it seems that the term “copy” should be broadly construed and encompasses digital copies that are disseminated over the Internet. There are two reasons. First, the Agreed Statements were not adopted by all countries. For instance, the U.S. insisted to incorporate the concept of digital distribution into this Agreed Statements. Therefore, the existing Agree Statements is more close to a product of compromise. This made the “tangible articles” requirement less reliable. The commission of European Communities also published their proposal as a result of the implementation of WCT, but without a fundamental root source, the statement of the proposal is also less reliable. Second, the broad construction of the definition of “copy” is the requirement of meeting “the aims of the right of distribution and prevent the partitioning of the Single Market by means of the non-exhaustion of rights in copies of the work.”576 In 2012, the ECJ pointed out that the Recital 28 from Information Society Directive does not preclude that the distribution right could be applied in distribution of intangible form of copies.577 Because such requirement did not exist in Software Directive, and Art 4(2) of Software Directive by referring without further specification of the “sale... of a copy of a program,” makes no distinction according to the tangible or intangible form of a copy.578 But the Software Directive is a lex specialis of the Information Society Directive, which means that the concepts in the Software Directive must be

576 EU Copyright: A Commentary, supra note 124, at 424, para 11.42.
577 Case C-128/111 UsedSoft, supra note 152, para. 53-62.
578 Id, para.55.
interpreted the same in the principle of equal treatment. The ECJ further analyzed from an economic point of view, indicated that the sale of a computer program on CD-ROM or DVD and the sale of a program by downloading from the Internet are similar. “The on-line transmission method is the functional equivalent of the supply of a material medium.”579 As a result, in accordance with the principle of equal treatment, Art 4(2) of Software Directive confirms that the exhaustion of the distribution right takes effect after the first sale in the EU of a copy of a computer program by the copyright holder or not by the copyright holder but with his consent, regardless of whether the sale relates to a tangible or an intangible copy of the program. Since there is the exhaustion of the distribution right on the Internet, digital distribution should not be out of the hook. So this indication is equal to that the act of dissemination of digital works (that are works on intangible article) via Internet can constitute distribution. As a result, Art 4 of Information Society Directive should encompass copies both in tangible and intangible form, so that the digital distribution should also be regulated.580

However, the above reasoning had been rejected by the German Court recently.581 The German Court held that because of the nature of the Software Directive as lex specialis to the Information Society Directive, the reasoning in UsedSoft could not be applied to other subject matter, especially the digital content such as downloadable e-books and audiobooks in this case. This shows the German

579 Id, para 61.
580 Some scholars supported that Recital 28 clearly define the means of distribution can be by paper, CD or other physical medium but the right does not extend to online distribution or to services in general. See TREVOR COOK & LORNA BRAZELL, THE COPYRIGHT DIRECTIVE, UK IMPLEMENTATION (2004).
581 Landgericht Bielefeld- case no 4 O 191/11
Court concluded that the Information Society Directive does not permit application of the principle of exhaustion to works in intangible form. Based on the reasoning in UsedSoft, it means that there’s no digital distribution via Internet except the online software.

Based on these two former cases in EU, it seems that the ECJ did not discuss the issue of whether the digital distribution exist already. All the existing theories are based on the discussion of the exhaustion of the distribution right. The ECJ will definitely further analyze this issue in the future because of the development of cloud computing technology. In my opinion, it’s a worldwide trend that EU will adopt the concept of digital distribution. For instance, when UK implemented the Art 4 of Information Society Directive, it added Section 16(2)(b) to grant copyright holders the right to issue copies of the work to the public.\textsuperscript{582} It is obvious the distribution right in UK relevant to off-line multimedia works disseminated in CD-ROM or DVD-ROM format, but it’s not apparent from the terms of the section that it is restricted to tangible copies. And Section 17 supports the view of intangible copies can be distributed to the public. According to Section 17(2), copying includes “storing the work in any medium by electronic means.”\textsuperscript{583}

\textbf{B. Questions Arouse With Regulating Digital Distribution By The Right Of Distribution}

If digital distribution exists, what’s the difference between the right of distribution and the right of communication to the public under EU Directives? According to Article 6(1) of WCT, in accordance with Arts 3 and 4 of the Information

\textsuperscript{582} CDPA, \textit{supra} note 168, section 16(2)(b).

\textsuperscript{583} See Aplin, \textit{supra} note 159, at 122-123.
Society Directive, transfer of ownership changes an act of “communication to the public” into an act of “distribution.” Interactive communication (on-demand transmission), which regulated by the right of communication to the public, allows users to enjoy works via the Internet at the time and place they selected. But this kind of transmission would hardly result in a fixation of the transmitted works as a copy on the hard drive. The dissemination of digital works regulated by the right of communication to the public usually provides an intangible service instead of copies. In other words, the right of communication to the public does not require the existence of a new copy of the work that being enjoyed by users. Without a new copy, it means there’s no new ownership exist. So, whether the distribution right should be applied or not is determined by whether a transfer of ownership has occurred. If a transfer of ownership has not occurred, then it is communication to the public rather than the distribution to the public. A transfer of ownership could occur via a sale, donation, exchange, barter or endowment, as a result, “this is an issue to be decided on the basis of the contract.” So, Rental and Lending rights are not covered by the distribution right since transfer of ownership occurred.

Then, another question arose, what if a copy of a work is offered for sale? First, neither import nor offering for sale within the EU triggers exhaustion if no sale has taken place. Then following the reasoning in UsedSoft, if offering for sale

584 UsedSoft case, supra note 152, para. 52.
585 EU Copyright Law: A commentary, supra note 124, at 426, para. 11.47.
cannot trigger exhaustion of the distribution right, the distribution right should not apply unless the copy is put in circulation.\(^ {587}\)

The third issue is the definition of “public.” It is well accepted that a transfer of ownership takes place to a member of the public.\(^ {588}\) The definition of “public” should in line with the definition of “public” in Art 3, and this definition had been analyzed in last chapter of the right of communication to the public. In general, if a copy of the copyrighted work is not sold or other kinds of transfer of ownership do not taken place to a member of the public, but rather to a relative, family members or acquaintance, the distribution right will not applied.

iii. The Right of Distribution in Other Countries—Singapore, Australia and Japan

Lots of countries in the world do not regulate the digital distribution via Internet at all. Some countries even don't provide an exclusive distribution right to copyright owners. For instance, Singapore and Australia only provide copyright owners the right of publication. The others do provide the distribution right but limited its scope of object to cinematographic works, such as Japan.

A. Singapore

Singapore does not provide copyright owners the exclusive distribution right, instead, it provides copyright owners of literary, dramatic and musical works,

\(^{587}\) See EU Copyright Law: A commentary, supra note 124, at 425, para. 11.44. However, some scholars also support the view of that the offer for sale or any other disposal of the original or copies of the work is covered by the right of distribution. See Research Handbook on the Future of EU Copyright, supra note 132, at 212 & 220.

\(^{588}\) UsedSoft case, supra note 152, para. 52.
artistic works, sound recordings and films the right of publication.\textsuperscript{589} According to Section 24, the objects of the publication right are limited to copies of former mentioned works, and the publication occurs via supply (whether by sale or other means) of the copies. As a result, publication right in Singapore also requires a transfer of ownership.\textsuperscript{590}

\textbf{B. Australia}

There’s no exclusive right of distribution being granted to copyright owners in the Australian Copyright Act 1968. However, the concept of distribution is mentioned lots of times in the Copyright Act 1968. The most relevant exclusive right which relates to the right of distribution is the publication right under the traditional circumstance. Section 29(1)(a) defines the publication as “a literary, dramatic, musical or artistic work, or an edition of such a work, shall be deemed to have been published if, but only if, reproduction of the work or edition have been supplied (whether by sale or otherwise) to the public.”\textsuperscript{591} Based on this definition, it’s clear that the publication right does not cover cinematograph films, sound recordings or broadcasts. However, “a cinematograph film shall be deemed to have been published if, but only if, copies of the film have been sold, let on hire, or offered or exposed for sale or hire to the public,” and “a sound recording shall be deemed to have been published if, but only if, records embodying the recording or a part of the recording have been supplied (whether by sale or otherwise) to the public.”\textsuperscript{592} From this definition, there are three basic elements in the publication right: (1) the act

\textsuperscript{589} Singapore Copyright Act, \textit{supra} note 172, section 12.1.7
\textsuperscript{590} Id, section 24(1).
\textsuperscript{591} Copyright Act 1968, \textit{supra} note 178, section 29(1)(a).
\textsuperscript{592} Id, section 29(1)(b)&(c).
regulated by the publication right is supplying a reproduction of a work or edition; (2) the means of the supplying is by sale or other supply means; and (3) the recipient of the supplying is the public. It’s clear that in Australia, the right of publication will only be established via the act of distribution. And it’s also clear that the objects of the right of publication are tangible physical materials, for instance they are reproductions of a work, copies of a file or records of a sound recording. As a result, the right of publication cannot regulate transmission via the Internet. As I mentioned in last chapter of the right of communication to the public, Australia added a new electronic transmission right that was mentioned in Section 10 the right of communication to the public in the Copyright Amendment (Digital Agenda) Act 2000.\textsuperscript{593} In an Australian Discussion Paper: Copyright Reform and the Digital Agenda, it states that “the transmission right would not apply to and would be distinguishable from the distribution of physical copies of copyright material, such as books and sound recordings.”\textsuperscript{594} As a result, it’s quite clear that in Australia, the right of publication will regulate the distribution of works made by physical materials, and the right of electronic transmission from the broad right of communication to the public will be used to regulate digital distribution via Internet. However, there are no new cases that discuss the digital distribution issue under the right of communication emerged recently.

\textsuperscript{594} The Attorney-General’s Department and the Department of Communications and the Arts, Discussion Paper Copyright Reform and the Digital Agenda (1997), para 4.13.
C. Japan

Following Art. 14(1)(i) of the Berne Convention, Japanese copyright law provides cinematographic works’ copyright owner with the exclusive right to distribute copies of their works in Art 26(1). Japan did not implement Article 6 of WCT, which states that the distribution right should encompass all categories of works. Instead, according to Art 26(2), the Japanese distribution right is only granted to the cinematographic work and the works incorporated therein. “Distribution” is defined as “the transfer of ownership and lending of copies of a work to the public, whether with or without payment, and in the case of a cinematographic work or a work reproduced therein, it includes the transfer of ownership and lending of copies of such work for the purpose of making a cinematographic work available to the public.”

The most significant difference between the Japanese distribution right and other countries’ distribution right is that only cinematographic works enjoy this right, and this right has a non-exhaustive character. For instance, the copyright owner will still have his right of distribution even after his film copies were put into circulation with his consent. This issue of exhaustion will be discussed later in the section talking about exhaustion principle. What’s relevant here are two cases that both ruled that video games software can be deemed as a cinematographic work, but their results are different because the issue of in whether the distribution right

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595 Japanese Copyright Act, supra note 190, art 26(1).
596 Id, art 26(2).
597 Id, art 2(1)(xix). (The distribution right including both the assignment of tangible property rights in embodiments and the rental or lending of same to the public, with or without consideration. The copyright owner of cinematographic works can control both selling and renting or lending copies.)
should be applied. In Akuto etc. v. K.K. Sega case, the Osaka High court concluded that video game software is a cinematographic work and applied the distribution right. However, in K.K. Enikkusu v. K.K. Josho case, the Tokyo High Court agreed that the video game software is a cinematographic work, but denied a distribution right. Because the Tokyo High Court ruled that Art 26 provides copyright owners the right to control copies to be distributed and presented at theatres, however, copies of video games software were not distributed or presented at theatres. As a result, although video game softwares are within the scope of cinemagraphic works, there was still no infringement of the distribution right.

Based on these two cases, it’s clear that Japan had already extended the objects of distribution right from cinematographic work to include video/computer game software. But, the objects of transmission via Internet in the cloud computing cannot be limited to cinematographic work or video game software. Objects like sound recordings, normal softwares, TV programs and others can be transmitted too. As a result, the distribution right in Japan cannot be applied now in issuing digital distribution via Internet.


599 Akuto etc. v. K.K. Sega, Judgment of Osaka High Court, March 29, 2001. (In 2002, the Supreme Court denied the distribution right in audiovisual subject matter other than traditional film copies intended for cinema showing of its non-exhaustive character.)
A. Digital distribution or not?

People are getting used to enjoy copyrighted works online by streaming or downloading. They enjoy the convenience of paying iTunes to download music, watching films or reading books at anytime and anywhere they selected. With the development of technologies, some of the video sharing websites or music boxes are able to film and produce their own TV series or music recordings then disseminate them via their own websites or music boxes. Those works will firstly and only be accessed from their own websites or music boxes. Most of the time users have to pay in order to enjoy these works. So under this circumstance, it’s unfair that the service providers of video websites or music boxes could not gain from an exclusive right of distribution. Because there’s no difference between disseminate a film in a theatre and disseminate a film on a specific website with payment. As a result, it’s reasonable to apply the distribution right to regulate the digital distribution. Then a divergence exists, which was discussed in the U.S. part in this section. The divergence is when decide whether there’s a digital distribution, should the court apply the actual distribution requirement or the offering to distribute requirement? In the U.S. part, I agreed that the later requirement— offer to distribute should be applied. But in the contour of the whole world, in my opinion, should apply the actual distribution requirement. That’s because the U.S. do not have an exclusive right of communication to the public, it only extend the right of public performance and the distribution right in order to imply the WCT Art 8. But under the umbrella solution, the EU and China had added a new right of communication to the public, which controls disseminating works via the Internet. If EU and China both adopted
the offering to distribute requirement, it would cause the conflicts of legal norms. Therefore, as for the U.S., the offering to distribute requirement will work out, but for other countries with the right of communication to the public, such requirement is not the best choice.

B. The Right of Distribution and A Proposal for China

a. The definition of distribution in Chinese law and its three key components

Copyright Law of China refers to other countries’ regulation of the right of distribution, uses Art 10(6) to authorize copyright owners an exclusive right of distribution. Art 10 (6) states the right of distribution “that is, the right to provide the public with original copies or reproduced copies of works by means of selling or donating.” According to this definition, in order to constitute an act of distribution under the copyright law in China, there are three key components. The first one is that the recipient of the distribution act is the public. Second, the objects of the distribution are original copies or reproduced copies. And third, the ways of the distribution are by selling or donating, which are ways of transfer of ownership.

For the first component—“public,” as I mentioned in last section of the right of communication to the public, China does not take this into consideration. Most Chinese scholars adopt the general view that public are unspecified numbers of people whose relationships are out of the scope of family members, relatives, and friends.

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601 Copyright law, supra note 460, art 10(6).
602 Based on the third component, it's clear that China adopted the narrow definition of the right of distribution, which only provides two ways of act: sale or donation. The broad definition of the right of distribution also includes more ways of act: rental, lease or lending. For instance, the U.S. adopted the broad definition.
The second component is the object of the act of distribution. Chinese Copyright Law simply states that original copies or reproduced copies are the objects. But two issues arise because of such unclear statement. The first issue is that in most cases, there’s only one original copy. Due to this uniqueness nature, it’s clear that the original copy can be only provided to one person rather than to the public in real life. Further, in the Regulations for the Implementation of the Copyright Law of the People’s Republic of China (which is expired now), Art 5(5) pointed out that the object of distribution is “copies of work...the number of copies of work satisfy the reasonable need of the public.” This expired regulation of implementation of the copyright law obviously required that the object of distribution needs to be “numbers of copies.” Therefore, it seems that an original copy cannot be distributed to the public. Lots of Chinese scholars agreed that the object should be “numbers of copies.” For Instance, Professor Wu Handong stated that “in general situation, the object of distribution refers to reproduced copies of works.” Professor Feng Xiaoqing and Professor Wang Qian also agreed this view and stated that “it’s rare to provide the original copy to the public.” Then comes the second issue: there’s no clear statement in the definition of the right of distribution to clarify that those reproduced copies should be in tangible form.

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604 Wu Handong(吴汉东), Wuxing Caichanquanjiben Wenti Yanjiu (无形财产权基本问题研究)[Analyzing the Right of Intangible Property](3rd ed. 2013), at 257.

605 See Feng Xiaoqing(冯晓青), Zhuzuo Quanfa(著作权法)[Copyright Law](2010), at 101; see also Wang Qian(王迁), Zhuzuoquan Faxue(著作权法学)[Copyright Law Science](2007), at 113.
Without such clarification, it’s even less clear to decide whether the right of distribution could regulate the act of dissemination to the public through the Internet (whether digital distribution exist) under the Chinese Copyright Law. Some scholars supported that the distribution right can regulate digital distribution via Internet based on this issue. This dissertation will discuss more about it later in this part.

The third component is transferring the ownership through sale or donation. According to Prof. Wang Qian, the meaning of the distribution right is to enable the public to enjoy copyrighted works repeatedly for a long time, and in order to do so, the public need to possess copies of the works. To possess copies of the works, transfer of ownership of such copies is significant. Although Chinese Copyright law did not obliquely mention the phrase “transfer of ownership” in the current copyright law, it’s still clear that both sale and donation will result in transferring of ownership. And the Copyright draft confirmed this view. Art 13(2) (the right of distribution) of the Copyright draft states “by means of selling, donating or other ways of transferring of ownership.” It’s clear that China indeed agrees that transfer of ownership is a key component of the right of distribution. And China increases the ways of transfer of ownership so that the ways of sale and donation will not limit the means of transfer of ownership. Transferring the ownership is also the substantive characteristic that causes the distribution right differs from other types of communicational economic copyrights, such as the right of performance, broadcasting right or the right of exhibition. The purpose of all the other

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606 Wang Qian, supra note 473, at 69.
607 Draft of Copyright Law, supra note 466., art 13(2).
communication rights except the right of distribution are to disseminate the contents of works. Although sometimes the public who receive those contents of works via these types of dissemination will use some technical measure to retain those works on their computers, camera or video recorder, such acts are the public’s personal acts. The public’s acts cannot be deemed as the necessary component of the general act of dissemination of works. As a result, in my opinion, the most significant component in the distribution right is transfer of ownership.

b. Could the right of distribution in China regulate digital distribution?

With the development of Internet, it’s obvious that copyrighted works are disseminated via the Internet more and more often. China also faced the issue whether the distribution right could regulate “digital distribution” online. There are basically two theories in China now. One agreed that the distribution right can regulate digital distribution and the other disagreed. The following part will discuss the reasons for concluding former two theories and my personal opinion toward this issue.

The scholars who agreed that the distribution right can regulate digital distribution online also agreed that the right of distribution should regulate the act of disseminating works to the public via the Internet. They provide three aspects of reasons. The first reason is from the aspect of civil law area. As mentioned above, the objects of distribution are copies, and there’s no clear statement require that such copies must be fixed in a tangible material. Art 10(6) only refers to “original
copies or reproduced copies,” and Art 58 that interprets “publication” only refer to “reproduction and distribution of works.” Even without mentioning “copies.”

Second aspect is from criminal law area, there are three criminal law interpretations expressly point that the right of distribution can regulate digital distribution online. The first one is published in 2014. Art 11 of Interpretation of the Supreme People’s Court and the Supreme People’s Procuratorate on Certain Issues Concerning the Application of Law in Handling Criminal Cases Involving Infringement of Intellectual Property Rights states:” Acts of disseminating a literary work, musical composition, motion picture, television program or other visual creations, computer software or other works of another to public shall be deemed as "reproducing or distributing" within the meaning of Article 217 of the Criminal Law.” Second, in 2005, the Supreme People’s Court and the Supreme People’s Procuratorate affirmed again in Reply of the Supreme People’s Court and the

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608 Copyright Law, supra note 460, art 10(6) & art 58.
609 Zuigao Renmin Fayuan Zuigao Renmin Jianchayuan Guanyu Banli Qinfan Zhishi Chanquan Xingshi Anjian JutinYingyong Falv Ruogan Wentide Jieshi (最高人民法院、最高人民检察院关于办理侵犯知识产权刑事案件具体应用法律若干问题的解) [Interpretation of the Supreme People’s Court and the Supreme People’s Procuratorate on Certain Issues Concerning the Application of Law in Handling Criminal Cases Involving Infringement of Intellectual Property Rights](Promulgating by the Supreme People’s Court and the Supreme People’s Procuratorate. Effective date Dec 22, 2004), art 11. Zhonghua Renmin Gongheguo Xingfa (中华人民共和国刑法) [Criminal Law of the People’s Republic of China] (promulgating by National People’s Congress, order No. 83 of the President of the People’s Republic of China, effective on Oct 1, 1997), art 217. (“Whoever, for the purpose of making profits, commits any of the following acts of infringement on copyright shall, if the amount of illegal gains is relatively large, or if there are other serious circumstances, be sentenced to fixed-term imprisonment of not more than three years or criminal detention and shall also, or shall only, be fined; if the amount of illegal gains is huge or if there are other especially serious circumstances, he shall be sentenced to fixed-term imprisonment of not less than three years but not more than seven years and shall also be fined ; (1) reproducing or distributing a written work, musical work, motion picture, television programme or other visual works, computer software or other works without permission of the copyright owner;...”)
Supreme People's Procuratorate on Issues Relating to Audio-visual Products Involved in the Trial of Criminal Cases of Copyright Infringement: “Distribution of audio-visual products via the Internet without the consent of the original producer shall be deemed as "duplication and distribution" stipulated in Item 3 of Article 217 of the Criminal Law.” And third, in 2011, Supreme People's Court, the Supreme People's Procuratorate and the Ministry of Public Security clearly interpreted that distribution should include dissemination on an information network in art 12 of Notice of the Supreme People’s Court, the Supreme People's Procuratorate and the Ministry of Public Security on Issuing the Opinions on Several Issues concerning the Application of Law in Handling Intellectual Property Right Infringement Criminal Cases. There’s no reason for the courts to applied different scope of “distribution” in deciding civil cases and criminal cases. As a result, based on these three criminal interpretations, it seems that distribution right should regulate digital distribution online (dissemination of works to the public on information networks).

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610 Zuigao Renmin Fayuan Zuigao Renmin Jianchayuan Guanyu Banli Qinfan Zhuzuoquan Xingshi Anjianzhong Sheji Luyin Luxiang Zhipin Youguan Wentide Pifu (最高人民法院、最高人民检察院关于办理侵犯著作权刑事案件中涉及录音录像制品有关问题的批复)[Reply of the Supreme People's Court and the Supreme People's Procuratorate on Issues Relating to Audio-visual Products Involved in the Trial of Criminal Cases of Copyright Infringement](promulgating by the Supreme People's Court and the Supreme People's Procuratorate, effected on Oct 15, 2005).

611 Zuigao Renmin Fayuan Zuigao Renmin Jianchayuan Gonganbu Yinfa Guanyu Banli Qinfan Zhishi Chanquan Xingshi Anjian Shiyong Falv Ruogan Wentide Yijian (最高人民法院、最高人民检察院、公安部印发《关于办理侵犯知识产权刑事案件适用法律若干问题的意见》的通知)[Notice of the Supreme People’s Court, the Supreme People's Procuratorate and the Ministry of Public Security on Issuing the Opinions on Several Issues concerning the Application of Law in Handling Intellectual Property Right Infringement Criminal Cases](promulgating by the Supreme People’s Court, the Supreme People's Procuratorate and the Ministry of Public Security, effected on Jan 11, 2011), art 12. (“Distribution” includes general distribution, wholesale, retail, dissemination on an information network, lease, exhibition and other activities.”)
And the third aspect is from administrative law area. Article 2 of Provisions on Administration of Web Publishing Services states: “web publishing services refer to activities of providing web publications to the public through information networks.” According to this definition, web publishing almost have the same meaning as the right of dissemination to the public through information networks in China, the only difference is the objects here are web publications. So publication should include disseminate works to the public via the Internet. Since publication is defined as “reproduction and distribution of works” as I mentioned above, it seems that distribution right should also include the dissemination of works to the public via the Internet. All in all, based on these three aspects of reasons, some scholars concluded that the distribution right should regulate digital distribution.

As to the scholars who do not agree that the distribution right should regulate digital distribution, especially based on Professor Wang Qian’s theory, there are also three reasons. First, the scholars stated that copies refer to material objects that fixed the works. Since the key component of the distribution right is transferring of ownership of copies, which are material objects, and the dissemination to the public via the Internet does not result in transferring of

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612 Wangluo Chuban Fuwu Guanli Guiding (网络出版服务管理规定) [Provisions on Administration of Web Publishing Services, Pormulgating by General Administration of Press and Publication, Radio, Film and Television; Ministry of Industry and Information Technology] (effected on Mar 10,2016), art 2. (This provision replaced the old Interim Provisions on the Administration of Internet Publication (which was expired now). In the old provision, art 5 states that “The Internet publication as used in these provisions shall refer to the online communication acts of the Internet information service providers to, after selection and edition, publish the works produced by themselves or by others on the Internet or to send out the works via the Internet to the users for public browse, read, use or download.”)

613 See Wangqian, supra note 473, at 67-96.
ownership of copies, the distribution right should not regulate the dissemination to the public via the Internet. Second, it’s illogical if the distribution right can regulate the dissemination of works to the public via the Internet, because such act should be regulated by the right of dissemination on information networks from Art 10(12) of Copyright Law. Art 10 of Copyright Law granted copyright owners 17 different kinds of exclusive rights, which allow copyright owner to pretend others act these 17 kinds of acts without authorizations. Based on the legislative logic and a common sense in interpreting laws, it’s reasonable that different kinds of exclusive rights should regulate different kinds of actions. It’s illogical to grant copyright owners an exclusive right, but another exclusive right can also control parts of the control range of this right. And if it is so, the right is not exclusive. Third, the judicial decisions of courts in China can also support that the distribution right should not be used to regulate the dissemination of works to the public via the Internet. For instance, in the case of Huaxia Films Distribution Co. v. Hunan Internet Communication Ltd.,\(^ {614}\) the plaintiff Huaxia Films legally being authorized to distribute the film “The Terminator 3” to the public from cinemas in China. However, the defendant uploaded this film to its own website and enable users to download it by paying money without Huaxia’s authorizations. The plaintiff sued the defendant for infringing its exclusive right of distribution of the film. The court held for the defendant, because the act of disseminating the film to users for downloading via

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the Internet could not be regulated by the plaintiff’s exclusive right of distributing the film from theatres. The plaintiff cannot sue for acts that cannot be regulated by his exclusive right. The second case is Beijing Yuanquan IP Agency Company v. Baidu.com.615 The plaintiff has the exclusive right to authorize ISPs to provide some music recordings to the public via the Internet in the main land of China. The defendant runs a music website that enables users to audit and download music recordings, and the defendant has the exclusive right of distribute the same music in the main land of China. The plaintiffs sued for infringing his exclusive right of dissemination on information networks. But the defendant argued that his exclusive distribution right ought to authorize he legally provide those music recordings to the public via the Internet. The court disagreed and ruled that the distribution right cannot be extended to regulate parts of the scope of the right of dissemination on information networks. The reason provided by the courts is similar to the second reason of scholars in supporting that the distribution right cannot regulate digital distribution. First, the courts stated provide the definitions of the distribution right and the right of dissemination on information networks that provided in the Copyright Law. And then the courts stated:” As far as the logical relationship of legal norms, since the Copyright Law regulate copyright owners’ exclusive rights in the way of listing, it means that these rights are independent from each other and there should be no coincident points or intersection area among them. Further according to the literary content of legal norms, the distribution right is copyright owners’

right to transfer ownership of copies, but the right of dissemination on information networks is copyright owners’ right to enable users to obtain works in a way of interactive communication. It’s clear that to copyright owners, the emphasis and scope of these two rights are different. As a result, the right of dissemination on information networks should be deemed independently from the right of distribution.” The court provided a real convactive reason that the distribution right should not regulate the act of dissemination of works to the public via the Internet.

c. A proposal for China

In my opinion, the distribution right should regulate the act of dissemination of works to the public via the Internet, but with certain limitations. There are two reasons. The first is that extending the scope of the distribution right is an international trend of the world. There’s no doubt that U.S. stably use the distribution right to regulate digital distribution. What’s impressing is that the E.U., which also provide a new exclusive right of communication to the public, also began to extend the scope of the distribution right (UsedSoft case). They are the leaders in IP laws, and they can lead the trend of amending IP laws. Since U.S. and EU are doing so, it’s clear that extending the scope of the distribution right is imperative. In order to face the challenges may be brought by them, China should follow this existing trend to enable the distribution right to regulate digital distribution online. Second from an economic point of view, more and more copies of publications are disseminated to the public via the Internet. For instance, people are able to subscribe digital version of newspaper, magazines, or purchase computer software online. It’s a irreversible trend of new economic. It’s reasonable to repeal the
requirement that objects of distribution have to be in tangible forms. In my opinion, the legislators of Copyright Law draft should also agree that the object of distribution should not be limited to tangible forms since they did not change their statement—they did not add “in tangible forms” in limiting the objects of distribution.\footnote{Draft of Copyright Law, \textit{supra} note 466, art 13(2).}

Although I think the scope of the distribution right should be extended, there’s definitely should be limitations, or otherwise will cause conflicts of the scope between the distribution right and the right of dissemination on information networks. As I mentioned above, the key component of the distribution right is actually “transfer of ownership,” this component should remain its significant position whether extend the scope of the distribution right or not. So, in my opinion, in order to distinguish these two rights, it’s effective to estimate actors’ intention. If actors intend to transfer ownerships of copies of works, the related actions online should be regulated by the distribution right. If not, the acts should be regulated by the right of dissemination on information networks. Then how to estimate actors’ intention? In my opinion, if a person uploaded a work on the Internet, if others can enjoy the work online but cannot download it, such act only constitutes dissemination on information networks but not digital distribution. If users can not only enjoy the work online but also download it for free, the downloading act can be deemed as the actor’s donation, so such act should be regulated by the distribution right. If users only can enjoy or download the work by paying certain fees, enjoy online with fees can be deemed as an act of rental and download with fees is an act
of sale, as a result, there’s no doubt that such acts should be regulated by the distribution right.

In conclusion, I will suggest 3 points in this proposal of China: (1) Do not add “in tangible forms” requirement in limiting “original copies or reproduced copies.” (2) Extend the scope of the distribution right to regulate digital distribution online. (3) At the mean time, limit (2) by estimating whether the actor’s intention is to transfer of ownership.
Chapter 4 : Intermediaries’ Potential Defense

I. Exhaustion Doctrine (First Sale Doctrine)

One of the most important legislative purpose of the Copyright Law (whether it’s national copyright law or international agreement), is to reach “a balance between the artist’s right to control his work... and the public’s need for access...”\textsuperscript{617} Therefore the Copyright law not only grants copyright owners exclusive rights but also adds a series of exceptions and limitations on their exclusive rights. The exhaustion doctrine is one of these limitations limiting copyright owner's distribution right. It is used to balance copyright owners’ interests in monopoly over the distribution of their copyrighted works and consumers' interests in able to sell their property.

Neither the Berne Convention nor the Rome Convention reflects the exhaustion doctrine in their content. Article 6 of TRIPs mentioned the exhaustion doctrine, but left it open without particular regulation. Accordingly, the signatories are free to regulate the exhaustion doctrine.\textsuperscript{618} WCT uses Art 6(2) to limit the right of distribution: “Nothing in this Treaty shall affect the freedom of Contracting Parties to determine the conditions, if any, under which the exhaustion of the right in paragraph (1)[right of distribution] applies after the first sale or other transfer of ownership of the original or a copy of the work with the authorization of the author.”

\textsuperscript{617} Stewart v. Abend, 495 U.S. 207, 228 (1990).
\textsuperscript{618} Agreement on Trade-Related Aspects of Intellectual Property Rights (Marrakesh, Morocco, 15 April 1994), Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) [hereinafter TRIPS Agreement], art. 6. (“For the purposes of dispute settlement under this Agreement, subject to the provisions of Articles 3 and 4 nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights.”)
This Art 6(2) provides exhaustion to the first or other transfer of ownership of the original copy or a copy of the original work with the authorization of the author. Countries all over the world provide similar statutes reflecting exhaustion doctrine to protect consumers’ property right, which allow them to alienate their property legally. For instance, the U.S. granted the owner of a copy to resell or otherwise dispose of the possession of his copy by codifying the first sale doctrine. Similarly, Japan states that the exclusive right to offer the author’s work to the public by transfer of ownerships shall not apply in the case of transfer of ownership of the original or copies of a work with authorizations by the right holder of the right of transfer of ownership.

This exhaustion doctrine works well and efficiently for many years, however in recent decades, as I mentioned in last chapter (the section of the right of distribution), forms of distribution of copyrighted works has transited from the delivery of tangible copies to the transmission of data through the Internet. For example, Amazon now sells e-books in a cheaper price than hardbacks, and the development of Apple’s iTunes service that allow downloading music cause the dropping of CD sales. People are getting used to pay for downloading copyrighted works via the Internet. Under such circumstance, do people have the right to resell their lawfully obtained digital copies of copyrighted works under the exhaustion doctrine? Furthermore, with the development of the cloud technology, people also can use software via the Internet to complete their project without downloading the

619 Ginsburg & Treppo, supra note 492, at 383.
621 Japanese Copyright Act, supra note 190, § 26 bis (2).
software. So, could the exhaustion doctrine be applied into the digital world? This dissertation will analyze the different countries’ attitude toward these issues in applying the exhaustion doctrine or not. There’s no doubt that the digital world had already changed the distribution of copyright works’ medium, its market and its business model. This dissertation will also analyze how China deal with these issues and provide a reasonable proposal based on former analysis.

i. The U.S. Part—The First Sale Doctrine

The first sale doctrine is the codification of the common law principle of copyright exhaustion doctrine. It is designed to reconcile the restrictions of copyright law with property law goals of avoiding restraints on alienation.\textsuperscript{622} Restraints on alienation are inconsistent with the “essential incidents of a right of general property in movables, and ... obnoxious to public policy, which is best subserved by great freedom of traffic in such things as pass from hand to hand.”\textsuperscript{623} The first sale doctrine can be deemed as American copyright law's solutions to protect the free flow of goods in the stream of commerce.\textsuperscript{624}

The U.S. Supreme Court adopted the concept of exhaustion firstly the in Bobbs-Merril Co. v. Straus in 1908.\textsuperscript{625} In this case, the plaintiff printed a notice that required the dealers to sell the book at a price no less than one dollar. Selling a book less than one dollar will be treated as an infringement of the copyright. However,

\begin{itemize}
\item \textsuperscript{622} Brian W, Carver, \textit{Why License Agreements Do Not Control Copy Ownership: First Sales and Essential Copies}, 25 BERKELEY TECH. L.J. 1887, 1890 (2010).
\item \textsuperscript{623} John D. Park & Sons Co. v. Hartman, 153 F. 24,39 (6th Cir. 1907).
\item \textsuperscript{624} See Aaron Perzanowski & Jason Schultz, Digital Exhaustion,\textit{58 UCLA L. REV.} 889, 911 (2011).
\item \textsuperscript{625} Bobbs-Merril Co. v. Straus, 210 U.S. 339 (1908).
\end{itemize}
the defendants sold the copies of the book below one dollar. The plaintiff claimed that the defendant violate its “sole right and liberty of ...vending.”\textsuperscript{626} The plaintiff further argued that the Copyright Act granted copyright owners the “whole field of the right of exclusive sale,” which means that a publisher could withhold copies from the market or sell copies conditionally.\textsuperscript{627} However the Supreme Court rejected that a copyright owner can continue to control subsequent resale of copies under the right to vend by declaring conditions on its initial sale.\textsuperscript{628} Once the plaintiff sold copies “in quantities and at a price satisfactory to it, it exercised the right to vend,” and exhausted the right to vend concerning the particular copies sold.\textsuperscript{629} The Supreme Court ruled that once the first sale occurred, the copyright owner cannot apply copyright law to impose limits on future sale.\textsuperscript{630} Congress embraced the Supreme Court’s decision in Bobb-Merril case, and codified this doctrine in § 41 of the 1909 Copyright Act and recodified it in 1947 without alteration: “nothing in this Act shall be deemed to forbid, prevent, or restrict the transfer of any copy of a copyrighted work the possession of which has been lawfully obtained.”\textsuperscript{631} In 1976, Congress amended § 109(a) which embodied the current version of first sale doctrine.

\textsuperscript{626} Copyright Act of 1790, ch. 15, § 1, 1 Stat. 124 (amended 1802).
\textsuperscript{627} Bobbs case, \textit{supra} note 625, at 351.
\textsuperscript{628} \textit{Id}, at 350-351.
\textsuperscript{629} \textit{Id}, at 351.
\textsuperscript{630} \textit{Id}. (But contractual obligation may support restrictions on future sales.)
A. What is the First Sale Doctrine?

§ 109(a) limits the copyright owner’s control over copies of the work after the first sale or transfer by stating: “Notwithstanding the provisions of section 106(3), the owner of a particular copy or phonorecord lawfully made under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord…”632 That is to say that once a legal copy of an expression is sold, the copyright owner, with limited exceptions, cannot control how the copy is later used. And the owner of that copy could then dispose of it as he sees fit.633 In order to use the first sale doctrine to defeat a copyright infringement, there are four requirements: (1) the copy at issue was lawfully produced with the permission of the copyright owner; (2) the copy left the possession of the copyright owner under his authority; (3) the defendant was a lawful owner of the copy in questions; (4) the defendant distributed the particular copy that he acquired.634 From the second requirement, we know the transfer of the copy could happen via lawfully sale, or donation. It has to be known that the first sale doctrine does not apply when there’s no actual transferring of ownership but only rental, lease or loan. This requirement is quite important when discuss the next part— whether using software from cloud

633 Leaffer, supra note 32, at 328.
634 See 2 Nimmer on Copyright, supra note 50, § 8.12(B)(1)(a); see also Leaffer, supra note 13, at 328. (Prof. Leaffer stated that the 4th requirement as: “the defendant’s use implicates the distribution right only, not the reproduction right.” Although Prof. Leaffer did not specifically pointed out that only the “particular” copy could be distributed, from his latter discussion of whether the first sale doctrine should be extended to digital transmission, he clearly pointed that since digital transmission will result in a reproduction of the work, it will infringe the right of reproduction, which could not be defended by the first sale doctrine.)
should be deemed as a licensed activity or a result from sale. It’s clear, if it’s an act of licenses, the first sale doctrine will not be applied at all. Prof. Leaffer stated that because of the first sale doctrine, the owner of a copy can “dispose of it physically” by resell, rent, donate, rebind or destroy.\footnote{Id.}

As for the issue of jurisdiction, the U.S. Supreme Court recently adopted the application of international exhaustion for works firstly sold outside the U.S. In the Kirtsaeng v. John Wiley & Sons, Inc case, the Supreme Court ruled that copies that lawfully made outside the U.S. may be imported into the U.S. without infringing the copyright owner’s copyright. The first sale doctrine should be equally applied to goods lawfully manufactured outside the U.S.. \footnote{Kirtsaeng v. John Wiley & Sons, Inc., 133 S. Ct 1351 (2013).}

\textbf{B. Is it License or Sale?}

According to § 106(3), a mere licensee cannot be protected by the first sale doctrine, which means he cannot sell, rent, lease, give away or otherwise distribute the work. A licensee will infringe the copyright owner’s right in § 106(3).\footnote{17 U.S.C. § 106(3). (The copyright owner has the right or the right to authorized “to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending.”)} For instance, a person who has rented a copy of a movie from the copyright owner would have no right to rent it to someone else without the copyright owner’s permission.\footnote{H.R. REP. No. 94-1476, at 80 (1976).} So, the issue of whether there’s a license or sale is essential for determining whether the first doctrine should be applied. In the digital world, copyright owners often use restrict methods, such as Digital Right Management.
(DRM) software, End User License Agreements (EULAs), to extend their exclusive right in order to control the digital content. Under this circumstance, the first sale doctrine often times cannot be applied to copyrighted works embodied in digital, since copyright owners always claimed that there’s no sold but only license to users. If there’s no limitation on these “license agreement” which allow copyright owner to control users’ use of the digital content, it does not meet the delicate balance which is required by the Copyright Act. According to Prof. Nimmer, “the balance us disrupted when state [contract] law is permitted to enlarge the rights of copyright proprietor at the expense of copyright users.” There’s no doubt that Congress should provide guidelines to prevent copyright owners from abusing the license tools to control users’ use of digital works. However, there’s no such guideline to be used now. As a result, nowadays, copyright owners and users both need to find the implication of the proposed guideline from the court’s decision relevant to this issue. There are three conductive cases that implicate the 9th Circuit’s judgment over this issue.

639 Digital Right Management (DRM), WIKIPEDIA.ORG, available at https://en.wikipedia.org/wiki/Digital_rights_management (“various access control technologies that are used to restrict usage of proprietary hardware and copyrighted works”) End User License Agreement (EULAs), WIKIPEDIA.ORG, available at: https://en.wikipedia.org/wiki/End-user_license_agreement (“an end-user license agreement (EULA) or software license agreement is the contract between the licensor and purchaser, establishing the purchaser's right to use the software. The license may define ways under which the copy can be used, in addition to the automatic rights of the buyer including the first sale doctrine and 17 U.S.C. § 117 (freedom to use, archive, re-sale, and backup).” It is also known as click-wrap or shrink-wrap licensing. EULAs are terms and conditions that users must accept to use software, such as iTune, or make purchases on a cloud platform such as Amazon.com.)

640 See Stewart v. Abend, 495 U.S. 207, 228 (1990). (“The Copyright Act creates a balance between the artist's right to control the work during the term of the copyright protection and the public's need for access to creative works.”)

The First case is F.B.T. v. Aftermath Records. In this case, the plaintiff signed an agreement that granted the defendant the right to distribute recordings of an artist by paying certain royalties of the retail price of copies of the artist’s records sold (Record Sold provision). And by paying net revenue that the defendant obtained by licensing out the use of the artist’s master recordings (Master Licensed provision). The defendant licensed various third parties the right to distribute the artist’s records via the Internet. The plaintiff claimed that the royalties for the artist’s digital downloads and mastertones should be calculated pursuant to the “Master Licensed” provision of the agreement, but the defendant argued that the royalties should be calculated pursuant to the “Record Sold” provision. The District court agreed with the defendant, however, the 9th Circuit reversed the district court’s decision and concluded that the defendant’s agreements permitting third parties to use its sound recordings to produce and sell permanent downloads and mastertones were licenses rather than sales. By referring §114, §115 and the first sale doctrine, the 9th Circuit provided its reasons. The 9th Circuit clarified the definition of the term sale and license, and concluded that there’s no sale since the download distributors did not obtain title to the digital files, and the defendant remained the ownership of those digital files. And since the defendant transferred the copy of copyrighted material, retained title and limited the use to which the material may be put, and was compensated periodically based on the transferee’s

642 F.B.T. Prods., LLC v. Aftermath Records, 621 F. 3d 958 (9th Cir. 2010).
643 Id., at 965-67.
644 Id., at 965. ("A sale of a work may either be transfer in title of an individual copy of a work, or a sale of all exclusive intellectual property rights in a work.")
exploitation of the material, the transaction should be a license.\textsuperscript{645} As a result, it seems that digital music files that could be downloaded from iTunes, Sprint or other digital stores may be considered license from the music industry in regards to payments to artists and none transfer of title. Under this circumstance, it seems that copyright owners are able to take steps to limit and control the use of the digital music files by the users who lawfully downloaded them.

Then, in the Vernor v. Autodesk, Inc case, the defendant purchased several used copies of the plaintiff’s software from the plaintiff’s direct customer.\textsuperscript{646} However, its direct customer had made an agreement with the plaintiff to destroy all copies of these used software. But eventually he broke the agreement and sold those softwares to the defendant. The defendant then resold these used software on ebay. The plaintiff claimed that it only licensed and never sold copies of its software since it put a “shrinkwrap” notice on the standard packaging.\textsuperscript{647} The 9th Circuit held that “a software user is a licensee rather than an owner of a copy where the copyright owner (1) specifies that the user is granted a license; (2) significantly restricts the

\textsuperscript{645} Id.

\textsuperscript{646} Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010).

\textsuperscript{647} Id, at 1104-05. (The “shrinkwrap” noticed that the “software is subject to the license agreement that appears during the installation process or is included in the package.” The standard license agreement accompanying the CDs contains several key terms: (a) “Autodesk retains title to all copies;” (b) “the customer has a nonexclusive and nontransferable license to use” the software; (c) “it imposes transfer restrictions, prohibiting customers from renting, leasing, or transferring the software without Autodesk’s prior consent and from electronically or physically transferring the software;” (d) “it imposes use restrictions—you may not (1) modify….the software… (3) remove any proprietary notices, lables, or marks from the software…(4) use… the software outside of the Western Hemisphere; …(6) use the software for commercial or other revenue-generating purposes if the software has been licensed or labeled for educational use only;” (e) “provides for license termination if the user copies the software without authorization …”(f)"the software is an upgrade.")
user’s ability to transfer the software; and (3) imposes notable use restrictions.”\footnote{Id, at 1111.} Since the plaintiff already specified the license requirement and imposes restrictions, it was clear that the direct customer was a licensee rather than an “owner of a particular copy” of the software, as a result the first sale doctrine could not apply and he was not entitled to resell the copies of the software. And the defendant did not receive title to the copies, and could not invoke the first sale doctrine either. All in all, the 9th Circuit ruled that a purchaser of software bound by a restrictive license agreement could be a licensee (but not the owner of a copy), therefore not entitled to the first sale doctrine. However, the 9th Circuit limited this holding to software applications and it will not apply to digital music files or other digital files.\footnote{Id, footnote 14.}

Third, in the UMG Recordings, Inc. v. Augusto case,\footnote{UMG Recordings, Inc. v. Augusto, 628 F.3d 1175 (9th Cir. 2011).} the plaintiff mailed promo CDs to individuals such as music critics and radio disc jockeys without charges solely for marketing purposes.\footnote{Id, at 1177-78. (The promo CDs asserted that the transaction is a license by labeling with a statement: “This CD is the property of the record company and is licensed to the intended recipient for personal use only. Acceptance of this CD shall constitute an agreement to comply with the terms of the license. Resale or transfer of possession is not allowed and may be punishable under federal and state laws,” or “Promotional use only, not for sale.”)} The defendant was not one of those individuals, he obtained these promo CDs from various sources. Then the defendant sold the promo CDs at auction. The plaintiff sued for infringement of his exclusive right to distribute the CDs. The 9th Circuit held that the act of mailing promo CDs to the recipients result in a sale for the purpose of the first sale doctrine. The plaintiff's distribution of promo CDs enable the recipient “to use or dispose of them in any
manner they saw fit,” and the plaintiff did not enter a license agreement.652 The 9th Circuit provided two reasons for its conclusion. The first reason is “based on the nature” of the plaintiff’s distribution. Since the promo CDs are “dispatched to the recipients without any further prior arrangement as to those particular copies.”653 Second, the plaintiff’s restrictions in the labels of the CDs did not establish the creation of a license agreement. The restriction statement stated that acceptance of the CD constitutes an agreement to a license and its restrictions, but such acceptance could be assumed if the recipients made no responses at all.654 As a result, “without meaningful control or even knowledge of the status of the CDs after shipment,” the plaintiff’s transfer of possession to the recipients resulted in a transfer of title.655

   Based on these decisions, in my opinion, the 9th Circuit provided its own guideline to decide whether a license or a sale exists: to accomplish a license, there are three requirements. (1) The copyright owners have to explicitly state that users are granted licenses and clearly demonstrate the use restrictions; (2) The users affirmatively and explicitly disclosed that they accept the license agreement provided by the copyright owners, implication of agreement could not be accepted as agree with the license; (3) The license agreement must specify that it limit the users’ ability to transfer the copies. However, in my opinion, there’s still need of limitations toward these restrict licenses, otherwise copyright owners’ abuse of

652 Id, at 1180.
653 Id. (“The CDs are not numbered, and no attempt is made to keep track of where particular copies are or what use is made of them.”)
654 Id, at 1182.
655 Id, at 1182.
such expanded right may occur soon. For instance, nowadays, copyright owners are using EULAs to reserve their right to suspend or terminate access to purchased content at any time they desired without notice.\textsuperscript{656} All in all, in my opinion, Congress may firstly codify how to reach a license agreement between a copyright owner and a user into the Copyright Act, and then add reasonable limitations on these licenses that expand copyright owners exclusive right.

\textbf{C. Could the First Sale Doctrine Be Applied to the Digital World?}

As mentioned in the section of the right of distribution, the Internet and cloud computing technology are challenging the traditional business mode and market place in the pre-Internet era. The traditional first sale doctrine developed in the old days when the objects are physical copies of copyrighted works. But when the copyrighted works are being transferred through the Internet even without downloading, should the first sale doctrine still being applied?

a. The ReDigi case and reasons for not extending the first sale doctrine to the
digital transmission

The Copyright Office and some scholars pointed that the first sale doctrine should not be applied in the digital world. The Copyright office noted that “The tangible nature of a copy is a defining element of the first sale doctrine and critical

\textsuperscript{656} \textsc{Apple iTunes Terms & Conditions}, \url{http://www.apple.com/legal/internet-services/itunes/us/terms.html} (“Notwithstanding any other provision of this Agreement, Apple and its licensors reserve the right to change, suspend, remove, or disable access to any iTunes Products, content, or other materials comprising a part of the iTunes Service at any time without notice.”)(last visited Jun. 28, 2016)
to its rationale.” 657 The Department of Commerce Internet Policy Task Force supported the Copyright Office’s opinion in its White Paper on Remixes, First sale, and Statutory Damages in 2016. 658 It concluded that the Copyright Office’s 2001 observation of extending the first sale doctrine to digital transmissions is harmful to primary markets is still valid, since the technology to “effectively prevent the retention of copies after a transmission has not yet become a practical reality.” Prof. Leaffer also agreed that the first sale doctrine should not be extended to digital transmission and supported the Copyright Office report. He provides the following reasons: (1) “the first sale doctrine is restricted to the transfer of physical copies of the work;” (2) it “provides no defense to infringements of the reproduction right,”—“an Internet transmission results in a reproduction of the work;” (3)”physical copies degrade over time, whereas digital information does not;” (4) “works in digital form can be reproduced flawlessly and be disseminated globally at little cost and with

657 See U.S. COPYRIGHT OFFICE, DIGITAL MILLENNIUM COPYRIGHT ACT: SECTION 104 REPORT, EXECUTIVE SUMMARY (2001), at 82-83. (“Physical copies of works degrade with time and use, making used copies less desirable than new ones. Digital information does not degrade, and can be reproduced perfectly on a recipient’s computer. The ‘used’ copy is just as desirable as a new copy of the same work. Time, space, effort and cost no longer act as barriers to the movement of copies, since digital copies can be transmitted nearly instantaneously anywhere in the world with minimal effort and negligible cost. The need to transport physical copies of works, which acts as a natural brake on the effect of resales on the copyright owner’s market, no longer exists in the realm of digital transmissions...Additionally, unless a ‘forward-and-delete’ technology is employed to automatically delete the sender’s copy, the deletion of a work requires an additional affirmative act on the part of the sender subsequent to the transmission. This act is difficult to prove or disprove, as is a person’s claim to have transmitted only a single copy, thereby raising complex evidentiary concerns.”)

low visibility.” And further, according to the ReDigi case, it is much clearer that the first sale doctrine could not be applied in the digital world.

The court’s decision in the ReDigi case shows problems caused by applying the traditional first sale doctrine to new technology which challenged the traditional form of distribution and business modes. This decision extended copyright owners’ exclusive control over digital copies of their copyrighted works without adding equivalent limitations on such extension. It also illustrated that the importance to amend the traditional first sale doctrine in order to apply it to current digital world and new technologies.

In the ReDigi case, after the users uploaded their legally purchased music files to the ReDigi’s “Cloud Locker,” they could offer to sale these music files to other users at a discounted price. Once the music files were sold, ReDigi use a technology called “forward-and-delete” to ensure that the seller’s access to the files is terminated, and the new owner can store the files in their Cloud Locker, stream them, sell them, or download them to his personal device. The District court held that the first sale doctrine should not be applied when users resell copyrighted works via digital distribution, even if the technology of “forward-and-delete” software can ensure that the seller’s copy is deleted during the digital transaction. The district court provided two main reasons. First, the court emphasized that the first sale doctrine only protects the owner of a “particular” copy or phonorecord to distribute “that particular” copy or phonorecord. Nonetheless, based on the

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659 Leaffer, supra note 32, at 331-32.
660 Capitol Records v. ReDigi, supra note 563.
661 Id, at 645.
662 Id, at 646.
technology of ReDigi service, the owner could only distribute unlawful “reproductions of the copyrighted code embedded in new material objects,” which could not be “that particular” copy or phonorecord.663 But the court further asserted that is not to say the first sale doctrine could not be applied in the digital world at all. It could still be used to protect digital works—a lawful owner's sale of his “particular” phonorecord, “be it a computer hard disk, iPod, or other memory device onto which the file was originally downloaded.”664 Second, the District court also rejected the defendant’s argument that the court should amend the first sale doctrine in order to construe the basic purpose of the Copyright Act. The District court reasoned that not only because the court is not authorized to do such amendment, which should be a legislative prerogative, but also the Copyright Office already noted that the justifications for the first sale doctrine in the physical world could not be imported into the digital domain.665

It seems that the mainstream opinion of the U.S. perspective towards the issue of whether the first sale doctrine should be applied in the digital world is negative. However, because of the rise of new technology and the Copyright Act's requirement of delicate balance, more scholars are turning to support the idea that the first sale doctrine should be applied in the digital world nowadays. I myself also support to extend the first sale doctrine to the digital distribution, and will provide further discussion in the next section.

663 Id, at 655.
664 Id, at 656.
665 Id.
b. But, Why Not?

As mentioned earlier, more scholars are changing their attitude that it could. In my opinion, there are three basic reasons in supporting that the first sale doctrine should be applied.

First, in my opinion, the District court's reasoning for its conclusion that the first sale doctrine could not be imported into the digital domain has a problematic logic. The District court ruled that the first sale doctrine can still be used to protect digital works under the requirement of “particular” copy or phonorecord, if a lawful owner of the copyrighted work transfer a computer hard disk, iPod or other memory device with the copyrighted work. Nonetheless, the district ignored the fact that this way of distribution also facing the Redigi case’s “sole copy problem.” If the court believes the “forward-and-delete” technology in that case, cannot guarantee that only the lawful owner can retain a sole copy of the works. Then how could the court feel safe about the lawful owner would not retain more copies of the same copyrighted work in his other devices. If so, the lawful owner can simply resell the devices onto which the file was stored for multiple times. Such action will also using the district court's words, “do harm to the primary markets.”

Second, as mentioned above, the first sale doctrine is used to maintain the delicate balance between the copyright owner's right to control the work during the term of copyright protection and the public's need for access to copyrighted works. And it's also the codification of the common law principle of copyright exhaustion, which is used to avoid restraints on alienation. There's no reason for the Copyright Act to only extend copyright owners’ exclusive right over the control of digital
transmissions without granting users equivalents responses to limit such extension. Usually, users can purchase a single song at the price of $0.99 from iTunes store, they could also purchase the CD which not only include that particular song but also another 9 songs at the price around $10 from Amazon. There’s no price difference for the user who decides to purchase all songs from an album. Under this circumstance, why the user who pay the same price for the same number of songs from iTunes cannot resell his property just like the user who purchase a CD which stored the same songs? And further, the user who decides to purchase digital songs from iTunes may even pay more than the user who purchased a CD from Amazon, because he has to pay for his storage space in iCloud. The user paid not only price for the songs, but also price for the storage space. Then why he could not resell his property? Although the “forward-and-delete” technology cannot fulfilled the requirement of the first sale doctrine, there’s no reason to reject to apply the whole first sale doctrine to the digital world. What’s interesting here, is that the ReDigi's specified “forward-and-delete" software had already been issued a patent by the U.S. Patent and Trademark Office. The ReDigi's software was designed to scan the user's hard drive to ensure no other copy of the file was retained. ReDigi gained a patent for its instantaneous “copy-less” digital file transfer that includes a “Removal and Monitoring Mechanism” to ensure “personal-use copies of the sold media are removed.”666

Third, according to scholars Aaron Perzanowski and Jason Schultz, the first sale doctrine itself can provide both social and economic benefits. They pointed out that the key social benefits of the first sale doctrine generally falling into four categories: access, preservation, privacy, and transaction clarity. For access, the role of first sale doctrine can increase affordability and availability to different types of copyrighted work through secondary markets, libraries, or rental-based businesses. For preservation, with the application of the first sale doctrine, public can still access to the works that copyright owners determined to withdrawn, or suppressed because of cultural or political reasons. Secondary market can keep the works in circulations, which will remain copyrighted works as “a portion of our cultural history... preservation benefits society broadly.” For privacy, the first sale doctrine enables people to transfer works privately and anonymously since they can transfer without permission of the copyright owner. For transaction clarity, the first sale doctrine “promotes market efficiency and transactional clarity by protecting consumers from high information and transaction costs and deceptively...

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667 See Perzanowski & Schultz, supra note 624, at 892-901.
668 Id, at 894. See also Anindya Ghose et al., Internet Exchanges for Used Books: An Empirical Analysis of Product Cannibalization and Welfare Impact, 17 INFO. SYS. RES. 3 (2006).( The authors noted that empirical evidence does not show that secondary market cannibalize the primary market, as the ReDigi court suggested. Anindya Ghose study, which cited by Perzanowski and Schultz, shows that 84% of used book purchasers on Amazon would not have purchased the book at a 'new' book prices. And despite a 0.3% reduction of publisher' gross profits due to Amazon's secondary book market, the new welfare gain was nearly $88 million annually.)
669 Id, at 895.
670 Id, at 896. (Otherwise, copyright owners are able to “track the movement of the work and the identity of each participant in the transaction.”)
completes limitations on the use of low-cost copyrighted goods.” 671 As to the economic benefits, the first one is that the first sale doctrine can encourage innovations through competitions between copyright owners and secondary markets, innovation by secondary market providers, and innovation by users. For instance, copyright owners have to create new things in order to differentiate their new copies from used copies, which are in circulation in the secondary market. 672 An add on is the first sale doctrine “promotes platform competition by reducing consumer lock-in.” Under the circumstance of DRM, people can only playback certain content on a particular device or platform (for instance, before 2009, songs downloaded from iTunes can only be played via Apple devices), the first sale doctrine allow people to sell their existing content and lowering the cost of switching to another platform. 673

All in all, in my opinion, Congress has the duty to re-codify statute reflecting the first sale doctrine to protect copyright owners’ right, consumers’ interests, technological innovation and new digital market. Even though the current first sale doctrine cannot be directly apply to the current situation, it should be known that certain restriction of copyright owners’ right to control digital transmission is needed. And in my opinion, the best move of such restriction should be directly re-codify the current statute reflecting first sale doctrine to enable it adapts to the current situation without legal loops.

671 Id. (With contrary to the various legal terms that may be tied to a copyrighted work, the first sale doctrine “gives consumers a reliable baseline that simplifies these transactions.”)
672 Id, at 897.
673 Id, at 900-01.
ii. The E.U. Part— the Exhaustion Doctrine

It is known that for the purpose of harmonizing IP rights and the European principle of free circulation of goods, the E.U. legislated the exhaustion doctrine.\textsuperscript{674} The E.U. adopted the exhaustion doctrine aiming at the distribution right in its several Directives to limit copyright owner's rights in conformity of the principle of free circulation of goods. Article 5 of the Database Directive provides that “... the first sale in the Community of a copy of the database by the right holder or with his consent shall exhaust the right to control resale of that copy within the Community;...”\textsuperscript{675} Article 4 of Software Directive states: “The first sale in the Community of a copy of a program by the right holder or with his consent shall exhaust the distribution right with in the Community of that copy, with the

\textsuperscript{674} See Ginsburg & Trepoz, supra note 492, at 391. See also Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union, Declarations annexed to the Final Act of the Intergovernmental Conference which adopted the Treaty of Lisbon, signed on 13 December 2007, \url{http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT}, art 28, 34-36. ("Article 28 1. The Union shall comprise a customs union which shall cover all trade in goods and which shall involve the prohibition between Member States of customs duties on imports and exports and of all charges having equivalent effect, and the adoption of a common customs tariff in their relations with third countries. 2. The provisions of Article 30 and of Chapter 3 of this Title shall apply to products originating in Member States and to products coming from third countries which are in free circulation in Member States." "Article 34 Quantitative restrictions on imports and all measures having equivalent effect shall be prohibited between Member States." “Article 35 Quantitative restrictions on exports, and all measures having equivalent effect, shall be prohibited between Member States.“ "Article 36 The provisions of Articles 34 and 35 shall not preclude prohibitions or restrictions on imports, exports or goods in transit justified on grounds of public morality, public policy or public security; the protection of health and life of humans, animals or plants; the protection of national treasures possessing artistic, historic or archaeological value; or the protection of industrial and commercial property. Such prohibitions or restrictions shall not, however, constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.” )

\textsuperscript{675} Database Directive, supra note 140, art 5(c).
exception of the right to control further rental of the program or a copy thereof.”676

It’s clear that these two directives only expressly granted the exhaustion doctrine for software and database (both for copyright and the sui generis right). It was until the enactment of the Information Society Directive that the exhaustion doctrine was explicitly used in regulating all types of works for the first time. Art 4(2) of Information Society Directive provided that “the distribution right shall not be exhausted within the Community in respect of the original or copies of the work, except where the first sale or other transfer of ownership in the Community of that object is made by the right holder or with his consent.”677

According to these articles from those directives, the key principle of the exhaustion doctrine in E.U. is that once a copyrighted good (for instance, a CD, a book or a software) have been put on the market with the consent from the copyright owner within the E.U., the copyright owner then cannot prohibit the further circulation of the good within the E.U. In a nutshell, the copyright owner’s right toward this good are exhausted once the good was successfully distributed to others. There are two basic features of the exhaustion doctrine. First, the exhaustion doctrine applies in the context of the distribution of copyrighted goods rather than service. It means that if a copyrighted work being performed or otherwise transmitted via cable, there’s no exhaustion of rights. The copyright owner can still prevent further subsequent retransmission within the E.U.. Thus, the exhaustion doctrine does not apply to the communication right or the rental and lending rights. Second, the exhaustion doctrine has a jurisdiction requirement. The exhaustion

676 Software Directive, supra note 122, art 4(2).
doctrine of the E.U. only applies to goods in circulation within the scope of E.U. members (which includes for the purpose of EEA\textsuperscript{678}).\textsuperscript{679} It means that the E.U. does not recognize international exhaustion of a copyright owner’s right. Thus, if the good is sold outside the EU, the right of distribution in the EU is not exhausted. For instance, when a CD was sold in Canada, the owner’s right would not be exhausted in the E.U.\textsuperscript{680}

**A. What constitutes a “sale”?**

It’s important to clarify the principle of exhaustion doctrine that it only applies to the distribution of copyrighted goods. The basic condition to constitute a distribution of copyright goods is the sale or other transfer of ownership of the copyrighted goods. It means that the right of distribution is exhausted when the lawfully first sale (or transfer of ownership) happened. Thus it’s important to interpret the definition of “sale.”

As to Article 4(2) of the Software Directive, it does not provide the meaning of the term “sale” upon national laws, it instead referred to settled case law and concluded that the term “sale” must be designated “an autonomous concept of

\textsuperscript{678} EEA, European Economic Area, WIKIPEDIA.ORG, available at [https://en.wikipedia.org/wiki/European_Economic_Area](https://en.wikipedia.org/wiki/European_Economic_Area) (“The European Economic Area (EEA) is the area in which the Agreement on the EEA provides for the free movement of persons, goods, services and capital within the internal market of the European Union (EU). The EEA was established on 1 January 1994 upon entry into force of the EEA Agreement.”)

\textsuperscript{679} But the distribution right continues fully to apply with respect to copies imported from outside the E.U. See Simon Stokes, Digital Copyright Law: Law and Practice 105 (4th ed. 2014), (“However, where goods are put on the market outside the EEA then the issue is one of consent: only if the right holders has clearly consented to the export of the goods from outside the EEA into the EEA then will there be international exhaustion.” “Consent must be unequivocal so will very rarely, if ever, be implied from the facts and certainly not from the silence of the rights owner.”)

\textsuperscript{680} See Case T-198/98, Micro Leader Business v. European Commission, 2000 CTLR N-113. (The lawful sale of Microsoft software in Canada did not exhaust Microsoft’s rights to prevent import of the software in Canada into France.)
European Union Law,” which must be interpreted in a uniform manner in each Member States.681 The ECJ adopted a broad interpretation of the term sale in the Usedsoft case: a sale means a transfer of ownership in an item of tangible or intangible property with certain payment.682 It further construed that a sale of all forms of product, characterized by a sale of computer programs (software), was constituted if a user is granted a right to use a copy of a computer program, for an unlimited period, with a payment of a fee designed to enable the copyright owner to obtain a remuneration corresponding to the economic value of the copy of the work.683 Therefore, when the two conditions of certain payment and usage for an unlimited period are met, a sale is constituted.

The Defendant in the Usedsoft case argued that it merely made the software available to download by users with no charges and the downloadable software cannot be used without concluding a user license agreement.684 And such a license only provides users a “non-exclusive and non-transferable user right.”685 Thus there was no sale in this case. However, the ECJ disagreed. The ECJ firstly pointed out that the download of a copy of a computer program and the conclusion of a user license agreement should be examined as a whole for the purpose of their legal

681 UsedSoft case, supra note 152, paras. 39-41. (“A uniform interpretation of the term sale is necessary in order to avoid the protection offered to copyright holders by that directive varying according to the national law applicable.”) See also Infopaq case, para 27.
682 Id, para. 42.
683 Id, paras. 45 & 49. (Advocate General observed in point 59 of his opinion that “if the term sale within the meaning of Article 4(2) of Directive 2009/24 were not given a broad interpretation as encompassing all forms of product marketing.... The effectiveness of that provision would be undermined, since suppliers would merely have to call the contract a licence rather than a sale in order to circumvent the rule of exhaustion.”)
684 Id, para.43.
685 Id.
classification, since an act of downloading a copy of computer program is useless if the copy cannot be used by its possessor.\textsuperscript{686} Then the ECJ found the purpose of the plaintiff’s making available of a copy of its software and the conclusion of a user license agreement is to make users permanently use the copy by paying fees that is designed to remunerate the plaintiff.\textsuperscript{687} Therefore the manner by which the copy of the software has been made available does not make a difference.\textsuperscript{688} Consequently, copyright owners cannot merely claim that the contract is a “license” rather than a “sale” to prohibit the exhaustion doctrine.\textsuperscript{689}

\textbf{B. Should the E.U. exhaustion doctrine encompass digital transmissions?}

In order to know whether the exhaustion doctrine should encompass digital transmissions, the scope of the object of the exhaustion doctrine should be contoured. Thus, this issue now turns to whether the application of exhaustion doctrine should be limited to tangible copies.

Traditionally, the exhaustion doctrine indeed only applies to tangible property and does not apply to intangible copies. The exhaustion doctrine can apply to digital copies of software only if it has been fixed on a tangible medium such as a CD. As to the Database Directive, Recital 33 clearly states “the question of exhaustion of the right of distribution does not arise in the case of on-line database,

\textsuperscript{686} \textit{Id}, para. 44.
\textsuperscript{687} \textit{Id}, para. 45.
\textsuperscript{688} \textit{Id}, para. 47. (The ECJ specified there’s no difference between the means of a download from the rightholder’s website and the means of a material medium such as a CD-ROM or DVD.)
\textsuperscript{689} \textit{Id}, para. 48.
which come within the field of provision of services.” And according to Recital 28 and Recital 29 of the Information Society Directive, it seems that the exhaustion doctrine is limited to the distribution of tangible copies. However, recently, based on the decision of the ECJ in Usedsoft case, it seems that the exhaustion doctrine should be applied to both tangible and intangible copies. This scope of the objective is contoured to “avoid the partitioning of market and to limit restrictions of the distribution of those works to what is necessary to safeguard the specific subject matter of the intellectual property concerned.”

In the Usedsoft case, the plaintiff specifically cited Recital 29 of the Information Society Directive to prove that the exhaustion doctrine does not encompass intangible copies. But the ECJ rejected the plaintiff’s argument upon three reasons. First, Article 4(2) does not explicitly state that the exhaustion doctrine is limited to copies of software on a material medium such as a CD or DVD. It makes no distinction to the tangible or intangible form of a copy. Second, the Software Directive is the specific directive that deal with computer programs relevant in this case, and it’s a lex specialis of the Information Society Directive. Third, the ECJ also observed that “from an economic point of view,” software online

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690 Database Directive, supra note 140, recital 33. (Electronic databases in tangible, material, medium are subject to exhaustion.)
691 Information Society Directive, supra note 127, recital 28 & 29. (“The question of exhaustion does not arise in the case of services and online services in particular.”)
692 EU Copyright Law: A commentary, supra note 124, at 429, para. 11.52. See also Usedsoft case, supra note 152, paras. 62-3.
693 Id, paras. 53-5.
694 Id, paras. 56-7. (Article 1(2) of the Software Direct points that “protection in accordance with this Directive shall apply to the expression in any form of a computer program.”)
transmission is “functional equivalent” to deliver in tangible medium. And as I mentioned above, the ECJ indicated that limit the scope of the exhaustion doctrine to tangible copies not only out range of what is necessary to safeguard the specific subject matter of the intellectual property, but also result in the partitioning of market.

In 2015, in the Art & Allposters International BV v Stichting Pictoright case, the defendant used a chemical process to transfer protected image from the plaintiff’s paper poster onto a canvas, and then sell these canvases. The protected image disappeared from the paper poster during the transfer process. The plaintiff claimed that the defendant’s acts constitute infringement of copyright and the exhaustion doctrine did not apply. The ECJ agreed and held that “the rule of exhaustion of the distribution right set out in Article 4(2) of Directive 2001/29 does not apply in a situation where a reproduction of a protected work, after having been marketed in the European Union with the copyright holder’s consent, has undergone an alteration of its medium, such as the transfer of that reproduction from a paper poster onto a canvas, and is placed on the market again in its new form.” The ECJ provide two main reasons in supporting its conclusion. First, the exhaustion doctrine should be applied to the tangible object rather than the protected work (intellectual creation) that incorporated into it. Second, the defendant’s transfer process constituted a new reproduction of the original poster

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695 Id, para 61.
696 Id, paras 62-3.
697 Case C-419/13, Art & Allposter International BV v Stichting Pictoright 2015.
698 Id, paras. 49-50.
699 Id, paras. 34-40.
and the previous consent of the rightholder to the distribution of his work does not cover the distribution of this new reproduction of the work. Thus the exhaustion rule did not apply when the object, which was marketed with the copyright holder’s consent, has undergone subsequent alterations to its physical medium. This case resulted in a stronger exclusive distribution right for the copyright owners, and it turns out that the ECJ turns to favored the copyright owners’ interests over the consumers’ interests. However, most importantly, this case did not mention a word in analyzing whether the exhaustion doctrine should be applied to digital content or not. Thus, the decision of this case only addresses the distribution of tangible objects, and does not cover the position in relation to the exhaustion of digital rights. This decision cannot serve as a reference for similar cases fact such as Redigi where users are able to transfer music files from lawfully purchased CD to “Cloud Locker.”

C. Limitations on ECJ’s conclusion

Although the ECJ reached a rather broad approach for applying the exhaustion doctrine in two aspects: (1) “sale,” which is the trigger of this provision is constituted when the software is able to be used for an unlimited period and in return for a fee corresponding to the economic value of the work; (2) the object of this provision encompass intangible copies, the ECJ provided two important restrictions to the application of this broader provision in relation to downloaded copies.

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700 Id, paras. 41-6.
First, in order to avoid infringing the exclusive right of reproduction, an original acquirer must make his own copy unusable at the time he reselling this tangible or intangible copy of a software.\footnote{1} And the distributor can use technical protective measure such as product keys to assure that the copy is made unusable.\footnote{2}

Second, “if the license acquired by the first acquirer relates to a greater number of users than he needs, the acquirer is not authorized by the effect of the exhaustion of the distribution right... to divide the license and resell only the user right for the computer program concerned corresponding to a number of users determined by him.”\footnote{3}

Generally speaking, according to the ECJ’s decision, it’s unclear whether digital exhaustion only occurs as far as downloading computer programs or it can also be applied to other types of works such as music recordings, e-books or films. In my opinion, based on the ECJ’s reasons in the Usedsoft case, it seems that the ECJ is adopting the exhaustion doctrine to apply to all types of digital works. Because the ECJ not only clarified that a sale occurs when a user get a permanent license by paying the specifically designed fee, but also pointed the “functional equivalent” feature of digital works compare to tangible works from an economic point of view.\footnote{4} The ECJ’s reasons in the Usedsoft case are so convincing and reasonable, which keep up to the trend of technical development.

\footnote{1}{\textit{Id,} para. 70.}
\footnote{2}{\textit{Id,} paras. 78-9.}
\footnote{3}{\textit{Id,} para. 69.}
\footnote{4}{However, the European Commission published “Public Consultation on the review of the EU copyright rules” in December, 2013. It stated that the application of exhaustion doctrine}
iii. The Exhaustion Doctrine in Other Countries

Since the issue of whether the exhaustion doctrine could be applied to digital transmission remained unsolved, it’s necessary to analyze the exhaustion doctrine in other countries in the following sections before provide a proposal for China.

A. Singapore

The Singapore Copyright Act contains four sections regulating the distribution and circulation of infringing copies of the copyrighted work or subject matter other than works and to ensure the exhaustion doctrine works in Singapore. The four sections include Section 33, Section 25(2) and Section 105. Copyright owner’s distribution right toward his work exhausting after the first sale of the work with his authorization. Singapore adopted the international exhaustion principle, it means that once genuine goods onto which copyright works stored had been put on the circulation anywhere in the world with the copyright owner’s consent, the copyright owner can no longer control further sale and distribution of that goods. Here the issue is what constitute a “genuine” good, in other sense what’s the requirement of the copyright owner’s consent. Parliament amended the Copyright Act and stated that where the copyright owner in Singapore is different from the
copyright owner in the country of manufacture, copyrighted goods made by the latter were nevertheless genuine goods.\textsuperscript{707} Thus a genuine good means a good which is made with the consent of the copyright owner in the country of manufacture, and the consent of the copyright owner in Singapore is irrelevant. Further, according to Section 25(3), if there is no copyright owner in the country of manufacture, it turns to require the consent of the person who has been entitled to the copyright in Singapore.\textsuperscript{708} Parliament provided its reason that “the government is mindful of the need of achieve a proper balance between ensuring cheaper prices for consumers and providing sufficient incentives for copyright industries to develop and remain competitive.”\textsuperscript{709}

Then the problem is whether the exhaustion doctrine can be limited by contract in Singapore. According to Section 25(4), in determining whether the making of the goods have been carried out with the consent of the copyright owner, any condition as to the sale, distribution or other dealings that imposed by the copyright owner shall be disregarded.\textsuperscript{710} It means that a copyright owner in the country of manufacture cannot take advantage of restrictions (contractual or

\textsuperscript{707} See Speech by the Parliamentary Secretary to the Minister for Law at the Third Reading of the Copyright (Amendment) Bill 1994, 63 HANSARD col. 415-16 (Aug 25, 1994). Before this amendment which stated that genuine means consent of the copyright owner in the manufacture country came out, the Singapore High Court ruled that only the copyright owner in Singapore whose consent was relevant for the purpose of determining if the imported copies were infringing copies. See PP v. Teoh Ai Nee, [1993] S.L.R. (R) 755 (Sing.). See also Irene Calboli & Edward Lee, Research Handbook on Intellectual Property Exhaustion and Parallel Imports, Edward Elgar Publishing, 187-88 (Jun, 2016).

\textsuperscript{708} Singapore Copyright Act, supra note 172, section 25(3).

\textsuperscript{709} Supra note 707.

\textsuperscript{710} Singapore Copyright Act, supra note 172, section 25(4).
otherwise) on further movement of the good. For instance, restricting sale of goods to a particular territory cannot restrict the act of legal importation into Singapore.

Singapore did not recognize digital exhaustion in its copyright law or deal with cases relevant to digital exhaustion nowadays. But, in my opinion, based on the legislative history, there's a constant and fundamental rationale in the Singapore Parliament to deal with such issue. The rationale is about public interests, that there are benefits to the public when genuine copies of copyright work can be made available to the Singapore public at a lower price.\footnote{See AIPPI Singapore Report on Question 240: Exhaustion Issues in Copyright Law, 2014, http://aippi.org/wp-content/uploads/committees/240/GR240singapore.pdf (last visited Jun 23, 2016).} It’s clear that public will gain more interest from their digital goods such as MP3 files or software by legally resell them without consent from its goods’ copyright owners. Thus, there’s a high possibility for the Singapore Parliament to adopt the digital exhaustion doctrine in order to protect public interests over copyright owners’ interests in the digital world.\footnote{See Id. (This report provides reasons of disagreement of the digital exhaustion. First, it states that the ownership cannot be transferred in intangible goods and the exhaustion cannot occur without a transfer of ownership. Then, the exhaustion only refers to the distribution right. But in the digital world, the act of reproduction and communication to the public usually occur via downloading, streaming or otherwise.)}

\textit{B. Australia}

The Australian Copyright Act does not explicitly regulate the exhaustion of copyright in a work. It seems that all the exclusive rights of copyright owners mentioned in Section 31 will not exhaust after the first sale of a copyrighted work.\footnote{Australia Copyright Act 1968, supra note 178, section 31.} However, the purchaser can generally resell or rent the good without
infringing its copyright owner’s right after he lawfully purchased the physical good on which there is a literary or artistic work. The reason of why the purchaser can resell or rent the good without exhaustion of copyright owner’s exclusive right, but rather that resell or rent a good does not generally involve doing an act comprised in the copyright. For instance, if the purchaser firstly reproduces the good and then sells the copy of the good, copyright owner is able to prevent such act because of the reproduction act that regulated by the copyright law. The practical effect is the same with the application of the exhaustion doctrine. Further, there are generally no restrictions for the purchaser to resell or rent the goods, which can be proved originally produced and acquired lawfully. However, copyright owners are able to impose restrictions on the purchasers’ resale act through contract, such as commercial distribution agreement. Once a purchaser enter into an agreement with the copyright owner in order to obtain a good or to used copyrighted material in his product, he is likely to be bound by the agreement because of contract law. And such agreements may limit the price at which the product should be sold, the territories in which the product could be sold, or other conditions.

As to whether there’s also a practical effect of online exhaustion, the answer from Australian legislation seems to be negative. Because if a purchaser try to sell or resale of a copyrighted work in digital form online, he is likely to reproduce and electronically communicate it in order to sell or resale. Customers further also need to reproduce the work in order to use it. But copyright owners are granted the exclusive rights of reproduction and right of communication to the public. Accordingly, copyright owners are able to control the online sale or resale of their
works. Further, based on the Australian Court’s decisions, a person who acquires copyrighted works online, even with certain payment, he could generally only have the right to use the particular material.\textsuperscript{714} It’s a license to use between the copyright owner and the person who acquired the copyrighted work online, even the use is in perpetuity. Thus there’s no online exhaustion in the Copyright Act in Australia explicitly or implicitly.\textsuperscript{715}

\textit{C. Japan}

As mentioned in the section of distribution right, the Japanese Copyright Act use the distribution right to regulate cinematographic works and the right of transfer of ownership to regulate works other than cinematographic works. According to the case law and the statute, the exhaustion doctrine exists in both of these two rights, and only in these two rights in the Japanese Copyright Act.\textsuperscript{716}

The same as other countries in the world, in Japan the trigger of exhaustion doctrine is the transfer of copyrighted work’s ownership. As to works other than cinematographic works, the Art 26 bis(2) clearly pointed that the right of transfer of ownership will exhaust after the lawful first sale.\textsuperscript{717} And as to cinematographic works, the Japanese Supreme Court clearly made a distinction between (1) works of


\textsuperscript{716} It’s generally understood that the right of reproduction, the right of rental of copies to the public, the right of performance and others will not exhaust.

\textsuperscript{717} Japanese Copyright Act, supra note 190, art 26 bis(2). (“The provision of the preceding paragraph shall not apply in the case of transfer of ownership of the original or copies of a work under the following conditions: (i) the original or copies of a work, the ownership of which has been transferred to the public by a person so authorized under the preceding paragraph, or with his consent..."
film and their copies for movie theatres to the practice of a distribution system which presupposes the rental of such films; and (2) copies of film for home video game machines with purpose of which is not to make them available to the public.\textsuperscript{718}

The former one remains the unexhausted nature, but with respect to the latter one, the distribution right will exhaust upon the lawful transfer of ownership. Thus, in case of copies containing cinematographic work, when the purpose of which is not that of showing them to the general public, such as DVDs, the distribution right will exhaust after the lawful transfer of ownership. The Japanese Supreme Court provided the rationale for the exhaustion doctrine that is the requirement of the smooth distribution of goods in the market and no need to allow copyright owners gain a double benefit.\textsuperscript{719}

Then, the AIPPI Japanese Report provided a clear statement and analysis about the issue of whether the Japanese exhaustion doctrine could be applied to

\textsuperscript{718} Japanese Supreme Court, 2001 (Ju) 952, Minshu Vol.56, No.4, at 808 (Apr 25, 2002). Available at \url{http://www.courts.go.jp/app/hanrei_en/detail?id=581}

\textsuperscript{719} \textit{Id.} ("This is because (1) the protection of the rights of the copyright holder by the Copyright Law needs to be realized in harmony with public and social interests, (2) in general, in cases of the assignment of products, the assignor transfers the rights in relation to the products to the assignee and the assignee acquires the rights which belonged to the assignor. In cases where a copyrighted work or its duplicate is placed in the market for distribution, the transaction is effected with the presupposition that the assignee acquires the right to reassign the products freely. If each assignment of the product or its duplicate requires the consent of the copyright holder every time, this would inhibit the free distribution of the products in the market, the smooth distribution of the copyrighted work and its duplicate will be inhibited, and it is likely to harm the interests of the copyright holder, and ultimately may be against the goal of the Copyright Law which purports to ‘aim at the protection of the rights of the authors and thus contribute to the development of culture’ (Article 1, Copyright Law), (3) on the other hand, the copyright holder receives the payment for the assignment when he assigns the copyrighted work or its duplicate, or receives a royalty when licensing the use of the copyright, and therefore, is guaranteed the opportunity to secure compensation, and there is no need to allow a double benefit to the copyrightholder in relation to the copyrighted work or its duplicate which had been assigned by the copyrightholder or the licensee.")
digital world in case of downloaded copies of copyrighted works. The answer is negative, which means that with regard to a download copy, exhaustion of the right of transfer of ownership or other rights will not apply, regardless of types of works.\textsuperscript{720} The report discussed this issue in three cases: (1) a party transfers a tangible medium onto which stores a downloaded copy to others; (2) a party transmits a downloaded copy to others; (3) a party uploads a downloaded copy and makes it downloadable to others. As to case (1), the copy that stored on the tangible medium was obtained via download but not through transfer of ownership. The requirement of lawful transfer of ownership of “the original or a copy of the work” cannot be met, thus the exhaustion doctrine cannot be applied. For the case (2) and (3), there ‘s no transfer of ownership of a copy because the right of transfer of ownership requires to transfer the ownership of the original or a copy of the work as a tangible object. This report also explicitly rejected the ECJ’s decision in the Usedsoft case, for is in Japan, a license (even a perpetual one) cannot cause the transfer of ownership and then result in exhaustion. In conclusion, Japan has not adopted the online exhaustion doctrine at least for now.\textsuperscript{721}


\textsuperscript{721} Id, at 16. (This report also indicates the Japanese further attitude towards online exhaustion doctrine with respect to downloaded copies. That is Japan may keep rejecting such doctrine, Japan insists that downloaded copies should be treated differently from copies stored on tangible data media.) See also Christopher, at 84-5.
A. The affection of cloud computing towards the exhaustion doctrine

In order to analyze whether the exhaustion doctrine should be applied to the issues caused by cloud computing technology, the starting point should be whether there’s online exhaustion doctrine exist around the world. Generally, nowadays, only the E.U. adopted the online exhaustion doctrine with respect to computer programs with permanent license and required payments beyond other types of works. All the other countries stayed with the opinion that the exhaustion doctrine should not be applied in the digital world. However, the debate is still on going nowadays. For instance, the U.S. scholars are providing reasons in supporting the digital first sale doctrine. Thus, I will analyze how cloud computing effects. As I mentioned at the beginning of this section, there are basically two questions caused by the cloud computing are relevant to discussion about the exhaustion doctrine.

The first one is showed as the SaaS. In the cloud business models, particularly in the SaaS models, ISPs usually retain the possession of their software copies on their servers, at the same time enable users to remotely access and take use of the software. Users can gain limited remote access to software to create work products in limited time, but without taking possession of such software either in physical possession or in digital forms as a reproduction on their own device. Basically, the model works like this: a customer enters into an agreement with ISPs by paying a recurring fee, receives access credentials as user IDs, then he can access software provided by ISPs via simple web browsers from his own device, in the end he is able to download the work he had created with the software. There maybe RAM copies generate during the use of the software by the user on his own device, but the ISP
always retain the copy of the software on their server. Thus, under such circumstance, there’s no transfer of ownership of the software at all no matter the object is tangible or intangible. Without the transfer of ownership, the exhaustion doctrine cannot be applied.

The second one is that people are getting used to purchase digital works online and store them in the cloud to enjoy them anywhere and anytime they want. For instance, people can purchase digital music recordings from iTunes store and stored the lawfully purchased files into their own iCloud space or Apple devices. People can also download Music app such as NetEase Music box from iTunes store or Android shop, by paying monthly fees or by purchasing songs, people are able to stored the music recording in their own cloud music locker and enjoy the music directly via the music box app without downloading.\textsuperscript{722} As for e-books, Amazon provides e-books in the form of EPUB,\textsuperscript{723} which can be store in devices such as kindle or directly download to Kindle cloud reader for latter read.\textsuperscript{724} With respect to these downloaded copies, can people resell them? According to the ECJ’s decision in the UsedSoft case, it seems that with particular conditions such as the work can be used permanently with designed payment, the digital files can be resold since the exhaustion doctrine applied to the digital world. The limitation is that individual who resells the digital file had to delete all the copies of this particular file. However,

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{722} NETEASE MUSIC BOX(网易云音乐), \url{https://itunes.apple.com/cn/app/wang-yi-yun-yin-le-pao-bufm/id590338362?l=en&mt=8} (last visited May. 6, 2016)
\item \textsuperscript{723} EPUB, WIKIPEDIA.ORG, available at, \url{https://en.wikipedia.org/wiki/EPUB} (“EPUB is an e-book file format with the extension .epub that can be downloaded and read on devices like smartphones, tablets, computers, or e-readers.”)
\item \textsuperscript{724} KINDLE CLOUD READER, \url{http://www.amazon.com/gp/help/customer/display.html?nodeId=200701430} (last visited May.6, 2016)
\end{itemize}
\end{footnotesize}
according to the U.S. court in the ReDigi case, the exhaustion doctrine cannot be applied where users try to resell their digital music files via ReDigi’s cloud music locker. And almost all the other countries reach the same conclusion as the U.S., the exhaustion doctrine cannot be applied to the digital world since there’s no transfer of ownership actually occur when user download digital files to their own devices or cloud storage space no matter with or without payment. Under this circumstance, how could China deal with the digital exhaustion doctrine?

**B. China’s Situation and A Proposal for China**

China did not legislate a particular article to reflect the exhaustion doctrine in the Copyright Law in China, but recognize the exhaustion of copyrighted works after the first sale of the work in practical and in theory.

In practical, several cases actually apply the exhaustion doctrine. And the Supreme People’s Court explicitly supported one of the cases in an article in its official journal: “The exhaustion doctrine in the IP law, means that a third party can legally use or sell the particular product without infringement after the patent right holder, trademark right holder or copyright owner sold that product, which was made personally by himself or by others with authorization. The exhaustion doctrine is a limitation to the enforcement of IP rights. It intends to avoid excessive monopoly that hinders circulation of products in the free market, and also to protect the third party to exercise his legal property right.”

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In theory, according to Prof. Zheng Chengsi, the exhaustion doctrine in the copyright area means: “copyright owners exhaust the right of distribution once they exercise it, they cannot excise the distribution right again. It also points out that once the original or copies of work be put into the market with the authorization of copyright owners, the copyright owner cannot control the further sale and distribution of that original or copies of work as goods.”

The former statements of the Supreme People's Court and Prof. Zheng Chengsi enable I to conclude the conditions of exhaustion in Chinese literature. First, when the original or copies of works be put into market to be distributed, it must be made under the authorization of the copyright owner of the work. Second, there must be a transfer of ownership of the good. Third, there should be no more new copies of the work in the further distribution. I would like to limit the third condition here as there can be new copy of the work, but the total number of it cannot be increased, because I myself support the idea to apply a digital exhaustion doctrine in China.

However, as for the exhaustion doctrine can be applied in the digital world, most Chinese scholars provide a negative answer based on the following reasons. First, the exhaustion doctrine was legislated because of the clash between the traditional property right and the distribution right under the copyright law. Under the traditional form of distribution, copyrighted work has to be distributed in a

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726 Zheng Chengsi(郑成思). Banquanfa(版权法)[Copyright Law](2009), at 293.
tangible form. Without a tangible form, copyrighted work cannot be distributed at all. If the copyright owner remains his distribution right after distribution, owners’ property right towards the tangible good on which stored the copyrighted work thus cannot be complete. However, there's no requirement of tangible goods in the distribution of copyrighted works online. There’s no conflict between the right of distribution and property right any longer. Thus the exhaustion doctrine is not needed anymore. Second, transmission of works online results in reproduction of the works. If the exhaustion doctrine applies to the online transmission, it is actually being applied to the right of reproduction. Such result is conflict with the traditional theory of the right of reproduction— the right of reproduction does not exhaust. Third is that current technology cannot ensure there are no copies remain with the owner who transmit a copyrighted work to others. Further some scholars even do not agree that the distribution right should be applied to the digital world, as a result, the exhaustion of the distribution right cannot be applied to the digital world either.

However, in my opinion, there should be a digital exhaustion doctrine to limit the digital distribution right. The most fundamental reason of my conclusion is to keep the dedicate balance between the interests of users and copyright owners. Users have the interests to access copyrighted works, and copyright owners have the right to control the work during the term of copyright protection. If copyright law expanded copyright owner’s distribution right in the digital world, users should also gain more protection to limit the result caused by the expanded distribution.

See Wang Qian, supra note 473, at 100-110.
right. Further, the technology cannot be an excuse for avoiding the digital exhaustion doctrine. There’s no doubt that the technology will develop very fast, one cannot step back from the legal loop we have already realized. And there’s evidence of ReDigi had already successfully made a useful “forward-and –delete” software to solve the issue caused by technology. Third, some scholars argued their reason for rejecting the digital exhaustion doctrine is that copyright owners’ interests will be decreased since users may tend to purchase “used” digital works online. The quality of digital works will never degraded and the distribution via Internet will not be limited geographically. Therefore, what if copyright owners can gain royalties from each sale of their works in digital form? Follow the instance of how copyright owners cooperate with online music radio— they gain certain royalties when their works have been played for certain times via the online music radio, copyright owners can also gain similar royalties from the resale of digital works via certain website such as ReDigi. Forth, what China needs now is to keep up pace with world’s development. If the E.U. and the U.S. explicitly extend the existing exhaustion doctrine to the digital world, we may consider adopt it under our own context. If they create a new limitation toward digital distribution, we should consider it under the actual circumstance of China and then adopted it rationally.

In conclusion, with regard to the exhaustion doctrine in China, in my proposal, China should try to reflect exhaustion doctrine into the statute. And then, follow the future trend of adopting the digital exhaustion doctrine.
II. Fair Use—Legal Exceptions or Limitations

Copyright owners’ right must be protected in order to promote the development of art, science and literature. Meanwhile, there’s no doubt that the public should also have the access to such protected works to gain useful information to benefit the whole society and live a better life. In order to maintain the delicate balance between copyright owners and the public, once copyright owners gain exclusive rights to control their copyrighted works, public should also have privileges under some circumstance to use these copyrighted works. This privilege should enable public to access copyrighted work without infringing copyright even without copyright owners’ consents. In international copyright conventions or national copyright laws, legislators usually use “limitations” and “exceptions” as vehicles to regulate public’s privilege in using copyright works. 728

The Berne Convention included a three-step test to control the reproduction. The three-step test is a criterion for estimating exceptions to copyright to determine whether a use of copyrighted works is lawful or not. 729 Article 9 (2) of the Berne Convention stated the possible exceptions to the reproduction right: “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

728 See Ginsburg & Treppoz, supra note 492, at 436.
the legitimate interest of the author." According to this statement, an act of reproduction without certain consent will not infringe the right of reproduction if it conforms to three requirements: (1) in certain special cases; (2) which does not conflict with a normal exploitation of the work; (3) which should not unreasonably prejudice the legitimate interests of the authors. It should be noted that the Berner's three-step test only covers the reproduction right.

TRIPs, WPPT and WCT recognized the importance of the three-step test and further adopted it and extended its scope to cover all types of exclusive rights. Art 13 of TRIPs requires that all members shall add limitations or exceptions to exclusive rights, and the conditions for adding such limitations and exceptions are: (1) to certain special cases; (2) which do not conflict with normal exploitation of the work and (3) do not unreasonably prejudice the legitimate interests of the right holder. The legislators did not limit the scope of concept of “exclusive rights” in Art 13 as legislators did in Berne Conventions, thus it’s obvious that the Berne’s scope of three-step test had been extended from simply the right of reproduction to other exclusive rights. Art 10 of WCT and Art 16 of WPPT also extended the scope of the three-step test when adopted the basic Berner’s three-step test.

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730 Berner Convention, supra note 226, art 9(2). (Art 10 & 10bis also listed several free use, such as quotations, illustrations for teaching, indication of source and author, and free use of certain articles and broadcast works or works seen or heard in connection with current events.)
731 TRIPs, supra note 618, art 13.
732 WCT, supra note 230, art 10 (“(1) Contracting Parties may, in their national legislation, provide for limitations of or exceptions to the rights granted to authors of literary and artistic works under this Treaty in certain special cases that do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the author. (2) Contracting Parties shall, when applying the Berne Convention, confine any limitations of or exceptions to rights provided for therein to certain special cases that do not conflict
The three-step test should be regarded as a guiding principle since all the international treaties that stipulated it. Member states of those international treaties shall accordingly make a reasonable adoption of it by satisfying domestic social cultural, and economic needs. This provision provided much more room than the specific exceptions recognized in international law. In adopting this provision of three-step test, countries made different efforts.

i. The U.S. Part—Fair Use

Copyright Act adds numbers of limitations on copyright owners’ exclusive rights. In the digital world, Internet service providers, not limited to the ISPs provide cloud services, are favoring in using the fair use doctrine as their defense. The fair use doctrine allows a defendant use a copyrighted work without the copyright owner’s consent and not being liable under the Copyright Act, where an infringement can be proven. Thus, it’s quite simple for an individual to use the fair use doctrine as a possible defense when facing a copyright infringement lawsuit.

with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the author.") WPPT, art16(2).( 2) Contracting Parties shall confine any limitations of or exceptions to rights provided for in this Treaty to certain special cases which do not conflict with a normal exploitation of the performance or phonogram and do not unreasonably prejudice the legitimate interests of the performer or of the producer of the phonogram.") Based on these two treaties, it’s obvious that not only the right of author of literary and artistic works but also the right of performers and producers of phonogram are limited under the three-step test. 733 See Martin Senftleben, The International Three-Step Test: A Model Provision for EC fair use Legislation, 1 J. INTELL. PROP. INFO. TECH. & E-COMMERCE L. 67, 67 (2010).
734 See Rosemont Enters., Inc. v. Random House, Inc., 366 F.2d 303 306 (2d Cir. 1966).(The fair use doctrine can be defined as "privilege in others than the owner of a copyright to use the copyrighted material in a reasonable manner without consent, notwithstanding the granted to the owner monopoly.")
The purpose of codifying the fair use doctrine is to promote the "progress of science and useful arts" by allowing the use other than preventing it.\textsuperscript{735} Under this purpose, the fair use doctrine developed through case law, and it was finally codified by Congress into the 1976 Copyright Act. The fair use doctrine is "an unremunerated exception of overarching general application," besides different kinds of compulsory licenses and specific exceptions to the public performance right.\textsuperscript{736} However, Congress didn’t give a precise definition to the term "fair use," instead it lists several kinds of use that usually conform to the defense in its preamble and provides four criteria that must all be applied to determine whether the defense succeeds. The following part will analyze both the preamble and the four criteria.

\textbf{A. Productive Use (Transformative Use) Theory in the Preamble}

According to § 107 preamble, the fair use doctrine permits reproduction of copyrighted works or by any other means without the copyright owner’s consent, “for purpose such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research...”\textsuperscript{737} Based on the statement of the preamble, judges and scholars realized that all these uses can be deemed as “productive” use (transformative use).\textsuperscript{738} Judge Leval stated in his 1990 article that a transformative use “must be productive and must employ the quoted

\textsuperscript{735} See Castel Rock Entm't, Inc. v. Carol Publ'g Grp., Inc., 150 F.3d 132,141 (2d Cir 1998). (The fair use doctrine is a doctrine of equity that permits certain uses of copyrighted works, strike a balance between copyright holder’s individual economic interests and the public’s interest in the ability to create new works by using works that have come before them.)

\textsuperscript{736} See Ginsburg & Treppoz supra note 492, at 473.

\textsuperscript{737} 17 U.S.C. § 107.

\textsuperscript{738} See Leaffer, supra note 32, at 490-92. ("A productive use should be impeded only when it is so excessive as to undermine the incentive to produce copyrighted works. On the other had, non-productive use merely appropriates without creating anything of social value.")
matter in a different manner or for a different purpose from the original....” and “the secondary use adds value to the original—if the quoted matter is used as raw material, transformed in the creation of new information, new aesthetics, new insights and understandings....” Judge Leval also pointed that “a quotation of copyrighted material that merely repackages or republishes the original is unlikely to pass the test.” Thus, “a nonproductive use (reproductive use) occurs when a user copies the material to use it for the same intrinsic purpose for which the copyright owner intended it to be used.” Judge Leval’s transformative use theory had been applied by all courts. He himself ruled that reproduction of a single copy from the plaintiff’s journals is not a transformative use even it’s used for a research purpose, thus there’s no fair use. Further, in the Campbell v. Acuff-Rose, the Supreme Court explicitly supported the transformative use theory by stating “the goal of copyright, to promote science and arts, is generally furthered by the creation of transformative works.” After this case, judges assess whether the defendant’s use is transformative in virtually all fair use decisions.

However, besides the case law, the transformative use theory is not endorsed by the language of the statute or by the legislative history. Some courts either took an expansion view of the transformative use theory or directly rejected it. For instance, the 2nd Circuit adopted an expansive view that it constitutes

740 Id.
741 Leaffer, supra note 32, at 490.
transformative use where the copyrighted work is used in an entirely different context in the Blanch v. Koons.\textsuperscript{744} In this case, the 2nd Circuit held that since the defendant did not use the image of the woman’s feet for the same intent of the original photograph and such usage was not merely a change of artistic media or venue, the defendant’s use was transformative.\textsuperscript{745} Then in the Perfect 10 v. Google, the 9th Circuit further expanded the concept of the transformative use in the digital world.\textsuperscript{746} In this case, the defendant Google, which is famous for its search engine, provides responses to search queries in the form of images. It is called “Google Image Search,” and the search results are provided as a webpage of small images called thumbnails. The thumbnails are reduced, lower-resolution version of full-sized images stored on third-party servers.\textsuperscript{747} The 9th Circuit determined that “even making an exact copy of a work may be transformative so long as the copy serves a different function than the original work,” and “here, Google uses Perfect 10’s image in a new context to serve a different purpose.”\textsuperscript{748} Thus the 9th Circuit concluded that Google’s reproductions of the plaintiff’s work in thumbnails were transformative use.

However, in the Betamax case (the famous Sony rule case), the Supreme Court ruled even if a usage did not constitute a transformative use, it could still fall within the category of fair use. This case expanded the scope of the fair use

\textsuperscript{744} Blanch v. Koons, 467 F.3d 244 (2d Cir. 2006).
\textsuperscript{745} Id.
\textsuperscript{746} Perfect 10 v. Google, 508 F.3d 1154 (9th Cir.2007).
\textsuperscript{747} Id, 1155.
\textsuperscript{748} Id, 1165.
The defendant Sony manufactured video cassette recorder that enables purchasers to tape free TV programs for a time-shifting purpose. The plaintiff sued the defendant Sony as a contributory infringer for supplying the direct infringer. The Supreme Court cited the House Report to prove that fair use should be deemed as a broader term and be determined case by case, rather than limit it to transformative use theory. The act at issue of taping free airwave TV programs was a private, noncommercial use. Although it was not a transformative use, it still constituted a fair use because it has no harm to the market from an economical point of view. Thus, based on the Supreme Court’s decision, a defendant can still successfully raise a fair use defense even its use cannot fulfill the transformative use theory.

In the digital world, the transformative use theory had been challenged again, because all content can be ultimately reduced to bytes. For instance, in the A.V. v. iParadigms case, the 4th Circuit ruled that the defendant’s digital archiving of the plaintiff’s school papers for a software system which was designed to detect plagiarism was transformative use, thus such use constitute fair use. However, in the UMG Recordings v. MP3.Com case, the district court held that the defendant’s “space shifting” service which eliminate users’ need for physical CD copies of their musical collections was not a transformative use. Such use was not a fair use even when previous ownership was demonstrated before a download was allowed. It’s obvious that only apply the transformative use theory in determining whether a fair

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749 Betamax case, supra note 79.
750 Id, at 448-50.
751 A.V. v. iParadigms, LLC, 562 F.3d 630, 640 (4th Cir. 2009).
use defense is valid is not enough. Therefore, the four criteria need to be brought into the discussion of whether there's a fair use.

**B. Four Criteria of the Fair Use Doctrine**

As mentioned, a defendant can still raise a successful fair use defense without qualifying as a transformative use. Four criteria in §107 must be applied to determine whether the use is fair use. The four criteria are: “(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; (4) the effect of the use upon the potential market for or value of the copyrighted work.” 753 Whether a copyrighted work is fairly used usually was decided on a case-by-case basis. The statutory factors cannot be “treated in isolation” but should be “weighed together, in light of the purposes of copyright.” 754 But the courts can also consider other factors rather than be limited to these four criteria. For instance, whether a defendant made a use of the copyrighted work in a good faith is always an important factor, but most includes in these four criteria.

As to the first factor—purpose of the use, the courts usually consider whether the use constitute transformative use. And then, whether the use itself is commercial always influences the Judges’ determination of fair use. 755 Generally,

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754 iParadigms case, supra note 752, at 638,
755 See Betamax case, supra note 79, at 451.
once a use is commercial, a defendant’s fair use defense may easily fail.\textsuperscript{756} The commercial nature means that a defendant can make an economic benefit with the use of copyrighted work. And the use can still be commercial even the purpose of such use is a transformative use such as for news reporting, for education or otherwise.

With respect to the second factor— the nature of the copyrighted work, there are two issue involved. The first one is whether the copyrighted work has been published, and the second one is whether the copyrighted work is informative or creative. The Supreme Court ruled that “the unpublished nature of a work is a key, though not necessarily determinative, factor, tending to negate a defense of fair use.”\textsuperscript{757} It means “the author’s right to control the publication of the work may outweigh an extensive fair use privilege.”\textsuperscript{758} But it also should be known that a fair use defense will not fail simply because of the fact that the work is unpublished.\textsuperscript{759} As for the second issue, it was proposed because of the fundamental goal the copyright law, which is to “promote the progress of science and useful arts.” A useful way to achieve this goal is to increase people’s knowledge and information. Thus, a work for informational use such as scientific, historical or medical science works is more likely to gain successful fair use defense than a use of works of entertainment.

\textsuperscript{756} See Leaffer, \textit{supra} note 32, at 496. ("A commercial purpose will not conclusively negate a finding of fair use, but a court should not strain to apply the fair use defense when it is being invoked by a profitmaking defendant.")


\textsuperscript{758} Leaffer, \textit{supra} note 32, at 497.

\textsuperscript{759} 17 U.S.C. § 107. ("The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.")
Then, for the third factor— the amount of copyrighted works being used, generally, the more the defendant had taken from the copyrighted work, the less likely the fair use test will be passed.760 Further, the court should also consider the quality and importance of the used portions.761“

This factor properly focuses on whether the defendant has taken more than necessary to satisfy the specific fair use purpose.” 762 When apply this factor to the digital world, such as upload or download service via cloud, with the convenient and rapid reproduction or transmission technology, the whole copyrighted works can be reproduced or transmitted in a second. A defendant provides online service may easily fail on this factor to prove fair use.

The forth factor— the effect upon the potential market, which is the most significant one in determining fair use. The reason is that a copyright owner wishes to keep a exploitable potential market for its copyrighted work. Failure to preserve a potential exploitable market will harm a copyright owner’s incentives for creativity, which are explicitly protected by copyright law. When weighing this factor, there’s no need of actual harm to be proved. The court “will consider not only the extent of market harm caused by the particular actions of the defendant, but also whether the widespread conduct of the kind that the defendant has engaged in would result in a substantially adverse impact on the potential market for the original.” 763

760 Betamax case, supra note 79, at 449-50.
761 Sundeman v. Seajay Society, Inc., 142 F. 3d 194, 201-08 (4th Cir. 1998). (It also should be known that even a relatively small portion may cause copyright infringement.)
762 Leaffer, supra note 32, at 499.
763 Id, at 501.
C. Napster Case, ReDigi Case and Google books Case – Application of the Fair Use Doctrine in the Digital World

In order to understand how to apply the fair use doctrine in the digital world, there are three important cases: Napster, ReDigi and Google books.

In the Napster case, as I mentioned earlier, the defendant Napster provided P2P file sharing service for users. It enabled users to access and download compressed digital music files from other Napster users’ computers.\textsuperscript{764} Napster alleged three fair uses of its service: (1) it merely provide access to “samples” of music, users can make temporary copies before they actually purchased music recordings; (2) it’s a “space-shifting” service, which enabled users to access to music recordings that they already own in a tangible CD form; (3) it provided permissive distribution of recordings.\textsuperscript{765} The 9th Circuit ruled that “downloading MP3 files does not transform the copyrighted work,” merely transmitted the original work in a different medium is not fair use.\textsuperscript{766} As for the first criteria, the 9th circuit ruled that “repeated and exploitative unauthorized copies of copyrighted works” would result in saving the expense of purchasing authorized copies, therefore a commercial use existed.\textsuperscript{767} Then, to the nature of the copyrighted work, the 9th Circuit affirmed that the music recordings in question are “closer to the core of intended copyright protection” as creative works. The nature of the musical recordings is against a find of fair use.\textsuperscript{768} Third, the 9th Circuit admitted that “wholesale copying” of a work

\textsuperscript{764} Napster case, supra note 513.
\textsuperscript{765} Id, at 1014.
\textsuperscript{766} Id, at 1015.
\textsuperscript{767} Id.
\textsuperscript{768} Id, at 1016.
might be protected in some cases such as time-shifting. But in this case, it was not
the same case.\textsuperscript{769} At last, the 9th Circuit affirmed that widespread entirely transfer of
the plaintiff's music recordings harm the potential market for CD sales, and it also
jeopardizes the record industry's future in the digital markets.\textsuperscript{770}

With regarding to the cloud computing technology, the ReDigi case is the
most relevant here where the defendant actually tried to raise the fair use doctrine
as a defense.\textsuperscript{771} The defendant ReDigi allows users to upload to or download from
Cloud Locker music recordings. ReDigi claimed that such uploading and
downloading actions were for personal use and storage, therefore should be
protected as fair use.\textsuperscript{772} The Court indicate that those several examples listed in the
transformative use merely illustrate the typical types, and the court will not simply
made a conclusion without considering the four criteria of fair use. The court held
that ReDigi's use was not transformative by citing the Napster case, in which ruled
that downloading MP3 files does not transform the copyrighted work. And further,
when applied the four criteria, the court indicated that the general principle in
adapting them is “free to adapt the doctrine to particular situations on a case-by-
case basis.”\textsuperscript{773} First, ReDigi’s use is commercial since it can directly profit from the
sale of a digital music file and the downloading users can save on the price of the

\textsuperscript{769} Id.
\textsuperscript{770} Id, at 1016-17.
\textsuperscript{771} ReDigi case, \textit{supra} note 563.
\textsuperscript{772} Id, at 653. (ReDigi also argued that “copying” to the Cloud Locker is protected as space-
shifting under the fair use doctrine. But according to the UMG v. MP3.com case, a defense
that stated space-shifting should be deemed as fair use was not effective at all.) \textit{See also}
Arista Records, LLC v. Doe 3, 604 F.3d 110, 124 (2d Cir. 2010). (The 2nd Circuit rejected to
adapt the fair use doctrine to users uploads and downloads on P2P file-sharing network.)
songs in the primary market.\textsuperscript{774} Second, the digital music files in question have creative nature, which should be protected by copyright law.\textsuperscript{775} Third, ReDigi’s wholesale transmission “negating any claim of fair use.”\textsuperscript{776} Forth, ReDigi’s sales are likely to harm both the market and the value of the copyrighted work, since the product that sold on ReDigi’s digital secondary market is “indistinguishable from that sold in the legitimate primary market” except for its lower price.\textsuperscript{777} Since not only the transformative use theory but also all the four criteria resulted against the defendant ReDigi, the court in sum concluded the fair use defense does not permit ReDigi’s service.

In 2015, the 2nd Circuit held that the Google Book’s “search” and “snippet” functions constituted fair use of books that Google had copied without the copyright owners’ authorization.\textsuperscript{778} Google makes and retains digital copies of books submitted to it by major libraries, and allows the libraries who had submitted a book to download and retain a digital copy. Google further allows the public to search the texts of the digital copies of the book and use display of snippets of text.

The 2nd Circuit held that the purpose of Google’s making of a digital copy of the plaintiff’s books is “highly transformative,” since such copying was “essential to permit searchers to identify and locate the books in which words or phrases of interest to them appeared.”\textsuperscript{779} The 2nd Circuit concluded that when the complete digital copies of copyrighted works “served a different function from the original,”

\textsuperscript{774} \textit{Id.}
\textsuperscript{775} \textit{Id.}, at 654.
\textsuperscript{776} \textit{Id.}
\textsuperscript{777} \textit{Id.}
\textsuperscript{778} Authors Guild et al. v. Google, Inc., 804 F.3d 202 (2d Cir. 2015).
\textsuperscript{779} \textit{Id.}, at 216-7.
the creation of such copies are transformative fair use. And further Google only provide tiny snippet view of works that is designed to show the searcher just enough context to help them evaluate whether the book falls within the scope of their interests, Google only displays the text limitedly to public. Then, Google did not provide a significant market substitute for the protected aspects of the originals, and its commercial nature and profit motivation did not justify denial of fair use.

There’s no doubt that the fair use doctrine can be applied to the Internet and cloud computing. However, under the U.S. case law, when dispute happens in digital world, especially relates to cloud service, the fair use defense is usually useless. The court had already affirmed by cases that “space-shifting” use is not transformative. And as to the four criteria, most of them are also against the usual cloud service such as storage, upload and download and otherwise. However, there are several situations have not been deliberated yet. For instance, ISPs provide private cloud music locker service. People are only able to upload their music recordings to their own cloud music locker from their legally purchased CDs, or directly stored legally purchased digital music recordings to their cloud music locker. They can’t share or resell the files, but can only enjoy what they have in their own cloud storage space at anytime and anywhere. In my opinion, this constitutes a fair use in this situation. It mainly because that the use is for personal private purpose and will leave no potential harm to the market since users have already paid for the copyrighted works. Another instance is use of copyrighted work for informational purpose. It’s

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780 Id, at 217.
781 Id, at 218-220.
782 Id, at 221-225.
clear that once the copyrighted work has a creative nature such as music recordings, films, and otherwise, there’s no existence of fair use. But, what if the copyrighted work has an informative nature? In my opinion, the defendant can make a strong argument by applying the fair use doctrine in this situation.

ii. The E.U. Part—Limitations and Exceptions

A. Limitations and Exceptions in the Software Directive

The E.U. firstly harmonized the limitations and exceptions in specific directives related to specific objects or specific rights, such as software, or the rental rights. Here, this dissertation will take the Software Directive as an example since it’s the most cited directive for disputes happens in digital world. Art 5 of the Software Directive provided exceptions to the restricted acts, which allow certain forms of usage of software, can be made without infringing the exclusive rights. According to Art 8, these exceptions must be interpreted strictly. And they have a mandatory effect in contrast to general exceptions, which can be void by legal contracts or licenses. In the SAS v. World Programming, the defendant obtained a copy of software under a license that restricted the use of the software to “non-
production purpose.” 784 By analyzing that the defendant only carried out acts under the license and his acts of loading and running were necessary for the use of the software, the ECJ concluded that such actions are within the Art 5(3) of the Software Directive. 785 In the Usedsoft case, 786 the ECJ held that since the right holder cannot prevent the resale of a copy of the software because of the exhaustion of the distribution right, the purchaser of the used copy should be considered as a lawful acquirer. Thus the purchaser would be enabled to download the copy that had been sold to him by its original purchaser. The act of download should be regarded as a reproduction of a software that was necessary to enable the purchaser of the used copy to use the program in accordance with its intended purpose under Art 5(1). 787

B. Limitations and Exceptions in the Information Society Directive

Then, in the Information Society Directive, the E.U. adopted a general approach to limitations and exceptions. It contains an E.U. version of the three-step test laid down in Art 5 (5) that is used as an additional control to the exhaustively listed exceptions in Art 5(1)-(4). To comply with Art 5(5), limitations listed in the former four provisions in Art 5 should only apply in “certain special cases which do

784 Case C-406/10, SAS Institute Inc. v. World Programming Ltd. supra note 135.
785 Id, para. 59. (“Consequently, the owner of the copyright in a computer program may not prevent, by relying on the licensing agreement, the person who has obtained that license from determining the ideas and principles which underlie all the elements of that program in the case where that person carries out acts which that license permits him to perform and the acts of loading and running necessary for the use of the computer program, and on condition that that person does not infringe the exclusive rights of the owner in that program.”)
786 Usedsoft case, supra note 152.
787 Id, para. 80.
not conflict with a normal exploitation of the work or other subject-matter and do not unreasonably prejudice the legitimate interests of the right holder.”

As I mentioned above, the international three-step test is flexible and tends to allow national lawmakers to satisfy a member countries’ domestic social, cultural, and economic needs. As a result, the agreed statement of Art 10 of WCT permits contracting parties to rationally extend it into the digital environment or other situation caused by new technology, and to devise new exceptions and limitations that appropriate in the digital network environment. However, Recital 44 of the Information Society Directive firstly required to apply the exceptions and limitations in accordance with international obligations; but then specified with regard to electronic environment, “the scope of certain exceptions or limitations may have to be even more limited when it comes to certain new uses of copyright works and other subject-matter.” Thus, according to the latter part of the Recital 44, it made the three-step in the Directive a “further restriction mechanism to the

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789 Agreed Statement Concerning about the WIPO Copyright Treaty, Adopted by Diplomatic Conference on December 20, 1996. (“Concerning Article 10: It is understood that the provisions of Article 10 permit Contracting Parties to carry forward and appropriately extend into the digital environment limitations and exceptions in their national laws which have been considered acceptable under the Berne Convention. Similarly, these provisions should be understood to permit Contracting Parties to devise new exceptions and limitations that are appropriate in the digital network environment.”)
790 Information Society Direct, supra note 127, recital 44 (“When applying the exceptions and limitations provided for in this Directive, they should be exercised in accordance with international obligations. Such exceptions and limitations may not be applied in a way which prejudices the legitimate interests of the rightholder or which conflicts with the normal exploitation of his work or other subject-matter. The provision of such exceptions or limitations by Member States should, in particular, duly reflect the increased economic impact that such exceptions or limitations may have in the context of the new electronic environment. Therefore, the scope of certain exceptions or limitations may have to be even more limited when it comes to certain new uses of copyright works and other subject-matter.”)
scope of limitations and exceptions.”791 It seems that the EU three-step test cannot be applied to disputes happens in the digital world.

The latter requirement from Recital 44 had been criticized by scholars since it “leads to a worst case scenario; a system that offers neither flexibility nor legal certainty.”792 And the scholars also criticized that the Art 5 of the Information Society Directive averted the three-step test of its fundamental goal, nature and rationale. The provision further be criticized for turning the guideline into a legal infrastructure for the judges to restrict the application of the existing exceptions.793 Under such circumstance, scholars argued that at least the EU three-step should be read in accordance with the first part of Recital 44, in the light of the corresponding provisions of WCT and TRIPs.794

According to the scholars, EU should construe the international three-step test as an enabling clause such as “EU-fair use.”795 With respect to the application of the three-step test, according to the Declaration on the Balanced Interpretation of the Three-step test in Copyright Law, firstly, the three steps should be “considered together and as a whole in a comprehensive overall assessment,” and secondly, the limitations are not necessarily to be interpreted narrowly according to their objectives and purposes.796 It should be known that the three-step test not only can

791 Id.
792 EU Copyright Law: A commentary, supra note 124, at 442, para. 11.70.
794 Read with reference to the public interest considerations in Arts 7-8 of TRIPs, Art 13 allows for a wider exception.
795 See EU Copyright Law: A commentary, supra note 107, at 444; see also Martin Senftleben, supra note 734.
796 C. Geiger, R. Hilty, J. Griffiths and U. Suthersanen, Declaration a Balanced Interpretation of the Three-step Test in Copyright Law 1 J. INTELL. PROP. INFO. TECH. & E-COMMERCE L. 119
be used to direct the member countries’ legislators to stipulate its domestic provisions, but also direct member countries’ courts and tribunals to interpret and apply the exceptions listed in the Information Society Directive.\textsuperscript{797}

As I mentioned above, Article 5, which regulated the exceptions and limitations, could be viewed as rights granted to users. Article 5 provided a list of specific exceptions that encompass different activities. Based on the Recital 32, which confirms the choice of the E.U. legislature to adopt a “closed list-approach, stating that the Directive provides for an exhaustive enumeration of exceptions and limitations to the reproduction right and the right of communication to the public.”\textsuperscript{798} Thus it seems that the specific exception list is a closed one that could not add new categories. However, Art 5(3)(o), the so called “grandfather clause,” allows “use in certain other cases of minor importance where exceptions or limitations already exist under national law, provided that they only concern analogue uses and do not affect the free circulation of goods and services within the Community, without prejudice to the other exceptions and limitations contained in this

\hspace{1cm}(2010), art 1 & Point 2. See also point 3 & 4, for further detailed interpretation. (As to step 1, all situations described in Art 5 should be taken into consideration. The step1 should “neither be an impediment to the introduction, under certain conditions, of open ended limitations, nor to the extended application of existing limitations or to the creation of new ones by the judiciary.” With respect to step 2, if the limitation is based on significant competing considerations, or help counter anti-competitive practices or effects, the conditions of step 2 should be treated as fulfilled. Then as to the step 3, it should focus on adequate compensation, which should provide for sufficient incentives for the continued creation and dissemination of works.)

\textsuperscript{797} Proposal for a European Parliament and Council Directive on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society, COM(97)0628, 32-33,46. (The Commission firstly provided that the exceptions could only be applied to certain special cases and these could not be interpreted in a manner that conflicted with the normal exploitation of the work or brought unreasonable prejudice. And in further proposals, member states are not required to implement the three-step test in their national laws, but the courts must interpret the harmonized exceptions in this right.)

\textsuperscript{798} Information Society, supra note 127, recital 32.
Article.”

Thus, this grandfather clause provides more space for Member States to apply the optional exception list according to diversity of their regimes.

There’s one mandatory exception for transient or incidental copies, which is regulated by Art 5(1). This exception was mandatory for all Member States. This exception had been analyzed in the section of the reproduction right. Thus, here I will not discuss this issue in detail again here in this section.

Then, Art 5 also provides an optional menu of 20 exceptions or limitations for Member States to choose to implement. Art 5(2) provides 5 optional exceptions and limitations to the reproduction right: reprographic copying, private copying, non-profit copying by public libraries, educational establishments or museums, ephemeral copying by broadcasters, and reproductions of broadcasts made by social institutions. Art 5 (3) then provides 15 optional exceptions or limitations to both the reproduction right and the right of communication to the public: (1) use for teaching and scientific purposes; (2) use for people with disabilities; (3) use for

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799 Id, art 5(3)(o).
800 Id, art 5(1).
801 Id, art 5(2). ("Member States may provide for exceptions or limitations to the reproduction right provided for in Article 2 in the following cases: (a) in respect of reproductions on paper or any similar medium, effected by the use of any kind of photographic technique or by some other process having similar effects, with the exception of sheet music, provided that the rightholders receive fair compensation; (b) in respect of reproductions on any medium made by a natural person for private use and for ends that are neither directly nor indirectly commercial, on condition that the rightholders receive fair compensation which takes account of the application or non-application of technological measures referred to in Article 6 to the work or subject-matter concerned; (c) in respect of specific acts of reproduction made by publicly accessible libraries, educational establishments or museums, or by archives, which are not for direct or indirect economic or commercial advantage; (d) in respect of ephemeral recordings of works made by broadcasting organizations by means of their own facilities and for their own broadcasts; the preservation of these recordings in official archives may, on the grounds of their exceptional documentary character, be permitted; (e) in respect of reproductions of broadcasts made by social institutions pursuing non-commercial purposes, such as hospitals or prisons, on condition that the rightholders receive fair compensation.")
reporting current events; (4) quotations; (5) uses for public security; (6) use for political speeches; (7) use during religious celebrations; (8) use of works of architecture; (9) incidental inclusion of a work or other subject-matter; (10) use for advertising public exhibitions; (11) use for caricature, parody or pastiche; (12) use related to the demonstration or repair of equipment; (13) use for the reconstruction of buildings; (14) use for research or private study; and (15) use in other cases of minor importance. 802 Art 5(4) allows Member Countries to provide exceptions or limitations to the distribution right, as referred to cases where Member Countries allow those exceptions or limitations in relation to the reproduction right. Scholars suggest that these 20 optional specific exceptions or limitations can be divided into three categories based on their respective justification. The first is for freedom of expression; within this category are quotations, caricature, religious celebrations or private copying. The second category is for public interests, within this category are education, libraries, social institutions, people with disabilities, public security and others. The third category is practical justifications, temporary copies, ephemeral recordings related to broadcasting are within this category. 803

Since Member Countries can choose to apply the exceptions or limitations from the optional menu provided by the Information Society Directive, the role of ECJ and other national courts became really important. Courts are at the front line applying the chosen exceptions or limitations. The Information Society Directive does not provide clear definition or scope of the listed exceptions or limitations, thus it’s the court’s responsibility to interpret the applied exceptions or limitations.

802 Id, art 5 (3).
803 EU Copyright Law: A commentary, supra note 124, at 441, para. 11.69.
According to Recital 4 & 9, the courts shall interpret the copyright owners’ exclusive right in a broad way but give a narrow interpretation to exceptions.\(^{804}\) Recital 21 also stated “a broad definition of these acts is needed to ensure legal certainty within the internal market.”\(^{805}\) As a result, the court supported the narrow interpretation of exceptions.\(^{806}\) With respect to the application of the mandatory exception for certain temporary acts of reproduction, the ECJ held that the conditions mentioned in Art 5(1) are cumulative and need to be interpreted in a restrictive manner in light of the three-step test.\(^{807}\) With regard to the cumulative conditions of applicability of Art 5(1), the ECJ relied on Recitals 4, 6 and 21, stated that “the conditions laid down in Article 5(1) thereof must also be interpreted in light of the need for legal certainty for authors with regard to the protections of their works.”\(^{808}\) Thus, with these two references, the ECJ adopted the principle of narrow interpretation of exceptions or limitations in the Infopaq case. Further, the three-step test was also used to require Member Countries to ensure that “the application of exceptions and limitations does not unreasonably disadvantage right holders in a number of other situations.”\(^{809}\)

However, the principle of narrow interpretation has not been applied consistently. The courts questioned the binding effect of recitals in EU legislation of

\(^{804}\) Information Society Directive, \textit{supra} note 127, recital 4 & 9. (Recital 4 states that “A harmonised legal framework on copyright and related rights, through increased legal certainty and while providing for a high level of protection of intellectual property,....” And recital 9 mentioned “Any harmonisation of copyright and related rights must take as a basis a high level of protection,....”)

\(^{805}\) \textit{Id}, recital 21.

\(^{806}\) C Case-5/08 Infopaq I case, \textit{supra} note 150.

\(^{807}\) \textit{Id}, para. 56-9.

\(^{808}\) \textit{Id}, para. 59.

\(^{809}\) See EU Copyright Law: A commentary, \textit{supra} note 124, para. 20.32.
the Information Society Directive. The court clarified that “the preamble to a Community act has no binding legal force and cannot be relied on as a ground for derogating from the actual provisions of the act in question.”\(^\text{810}\) Thus a recital may not restrict a right. Although the FAPL court reiterated the principle of narrow interpretation of exceptions or limitations, the court further concluded: “none the less, the interpretation of Art 5(1) must enable the effectiveness of the exception thereby established to be safeguarded and permit observance of the exception’s purpose.... In accordance with its objective, that exception must allow and ensure the development and operation of new technologies and safeguard a balance between the rights and interests of rights holders, on the one hand, and of users of protected works who wish to avail themselves of whose new technologies, on the other.”\(^\text{811}\) Then, in the Infopaq II case, the Danish court concluded that the three-step test should not further restrict the scope of the exceptions or limitations for transient copies theoretically by stating that “if those acts of reproduction fulfill all the conditions of Article 5(1) of Directive 2001/29, as interpreted by the case law of the Court, it must be held that they do not conflict with the normal exploitation of the work or unreasonably prejudice the legitimate interests of the right holder.”\(^\text{812}\) Follow this trend, in Painer case, the ECJ concluded that the purpose of exceptions of Art 5(3)(d) was to “strike a fair balance between the right to freedom of expression of users of a work or other protected subject-matter and the reproduction right

\(^{811}\) C-403/08 FAPL case, supra note 151, para. 163-4.  
\(^{812}\) Case C-302/10 Inforpaq II case, supra note 161, para.56.
conferred on authors.”

As a result, the EU courts seem to begin to adopt a principle of broad interpretation of exceptions or limitations in order to “enhance transparency through harmonious interpretation.” Thus, with the principle of broad interpretation of exceptions or limitations, new technology providers, such as ISPs could also apply content of Art 5 of Information Society Directive to their usage as a useful defense in protecting their own interests.

In general, EU provided a specific list of exceptions or limitations, and enabled Member Countries to choose to implement. It’s obvious that based on this chosen menu, Member Countries will have more flexibility in applying theses exceptions or limitations to better accommodate a country’s domestic culture, regime and technological developments or new business models. However, in order to make sure the implementation of these exceptions or limitations properly and rationally, E.U. should adopt a basic and uniform guideline in interpreting these exceptions or limitations. Member Countries will do better if they know clearly the contour of these exceptions or limitations is.

What’s more, The EU Member States are questioning the current scope of the listed exceptions or limitations provided by the Directives. For instance, in the UK’s response to the EU commission’s green paper on single digital market, UK had already proposed to expand the current exceptions of libraries and archives;

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813 Case C-145/10 Eva-Maria Painter v Standard Verlag GmbH and Others 2011, para. 134-5. (The ECJ concluded: “The fair use balance is struck, in this case, by favouring the exercise of the users’ right to freedom of expression over the interest of the author in being able to prevent the reproduction of extracts from his work which has already been lawfully made available to the public, whilst ensuring that author has the right, in principle, to have his name indicated.”)

814 See EU Copyright Law: A commentary, supra note 124, at 449.
dissemination of works for teaching and research purposes; and user-created content.\textsuperscript{815} This Green Paper focused on the effect of the digitization towards education and research. First, According to Article 5(5) and Recital 40 of the Information Society Directive, the exception only provides libraries or other beneficiaries a copyright owner’s exclusive reproduction right’s exception in specific cases.\textsuperscript{816} However, digitization will result in copies that involve the reproduction right. Article 5(2)(c) does not cover such digitization operated by private parties.\textsuperscript{817} Then, as for the aspect of the making available of digitized works, electronic delivery of documents to end-users cannot be covered by Article 5(3)(n). Third, for the dissemination of works for teaching and research purposes, Article 5(3)(a) does explicitly exclude the modern e-learning methods such as distance education.\textsuperscript{818} Forth, as to user-created content,\textsuperscript{819} there’s no exception, which “would allow the use of existing copyright protected content for creating new or derivative works.”\textsuperscript{820}

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\textsuperscript{815} Commision of the European Communities, Green Paper, Copyright in the Knowledge Economy, Brussels, COM(2008) 466/3. available at: \url{http://ec.europa.eu/internal_market/copyright/docs/copyright-infso/greenpaper_en.pdf}
\textsuperscript{816} CDPA 1988, supra note 168, section 42. (Section 42 allows libraries or archives to make a single copy of a literary, dramatic or musical work held in their libraries or archives to make a single copy of a literary, dramatic or musical word held in their permanent collection for the purpose of preservation and replacement. “The UK government is trying to expand this exception to allow for copying and formant shifting of sound recordings, films and broadcasts and to allow for more than a single copy where successive coping may be required to preserve permanent collections in an accessible format.” Cited Id.)
\textsuperscript{817} Information Society Directive, supra note 112.
\textsuperscript{818} Id. See also Green paper, supra note 816, at 16.
\textsuperscript{819} Id, at 19. (“User-created content was defined as ‘content made publicly available over the Internet, which reflects a certain amount of creative effort, and which is created outside of professional routines and practices.’”)
\textsuperscript{820} Id.
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Thus, UK calls for a “mandatory exception for teaching and scientific research, with a clearly defined scope in the Directive,”\textsuperscript{821} and exception for transformative use.

Professor Ian Hargreaves further proposed other types of exceptions for the digital age in his independent report.\textsuperscript{822} In this report, he also pointed out the need of “extension of the non-commercial research exception to all forms of copyright work,” and extension of archiving.\textsuperscript{823} Then after comparing the U.S. fair use doctrine with the UK exceptions, and the application of them to the developing new technology entities, Professor Hargreaves indicated that more sufficient flexible exceptions to “realize the benefits of new technologies without losing the core benefits to creators and to the economy that copyright providers” are needed not only in the UK but also in the EU.\textsuperscript{824} He specifically pointed the UK’s options of feasible exceptions: (1) “enabling new research tools;” (2) exceptions of private copying or format shifting.\textsuperscript{825} He stated that such exceptions should be mandatory since using contracts to regulate exceptions has many uncertainties: (1) “override the exceptions and limitations allowed in copyright law;” (2) “right holders can rewrite the limits.”\textsuperscript{826}

\textsuperscript{821} \textit{Id}, at 18.
\textsuperscript{823} \textit{Id}, at 49-50.
\textsuperscript{824} \textit{Id}, at 47. (UK should adopt a “twin track approach”: (1) add immediate specific exceptions that are feasible with the current EU directives; (2) “a new mechanism in copyright law to create a built-in adaptability to future technologies which, by definition, cannot be foreseen in precise detail by today’s policy makers.”)
\textsuperscript{825} \textit{Id}.
\textsuperscript{826} \textit{Id}, at 51.
All in all, EU member countries are now questioning the practical effect of the application of current listed exceptions in the directives. Member countries need more flexible exceptions in dealing with the challenges brought by the new technology and the potential issue brought by the upcoming new technology.

iii. Other Countries

The following sections will discuss the limitations or exceptions in other countries such as Singapore and Japan. Both Singapore and Australia adopted a concept of “fair dealing,” but Japan provide a list of limitation instead.

A. Singapore

Before the current version of fair dealing exceptions was consolidated in the Copyright Act Revised Edition of 2006, Singapore amended the fair dealing provision for several times. This latest version of fair dealing had been strongly affected by the U.S. fair use doctrine.

Singapore’s copyright act allows users to several kinds of acts of reproduction in absence of copyright owners’ authorization without copyright infringement for “fair dealing” situations. As to a literary, dramatic, musical or artistic work, or with an adaptation of a literary, dramatic or musical work, a fair dealing with them shall not constitute a copyright infringement if it's for the purpose of research or study, criticism or review, reporting current events and judicial proceedings or professional advice.\(^ {827}\) Besides these limited purposes defining fair dealing, S 35 (2) also provided five factors to be considered to

\(^ {827}\) Singapore Copyright Act, supra note 172, s 35-38.
determine whether a use of copyrighted works constitutes a fair dealing for any purpose other than the purposes listed above: “(a) the purpose and character of the dealing, including whether such dealing is of a commercial nature or is for non-profit educational purposes; (b) the nature of the work or adaptation; (c) the amount and substantiality of the part copied taken in relation to the whole work or adaptation; (d) the effect of the dealing upon the potential market for, or value of, the work or adaptation; and (e) the possibility of obtaining the work or adaptation within a reasonable time at an ordinary commercial price.”

Compare with the E.U. specific lists of exceptions to copyright infringements; the Singapore fair dealing exceptions are more flexible.

Singapore scholars are arguing whether to extend the current fair dealing exceptions to the U.S. model fair use doctrine. Most of them support to adopt a more flexible fair use doctrine because of the development of technology; Copyright law resolves market failures that result from the non-excludable and non-rivalrous nature of information products and services by granting copyright owners the exclusive rights to distribute. Copyright policy incentivizes the creation and distribution of new works, and lead to development of scientific and cultural. But it should be known that the development of scientific and cultural also depend upon accessing to useful copyrighted works. Thus a more flexible fair use policy is a reasonable and useful tool to promote access to copyrighted works, such as information products. The scholars interestingly focus on what’s the commercial

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828 *Id*, s 35(2).
effect will be brought to Singapore’s market by adopting the U.S. model fair use doctrine. Some may argue that since the digital technologies enable copyright owners to control the consumption of copyrighted works with reduced transaction costs, a fair use may harm a commercial market. However, some scholars in contrary argued that the extended fair use doctrine would not only contribute to a valuable high-technology industry but also stimulate demands for copyrighted works by encouraging investment and innovation in private copying technologies and by promoting the technology of transactions of copyrighted works, such as enable users to enjoy copyrighted works at any time and anywhere they choose via cloud computing service. Under this circumstance, “fair use is the only defense for these increasingly common, non-transformative copying activities that fall under the personal fair use class.”

Thus, it’s clear that after adopting flexible fair dealing exceptions in 2005, Singapore is trying to adopt the U.S. model of fair use doctrine in order to dealing with the development of new technology such as private copying.

**B. Australia**

The Copyright Act 1968 allows people to use copyrighted works without copyright owners’ consent in certain situation for certain purpose. This parallel concept is regulated in Section 40 of the Copyright Act 1968, and named as “fair dealing.” Australia is the first common law country that introduced the concept of

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830 See id.

831 Id, at 346.
fair dealing into the copyright law. It also should be known that, unlike the U.S. copyright law, Australian law does not have a general fair use principle. Besides the fair dealing exceptions, there are also other important exceptions including: (1) for educational institutions; (2) for libraries; (3) for governments; (4) private copying exceptions; (5) other special cases. Under the current Australian copyright law, the dealing must be for a specific statutory purpose listed in Section 40: (1) research or study; (2) criticism or review; (3) parody or satire; (4) reporting news; (5) professional advice by a legal practitioner, patent or trader mark attorney.

There’s no general exception for using copyrighted works, unlike the U.S. provide four general criteria and a transformative use. If a person’s purpose of using copyrighted works is not within the statutory limits, he will infringe that copyright. The Copyright Act further provides that fair dealings for the former specified purposes may still work within the following copyrighted works: (1) literary, dramatic, musical or artistic works; (2) adoptions of literary, dramatic or musical works; and (3) audio-visual items.

Generally, when determine whether a use is within the scope of fair dealing, the courts usually take a two-step analysis. First, the purpose of the use must be one

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833 Copyright Act 1968, *supra* note 178, s 40.
834 *Id*, s 41.
835 *Id*, s 41 A.
836 *Id*, s 42.
837 *Id*, s 43(2).
838 *Id*, s 40(1), s 41, s 41A, s 42, s 43.
839 *Id*, s 40(1), s 41, s 41A, s 42.
840 *Id*, s 103C(1), s 103A, s 103AA, s 103B. (It should be defined as sound recordings, cinematograph films, sound broadcasts or television broadcasts.)
of the specific purposes provided by the copyright law that mentioned above. Second, the use must be fair, and whether the use is fair will depend on the facts of the particular case. There are still specific requirements for different purposes. First, as to the fair dealing provisions for the purpose of criticism or review, and for the purpose of reporting news, there’s an additional requirement for a “sufficient acknowledgement” of the work or audio-visual item. Further, as to the purpose of research or study with regard to works and adaptations contains a quantitative test. A quantitative test is used to determine whether the use of quantities of copyrighted works is fair or not. It means that if no more than a “reasonable portion” of a work or adaptation that is described in an item of the table and is not contained in an article in a periodical publication is taken, the use can be deem as a fair dealing. A “reasonable portion” means the amount described in the item, and here as to the literary, dramatic or musical work, it’s 10% of the number of pages or number of words. There’s also a general guidance to fair dealing for research and study, which includes five factors: (1) the purpose and character of the dealing; (2) the nature of the work or adaptation; (3) the possibility of obtaining the work or adaptation within a reasonable time at an ordinary commercial price; (4) the effect of the dealing upon the potential market for, or value of, the work or adaptation; and (5) in a case where part only of the work or adaptation is reproduced—the amount and substantiality of the part copied taken in relation to the whole work or

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841 Id, ss 41 & 103A; ss 42(1)(a) & 103 B(1)(a).
842 Id, s 40(3)-(8).
843 Id, s 40(5).
adaptation. However, as for the other fair dealing exceptions, the Australia copyright law left them “completely to the courts to determine what factors are relevant to determining fairness in any particular case.”

Compare to the U.S. fair use doctrine, the fair dealing in Australia has a more limited scope since it only provide several specific purposes of fair dealing. As a result, the Australian Copyright Law Review Committee has recommended to adopt a more broad fair-use alike model to replace the current narrow fair dealing exceptions. The function of fair dealing exceptions in the digital environment is also been expected to echo the U.S.’s fair use doctrine. The Australian Law Reform Commission raised three questions: “(1) What problems, if any, are there with any of the existing fair dealing exceptions in the digital environment, (2) how could the fair dealing exceptions be usefully simplified; and (3) should the Copyright Act provide for any other specific fair dealing exceptions?” According to most copyright owners, entities representing or assisting copyright owners, stakeholders submitted their opinions that the existing fair dealing exceptions work “adequately

844 Id, s 40(2).
848 Id. See also Australian Law Reform Commission, Copyright and the Digital Economy, IP 42 (2012), question 45-47.
and effectively.”\textsuperscript{849} Even the Australian Copyright Council stated that they did not notice any practical problems in applying the current fair dealing exceptions. The only issue they notice is that the public’s understanding as to how web users can interact with the fair dealing exceptions. They suggested supporting “an education campaign directed at informing Australians of their copyrights and obligations.”\textsuperscript{850} Opponents who disagreed to adopt the U.S. model of fair use doctrine also pointed that the current copyright law provides a fair balance between copyright owners and users, however, the adoption of new fair use doctrine may break the balance and result in confusions and expenses. However, supporters, basically a number of copyright works’ users argued that the existing fair dealing exceptions are problematic because of its limited scope. They provided three reasons. First, they pointed that current fair dealing exceptions are not broad enough to provide an effective balance between owners and users in the digital environment. Second, they complained about the Australian Courts’ problematic interpretation of the complaining purpose-based, close-ended existing fair dealing exceptions. Third, they stated that some particular fair dealing exceptions were too specific.\textsuperscript{851} By analyzing these submissions from both sides, the Australia Law Reform Commission proposed its own proposal to reform the current fair dealing exceptions. The Australian Law Reform Commission admitted “the closed-end nature of the current fair dealing exceptions is problematic in the digital environment since it’s not sufficiently

\textsuperscript{849} See id. (Lots of submissions provided by this discussion paper had been listed in note 38-57.)
\textsuperscript{850} See id. (Arts Law Centre of Australia, Submission 171).
\textsuperscript{851} See id, note 58-64.
adapted or flexible to respond, to changing circumstances."852 It provided a detailed proposal 7-1 through 7-4 in its discussion paper. In its proposal, it suggested to repeal the current specific exceptions, and suggest to illustrate the new purposes in the fair use exception.853

In consequence, based on the discussion paper, although copyright owners and their representatives rejected to amend the current fair dealing exceptions in Australia, the trend of extending the limited fair dealing exceptions to broad fair use exceptions cannot be prevented. Thus, it is likely that in the future, “fair dealing” exceptions in Australia can also be applied to the digital environment.

C. Japan

It should be known that Japan does not have provisions reflecting fair use doctrine. Japanese Copyright Act enumerates several exceptions or limitations on

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852 Id, para. 7.80.
853 Id. (Proposal 7–1 The fair use exception should be applied when determining whether a use for the purpose of research or study; criticism or review; parody or satire; reporting news; or professional advice infringes copyright. ‘Research or study’, ‘criticism or review’, ‘parody or satire’, and ‘reporting news’ should be illustrative purposes in the fair use exception.
Proposal 7–2 The Copyright Act should be amended to repeal the following exceptions: (a) ss 40(1), 103C(1)—fair dealing for research or study; (b) ss 41, 103A—fair dealing for criticism or review; (c) ss 41A, 103AA—fair dealing for parody or satire; (d) ss 42, 103B—fair dealing for reporting news; (e) s 43(2)—fair dealing for a legal practitioner, registered patent attorney or registered trade marks attorney giving professional advice; and (f) ss 104(b) and (c)—professional advice exceptions.
Proposal 7–3 If fair use is not enacted, the exceptions for the purpose of professional legal advice in ss 43(2), 104(b) and (c) of the Copyright Act should be repealed and the Copyright Act should provide for new fair dealing exceptions ‘for the purpose of professional advice by a legal practitioner, registered patent attorney or registered trade marks attorney’ for both works and subject-matter other than works.
Proposal 7–4 If fair use is not enacted, the existing fair dealing exceptions, and the new fair dealing exceptions proposed in this Discussion Paper, should all provide that the fairness factors must be considered in determining whether copyright is infringed.)
copyright owners’ exclusive rights: (1) reproduction for private use; 854 (2) reproduction in libraries; 855 (3) quotation privileges; 856 (4) use for educational purpose; 857 (5) performances for non-profit purposes; 858 (6) use for news reports; 859 (7) use in political speeches; 860 (8) reproduction in judicial proceedings; 861 (10) exhibitions of artistic works by the owner; 862 (11) use of artistic works located in public spaces. 863 These specific limitations or exceptions are set out in Art 30 through 49 of the Japanese Copyright Act. Besides these exceptions or limitations, the 2012 Japanese Copyright Amendment added five specific provisions concerning the so-called “incidental involvement” of copyrighted works. 864

The most similar provision to the U.S. fair use doctrine and Japan’s fair dealing model is Art 32(1). It’s called the “quotation exception.” Under this provision,

854 Japanese Copyright Act, supra note 190, art 30.
855 Id, art 31.
856 Id, art 32(1)
857 Id, art 33, 33bis, 34, 35 & 36.
858 Id, art 38.
859 Id, art 39 & 41.
860 Id, art 40.
861 Id, art 42.
862 Id, art 45.
863 Id, art 4.
864 Id. (1) Article 30bis(1): the duplication or adoption of copyrighted material if such material is involved as an incidental object or sound which is difficult to split off from other subjects; provided that the duplication or adaptation is made in the form of photographing, sound recording or video recording; (2) Article 30bis(2): the use of the duplicated or adapted material made in the cases above; (3) Article 30ter: the use of copyrighted material to the extent necessary for the process of considering obtaining a license from the copyright owners; (4) Article 30quater: the use of copyrighted material that has been published, to the extent necessary for tests conducted to develop or put into practical use of sound/video recording technologies; and (5) Article 47novies: the recording or adaptation of copyrighted material to the extent necessary to prepare for streamlining of computer processing of the copyrighted material when such data will be provided through networks.)
the quotation of a published work is permitted if it accord with fair practice and
does not exceed that justified by purposed such as news reporting, criticism or
research.\textsuperscript{865} If the quotation is in a form of adapting a work by summarizing its
essential content, it may still justify by these purposes.\textsuperscript{866} According to Arts 48(1)
and (2), the quotation must be “clearly indicated in the manner and to the extent
deemed reasonable by the form of reproduction or exploitation,” along with the
name of the author of the quoted work if it appears on the work.\textsuperscript{867} As to the scope
of the object of the “quotation”, it seems that Japan intends to encompass more than
just copying or written words. In the Jokoku case, the Japanese Supreme Court took
no issue with being asked to assess whether the use of a copyrighted photograph
could be exempted as a citation under Article 32(1).\textsuperscript{868} The Japanese Supreme Court
did not determine whether a photograph was a type of work within the scope of
object in the quotation exception, it directly considered whether the citation of
photograph was fair or not. If followed the Supreme Court’s ignorance of the scope
of the object of quotation exceptions, it can be applied to all kinds of copyrighted
works. It’s then a broad reading of the quotation exceptions from this point.
However, the Japanese Supreme Court also took a quite restrictive position in the
same case when decided the issue of parody by stating that the quoted work must
be clearly distinguishable from the parody. The Supreme Court held that the
quotation exceptions would be applied only when the following two elements were

\textsuperscript{865} Id, art 32(1).
\textsuperscript{866} See Japanese Copyright Act, supra note 190, at 60.
\textsuperscript{867} Japanese Copyright Act, supra note 190, art 48 (1) & (2).
\textsuperscript{868} Case 1976(O) 923, Minshu Vol.34, No.3, at 244 (Mar,28 1980), available at:
\url{http://www.courts.go.jp/app/hanrei_en/detail?id=60}
satisfied: "(1) a clear separation exists between the copyrighted work and the using work; and (2) the using work must be the major part, and the copyrighted work a minor part." Thus the Japanese Supreme Court held that it was a modification which infringed the copyright owner’s right of integrity rather than a parody. Thus, it seems that Japan still contain a narrow view of interpretation of its exceptions or limitations of exclusive rights especially towards the quotation exceptions. Once an act of using copyrighted works cannot precisely fall within the scope of the specific limitations or exceptions, it will be held as an infringement.

Japan is also considering whether the U.S. model of fair use doctrine should be introduced to its own copyright law. By adopting the American fair use doctrine, more room can be provided to exceptions to the users, and made the application of exceptions or limitations more flexible. Such adoption may benefit the ongoing balancing process between Japan and the U.S. in terms of royalty payments, and it also has positive effect for Japan’s culture and economy. Other Scholars provided opposing opinions. They believed that Japan has a civil law system and it only had a few cases in the past can serves as “case law.” However, the U.S. fair use doctrine requires an analysis on a case-by-case basis.

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869 DOES THE JAPANESE COPYRIGHT ACT NEED FAIR USE IN ORDER TO EMBRACE PARODY? http://www.daviddfriedman.com/Academic/Course_Pages/IP_Theory_13/Papers2Discuss/Kaneko_Japanese_fair_use.htm#ftn21 (last visited July, 30). See also id.

870 Id.

871 See id. (Citing Kensaku Fuku).

872 See id. (However, Korea had adopted a combination of the U.S. fair use doctrine and the international three-step test. It could provide a reference for civil law countries, such as China. Korea Copyright Act, Article 35-3 (Fair Use of Copyrighted Material). Except for situations enumerated in art. 23 to art. 35-2 and in art. 101-3 to 101-5, provided it does not conflict with a normal exploitation of copyrighted work and does not unreasonably prejudice the legitimate interest of the copyright holder, the copyrighted work may be used, among other things, for reporting, criticism, education, and research. 2. In determining
iv. A Proposal for China to deal with fair use exception under cloud computing context

A. Exceptions or Limitations to Copyright under Cloud Computing Context.

One of the most important reasons for countries to adopt the exceptions or limitations to copyright owners’ exclusive rights is to enable public’s access to information and incentivize development of culture and technology. In the world of cloud computing, the cloud is the pool for almost all information. Cloud computing software has become the carrier of presenting and distributing works. Both copyright owners and users can take advantage of cloud computing. By using it, copyright owners can distribute their works more easily with less cost and time. More people can become “copyright owners” by using the cloud to share their own works without the trouble of dealing with publisher, distributor or other middleman. The cloud computing definitely incentivize people to create more works in copyrightable areas. Correspondingly, users are able to enjoy copyrighted works with less effort in less time. By a single click, copyrighted works are stored in their cloud space and are ready to be streamed online or downloaded. Because of the open nature of most cloud service, it’s obvious that users are able to gain more information by using the cloud service than by getting the traditional physical...
copies. Access to information is essential for users’ development of their own creative work, and with which users are likely to become “copyright owners.”

However, as for copyright owners, they have to put their copyrighted works into the cloud in order to distribute and gain benefits. As I mentioned above, because of the openness and share nature of the cloud, people are able to access to those copyrighted works. And in most of the time, people would not pay attention to whether they are accessing the copyrighted works legally or not. All they want is that they can get the copyrighted works they need with minimal cost—both money and time. Further, there are lots of ISPs who provide cloud computing service and they are in competition. To win the competition and gain more benefits is by attracted more users and provided more works. ISPs definitely do not want copyright owners to earn a share of the profits. Thus ISPs will not wholeheartedly use certain technological measures to protect copyright owners. Thus, copyright owners’ copyrighted work being putted into the cloud can be infringed at any time. Meanwhile, users and ISPs can raise exceptions or limitations as defenses for their activities, copyright owners may face a big loss. But people shall still have the access to some information without authorization from copyright owners and without infringing copyright law. It’s the public interests. Thus it’s important to adopt rationale exceptions or limitations.

Further, it seems that ISPs mostly just provide the basic service under the direction of users. However, ISPs also provide linking service or provide thumbnails for search result. These kinds of services are fully under their direction. According to the U.S. court, thumbnails can be deemed as a transformative use of copyrighted
works because they serve a different function from the original copies. The thumbnails also do not harm the copyright owners’ potential interests. ISPs successfully defend themselves in copyright lawsuits by using exceptions or limitations toward copyright owners’ exclusive rights. In my opinion, referring to the U.S., it seems that the basic purpose of ISPs’ activities is important in deciding whether exceptions or limitations can be applied or not. For instance, if an ISP provides a link for illustrating background, providing other support or opposite opinions, his activity may be deemed as “fair use” of the copyrighted works. Although I myself preferred the U.S. model of fair use doctrine in dealing with issues caused by digital world, the E.U. and other civil law countries such as China are still struggling in determining whether to adopt a broader exceptions or limitations model such as the U.S.. The following part will analyze the Chinese situation and provide a reasonable proposal for China.

**B. Chinese Limitation List and A Proposal for China**

China Copyright Law does not contain a concept of “fair use” or “fair dealing.” However, “fair use” as a terminology has been used a lot in discussing the related copyright issue. There are two ways of defining “fair use” in China. First is from Prof. Zheng Chengsi’s article, stated that “fair use refers to when use copyrighted works, there’s not only not necessary to acquire a copyright owners’ authorization, but also not necessary to pay, and such use will not constitute copyright infringement.”

The other one is from Prof. Wu Handong’s article, in which he stated “fair use means

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an act of using others’ copyrighted works for a fair purpose under the regulation of
the statute, without copyright owners’ consents and payments to them.”

a. China’s Limitation List

China as a civil law country, also provide a specific list of limitations in Art 22
of its Copyright Law just like E.U. has provided in its Information Society Directive.
China provides 12 kinds of specific limitations. They can be divided into eight
categories: (1) personal fair use; (2) medias’ use for news reporting or
otherwise; (3) educational use; (4) state organ to fulfill official duties; (5)
library, memorial hall or other similar institutes use to display or preservation of a
work; (6) free performance of a published work; (7) display or locate in an

874 Wu Handong, Zhuzuoquan Heli Shiyong Zhidu Yanjiu(著作权合理使用制度研究)[Analyzing Fair Use Doctrine Under Copyright Law][1996], at 144.
875 China Copyright Law, supra note 460, art 22(1)-(2).((1) use of a published work for the purposes of the user’s own private study, research or self-entertainment; (2) appropriate quotation from a published work in one’s own work for the purposes of introduction of, or comment on, a work, or demonstration of a point;)
876 Id, art 22(3)-(5).((3) inevitable reappearance or citation of a published work in
newspapers, periodicals, radio stations, television stations or other media for the purpose of reporting current events;(4) reprinting by newspapers or periodicals or other media, or rebroadcasting by radio stations or television stations or other media, of the current event articles on the issues of politics, economy and religion, which have been published by other
newspapers, periodicals, radio stations or television stations or other media, except where the author has declared that publication or broadcasting is not permitted;(5) publication in newspapers or periodicals or other media, or broadcasting by radio stations or television stations or other media, of a speech delivered at a public assembly, except where the author has declared that publication or broadcasting is not permitted;)
877 Id, art 22(6).((6) translation or reproduction, in a small quality of copies, of a published
work for use by teachers or scientific researchers in classroom teaching or scientific
research, provided that the translation or reproduction is not published or distributed;)
878 Id, art 22 (7). ((7) use of a published work by a State organ within the reasonable scope
for the purpose of fulfilling its official duties;)
879 Id, art 22(8). ((8) reproduction of a work in its collections by a library, archive, memorial
hall, museum, art gallery or similar institution, for the purpose of the display or
preservation of a copy of the work;)
880 Id, art 22(9). ((9) free of charge performance of a published work, that is, with respect to
the performance, neither fees are charged from the public nor the remuneration is paid to
the performers;)

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outdoor public place;\textsuperscript{881} (8) use for a public interest goal and base on humanitarianism.\textsuperscript{882} It is a closed list, which means other usage of copyrighted work will constitute infringement of copyright law if there is no consent from copyright owner.

This model of listing all kinds of specific limitations is quite useful in civil law countries, especially in China, since the guideline for judicial practice is this area is vague. Due to Chinese own realistic, this model has more stability and can lead to consistent judgment from courts. It’s much more easy for the courts to directly refer to some fixed rules rather than let them apply flexible general guidelines.

However, such model is also problematic. It is not enough flexible to apply when courts face new challenges. Further, the language used in this provision is not strict enough. For instance, Art 22(2) uses “appropriate” to describe the portion of quotation. There’s no interpretation of “appropriate” in the statutes. Thus the courts had to interpret by themselves. Such interpretation leads to a lack of uniformity among courts. Art 22(6) states an act of copying “in a small quantity,” there’s no interpretation of “small quantity” either. Art 22(7) mentions “within the reasonable scope” without further interpretation. All these unclear statements in the limitation provision may result in different judgments but based on similar facts, since the courts may interpret those terms in different ways. Art 22(1) lists a personal private use limitation of a published work for self-entertainment. This limitation may not

\textsuperscript{881} Id, art 22(10). ((10) copying, drawing, photographing, or video recording of an artistic work located or on display in an outdoor public place;)

\textsuperscript{882} Id, art 22(11)-(12).((11) translation of a work published by a Chinese citizen, legal entity or organization, which is created in the Han language (Chinese), into a minority nationality language for publication and distribution within the country; (12) translation of a published work into Braille and publication of the work so translated;)


work out well in digital world. People are able to download or stream pirate content privately for self-entertainment purpose without infringing copyright law because of this limitation. In my opinion, this limitation does not have positive effect for which copyright law’s legislators intended.

b. The General Guideline for Applying The Limitations List

What’s important here is that China provides a general guideline, although it’s not comprehensive or strict enough. It’s in the Regulation for the Implementation of the Copyright Law of the People’s Republic of China. Art 21 provides a general and basic guideline in determining whether the limitations can be applied or not. A user can use a published work without permission from the copyright owner when the following two requirements are fulfilled: (1) the use “shall not impair the normal exploitation of the work concerned;” (2) the use shall not “unreasonably prejudice the legitimate interests of the copyright owner.”

Although the guideline states two requirements as mentioned above, in practical, it seems that the Chinese court had considered more than those two requirements. The Chinese court also considered the purpose of the usage of copyrighted works, the amount of the portion from copyrighted work as a whole. In Shanghai Animated Film Studio v. Zhejiang Xinying Niandai Media Co., Ltd, the plaintiff owns copyright of several cartoon characters. However, the defendant used the cartoon characters in its movie poster as background. The plaintiff sued

883 Regulation for the Implementantion, supra note 603, art 21.
due to copyright infringement. The Shanghai IP court held that such usage constitutes “fair use” based on four reasons. First, the claimed cartoon characters had already been published for years. Second, the purpose for using these two cartoon characters is only to illustrate the age of leading roles in this film. Third, the cartoon characters have been placed in the background of the poster, they are just in the role of assistance and dependency. Forth, the cartoon characters only showed in the movie poster rather than the movie, the defendant did not advertise them either. There’s no harm to the normal use of these cartoon characters. Based on the opinion of this case, it’s clear that Chinese court is trying to adopt a U.S. type general guideline in order to determine the “fair use” issue.

c. There Is An Existing Limitations List To The Information Network

As to the information network, China had already adopted 8 kinds of specific limitations in Art 6 of the Regulation on the Protection of the Right to Communicate Works to the Public over information Networks in 2013, which is an administrative regulation. Art 6 provides: “A work of another person may be made available via an information network without the copyright owner’s authorization and payment of remuneration thereto when involving any of the following circumstances:(1) Quote of a published work, in a fair amount, in one’s work made available to the public for introducing or commenting on a particular work or for elaborating a particular issue;(2) Inevitable display or quote of a published work in one’s work made available to the public for reporting news on current events;(3) Provision of a published work, in a small amount, to a small number of teachers or scientific
researchers for classroom teaching or scientific research;(4) Provision of a published work to the public within a reasonable extent for a government organ’s performance of its official duties;(5) Translation, into a minority nationality language, of a published work created in the Chinese Han language by a Chinese citizen, legal person, or any other organization and provision thereof to the minority nationalities inside China;(6) Provision of a published written work to the blind in a peculiar manner that enables them to perceive it, for purposes other than profit-making;(7) Provision to the public of articles that are related to current political or economic issues and are already published via an information network; or(8) Provision to the public of a speech delivered at a public gathering.”

At some points, the existing information networks limitations fill in gaps and provide legal standings. However, Art 6 still uses a specific list, without a general guideline to determine issues fall outside of the list. The negative effect caused by specific list had been analyzed above will be more serious here due to the ongoing evolving nature of Internet and new technology.

As for issues of thumbnails, Art 5(2) of Provisions of the Supreme People’s Court on Several Issues Concerning the Application of Law in Hearing Civil Dispute Cases Involving Infringement of the Right of Dissemination on Information Networks uses the general guideline that mentioned above as a limitation. It

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886 Id, art 5. (“Where a web service provider makes relevant works available to the public substantially in lieu of any other web service provider in the form of webpage screenshot, thumbnail or the like, the people’s court shall decide that its act constitutes the behavior of making the works available to the public.
clearly showed China’s attitude towards use of the thumbnails, webpage screenshot or alike: it may constitute “fair use” when it neither affects the normal use of the works nor unreasonably damages the legitimate rights and interests of the copyright owner.

d. A Proposal For China

Based on the relevant regulations and provisions, and the court’s decision, it’s obvious that China is trying to use a basic guideline as a catch-out clause. However, such basic guideline is not mentioned in the new Copyright Law Draft. Although the legislators brought new limitations toward computer programs, as I mentioned above, a closed specific limitation list is not enough in dealing with the challenges brought by new technologies. And further, the unclear language was not changed or interpreted either. It will still cause confusion in applications.

Thus, this dissertation will provide three potential provisions for amending the current Copyright Law. First, if precise language cannot be used in the provisions, a new provision that interprets those words in specialty should be added. For instance, when interpret the word “appropriate” that describe the portion of quotation in Art 22(2), China may follow the Australia’s example— 10% of the number of pages or number of words. It’s better for legislator to provide a precise percentage of the portion of quotation. The phrase of “in a small quality” and “within in a reasonable scope” can be interpreted in the same way. Second, private
use of copyrighted work for “self-entertainment” should be removed. Third, China should clearly add a basic guideline as a catch out clause, such as the EU proposal of general clause—“a new mechanism in copyright law to create a built-in adaptability to future technologies which, by definition, cannot be foreseen in precise detail by today’s policy makers.” 887 Prof. Wu Handong adopted a U.S. model of fair use, there should be four factors: (1) the purpose of use, mainly consider whether such use is of a commercial nature or not; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; (4) the effect of the use upon the potential market of the copyrighted work and interests of the copyright owner. Prof. Feng Xiaoqing provided three factors: (1) the use of copyrighted work neither damages the legitimate rights and interests of copyright owners, nor negatively effects copyright owners’ incentive to create; (2) the use of copyrighted work should comfort with social needs; (3) if a user ask for permission from copyright owners by payment a forehand, such acts inevitably result in market failure. Based on these two scholars’ proposals, the current guideline and relevant court’s decision, in my opinion, the general guideline should include three factors: (1) the purpose of use. When applying this factor, court should not only consider whether such use is of a commercial nature, but also consider whether such use serves the same function as the normal use; (2) the amount of the portion used about the copyrighted work as a whole, and the amount of the portion used in respect to the new work as a whole; (3) the effect of the use, whether it unreasonable damages the legitimate rights and interests of the copyright owner.

887 Hargreaves, supra note 823.
Chapter 5: Conclusion

In order to deal with the challenges brought by the cloud computing technology, this dissertation analyzes how it affects copyright (such as the reproduction right) and copyright infringers’ potential defenses (such as the exhaustion doctrine). Major countries’ relevant legislation and cases have been examined and proposals for China for each of the above-mentioned topics have been made. Due to its length, this dissertation focuses on copyright infringer’s direct liability.

After examining major countries’ literature, a three steps analysis is extracted and applied in this dissertation. These steps are indispensable for making a proposal for China’s future cloud computing copyright legislation. The first step is to examine the relevant articles in the Berne Convention, WCT and WPPT. Such worldwide agreements provide a basic and general guideline in cloud computing area for signatory countries to follow. Therefore, these relevant articles are backbones of countries’ specific statutes. China then as a signatory country, shall follow what have been stipulated in those agreements. China, after considering its own reality, shall also selectively incorporate those articles into its own legislation like other major signatory countries. The second step is to examine major countries’ legislators’ intent when legislated their statutes and to review major countries’ relevant statute’s legislative history. Legislative history can provide essential information such as background or legislators’ concerns for legislating a statute. A synthesis for major countries’ legislative history and intent will benefit for Chinese literature and scholars. It could also serve as a study for western countries’
legislation methodology for Chinese legislators. The third step is to review the cases relevant to the cloud computing technology to see how major countries’ current statutes work out so far and how major countries’ courts apply those statutes. There is no doubt that courts at the frontline facing with legal loopholes evolved with new technology. Thus, getting to know how courts decide those cases relevant to the cloud computing technology is getting to understand how cloud computing technology is dealt in legal world. Potential legal resolutions towards the new technology can be implied from Court’s decisions, too. Those decisions are also meaningful because developers of new technologies need such guidance to avoid potential legal risks caused by their technologies. In some countries, higher courts’ decisions are binding to lower courts, such as the common law country. In other countries, higher courts’ decisions can be recognized as guidelines to lower courts.

China, as a developing country is face increasing online piracies copyright lawsuits brought by developed countries. Due to its characteristic, cloud-computing technology always plays a role in online piracies. Therefore, China needs to fill its legislation vacancy in cloud-computing area as a response to those countries’ claims. After applying the above-mentioned three-step analysis to US, EU, Japan, Australia, and Singapore, this dissertation has generated several legislative advices for China. I also consider China’s social reality and Chinese Copyright Law.

First, Copyright Law in China needs to be amended as a response to legal loopholes created by the cloud computing technology. Such amendments should be codified. As a civil law country, China does not have the tradition to follow the
precedents. Therefore, it is much more practical for Chinese courts to refer to a statute.

Second, a catch-out clause should always be included. Technologies evolves faster than copyright statue with no doubt. Civil law countries such as China usually use a list to indicate the exclusive right’s exceptions. If a list is a closed list, it gives judges no space using their discretion to deal with new situations. A good catch-out clause should be general and reasonable and written under moderate foresight.

Third, if words used in the existing statutes are not clear and may lead to different understandings. Such different understanding may also cause various courts’ decision even with similar facts. Interpretations clauses will guide the courts in apply the relevant statute correctly.

Forth, keep up pace with worldwide copyright law’s development, especially the legislative trend of the U.S. and the EU. They have more experiences in dealing with the problems caused by the cloud computing technology. China has better to learn from their experiences.

Except for legislative format, an amendment to Chinese Copyright Law need to deal with substantial concerns as well. I suggested the amended Copyright Law covers following substantial points to deal with cloud-computing technology involved legal issue.

As to the reproduction right, I suggest to treat temporary copy as regular copies and to be regulated under the reproduction right. However, there are potential exemptions: (1) the temporary copy’s generation is incidental; (2) it's sole
purpose is to enable non-infringing use; (3) the temporary copy is an essential part of technical process;(4) the temporary copy has no independent economic value.

As to the right of communication to the public, I suggest; (1) to extend the current scope of broadcasting right to regulate the non-interactive online communication; (2) to adopt the “users’ perception” standard when decide whether ISPs “provides” the infringing work; (3) to consider the ISP’s business model, control ability, financial benefits when decide whether he’s the infringer; (4) to define “public” as “us specified person or a large number of persons.”

As to the right of distribution, I suggest (1) the scope of the right of distribution should be extended to intangible forms, then to regulate digital distribution online; (2) to limit (1) by estimating whether the actor’s intention is to transfer of ownership.

As to the exhaustion doctrine, China should reflect the exhaustion doctrine in its Copyright Law amendment.

As to the legal exceptions or limitations, (1) add interpretations of words that being used in current statutes; (2) a specific exception— private use of copyrighted work for “self-entertainment” should be removed; (3) add a catch out clause that provides basic guideline.
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