DIGITAL AGE THE LEGAL REGULATION OF TEMPORARY COPIES IN CHINA

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Although the existence of temporary copy can be traced back to the analog age, it has been taken seriously by Chinese courts in recent years. The issues of temporary copies in the digital environment present the characteristics of complexity and diversity, and provoke a series of controversy, on the international level, over the traditional acts of copy. How to define temporary reproduction is a critical issue. International organizations, various countries or regions are attempting to define its nature through legislations. Those legislations reflect the tendency to incorporate temporary copy within the scope of the right of reproduction, and to impose limitations to copyright. Scholars in China have not yet reached a consensus on the legal position of temporary copies. In this paper, a case of temporary copy—Toutiao.com—is introduced to analyze the present juridical practices and some recommendations is offered with regard to the revision of Copyright Law of China.

1 This work is supported by the National Social Science Funds of China (grant no. 14BFX104).
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CONCLUSION

INTRODUCTION

The debut of temporary copy problem in copyright arises from the reproductions transitorily stored in the computer’s Random Access Memory (RAM). The traditional definition of “copy” is a fixed reproduction on tangible materials. The US Copyright Act 101 defines “copies” as follows:

material objects ... in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. ²

The realities of digital environment have rendered the traditional definition of copy inadequate for addressing emerging issues within the copyright system, one of which is the issue of temporary copies. Having existed since the analog age, temporary copies mainly refer to the temporary storage in a computer’s RAM nowadays. In MAI System Corp. v. Peak Computer, Inc., for instance, a Peak technician must boot the MAI computer and its operating system if he wants to maintain the machine. The decision made by the US Ninth Circuit was that a “copying” for purposes of copyright law occurs when a computer program is transferred from a permanent storage device to a computer’s RAM. “The loading of copyrighted computer software from a storage medium (hard disk, floppy disk, or read only memory) into the memory of a central processing unit (CPU) causes a copy to be made. In the absence of ownership of the copyright or express permission by license, such acts constitute copyright infringement.”

I. DEFINING THE CONCEPT OF TEMPORARY COPY

Being able to control temporary copies in digital devices has long been important to copyright owners. For IT industry, consumers increasingly engage in the exploitation of software without knowing they store a copy on their hard drive. Temporary Copies are prevalent in the digital environment. Here are some issues of temporary copies.

A. Some Issues of Temporary Copies in the Digital Environment

1. Cache

One type of the temporary copy is cache, including CPU cache, web

cache, i.e. a cache is a component that stores data so future requests for that data can be served faster. The data stored in a cache could be the result of an earlier computation, or the duplicate of data stored elsewhere. Web cache, for example, is when users are browsing a web page, the copyrighted works users want to see is automatically transferred into memory, where leaves a temporary copy of the work, and then displayed on the screen. If users run another order, new data thus will be transferred into the memory, overwriting or wiping out the original information. The web browser will also set aside a portion of the hard drive as the system cache, storing the web documents for the later reuse.

Another form of cache is Peer-to-Peer (P2P) caching, a technology used by Internet Service Providers (ISPs) to accelerate content delivered over peep-to-peep networks while leaving substantial fractions behind. With the development of streaming media and cloud computing, the public are preferring online experience to downloading. The shift has led to an exponential growth in the number of temporary copies on the Web, a phenomenon which is hard to miss.

2. Software as a Service

Also in highly development is Software as a Service (SaaS), a new service model that is unlike traditional applications requiring installation on users’ personal computers. The operation merely relies on the Internet to accomplish. The information that Application Service Providers (ASP) provided and users receive delivers through the Internet, which, based on former analysis, will inevitably involve temporary copies. SaaS is accessed by users using a thin client via a web browser. Like web cache, there are always some necessary parts of codes loading in the memory, keeping the programs running. Thus, SaaS is a process of producing a temporary copy of application data repeatedly.

Judging from the current pace of development, in the future digital environment, the amount of temporary copies will be innumerable as users’ each operation could potentially generate a temporary copy. Temporary copy is no longer a petty issue, but in desperate need of resolution.

B. Temporary Copy Should Subject to the Right of Reproduction?

The right of reproduction has always been at the heart of copyright. From an extensive point of view, translation, adaptation and broadcasting could be also regarded as acts of reproduction. In copyright laws, acts of reproduction are commonly defined as copies of works “fixed” in tangible
substance. In Copyright Law of the PRC, other forms of representation, such as broadcasting, translation and adaptation, are regulated by the derivation right. “Tangible substance” and “fixation” have been the most general constitution that differentiates acts of reproduction from others.

Before the birth of digital technology, the materials of “tangible substance” and the means of “fixation” are limited. The materials are nothing but papers, films, cassettes and others and the means are simply “printing, photocopying, copying, lithographing, making a sound recording or video recording, duplicating a recording, or duplicating a photographic work…”3 New media, such as CD, hard disk and flash memory, adds useful and convenient means to reproduction. Even though the digital age introduces such substantial fresh techniques, the requirement for fixation has not been removed. The only difference is that the copies exist for much shorter time, mostly just one second.

In the latest Copyright Law of the PRC (Revision Draft for Solicitation of Comments), the right of reproduction has been revised to “the right to fix the work on a tangible carrier through printing, reprinting, recording, reproduction as well as digital and other methods”.4 Adding “digital methods” to the list is a reasonable extension. The reservation of “fix”, however, seems to exclude temporary copies from the scope of the right of reproduction. In the digital environment, the access to copyrighted works is not only restricted to material substance, but also gained through the Internet. During the process of viewing or perceiving, the digital content stores temporarily in the memory of personal computers. If temporary copy was shut out, such act would therefore fall out of the realm of the reproduction right, which could cause flows within the provisions.

Temporary copy, whose definition has not been cleared by scholars, is a new phenomenon accompanied by the emergency of digital technology.

In my opinion, temporary copy should subject to the right of reproduction for several reasons. First, the acts of temporary copy occur only after users having an order to access to copyrighted works. It needs users’ initiative, which indicates their intention is clear and evident. Computers relying on temporary copies to proceed may not be aware of most users, but is under their command.

Second, temporary copy is known for its transience. However, the duration of short or long is relative. In fact, the time is long enough to meet the demand of browsing, watching and viewing, or to make temporary

copies into permanent ones. Therefore, the potential value of temporary copies cannot be estimated roughly by the lasting time. It is inequitable to deny temporary copy should be a part of copyright.

Last but no least, temporary copy matches perfectly the requirement of reproduction. Firstly, temporary copy, like other copies, is a recurrence of copyrighted materials. Although each piece contains only a portion of original works, it is the substantial piece that jointly constitutes a complete copy, and then the copy is displayed on the screen as a whole. Secondly, the carrier of temporary copies is, in fact, not intangible. The permanent copy downloaded from the servers to local computers is no doubt a reproduction in the copyright circumstance. Temporary copy, almost like permanent copy, is downloaded from the Internet and then stored in computers’ memories. Similarly, it should be regarded as a type of reproduction. Thirdly, absent cumulative creation during the transmission, temporary copy is a mechanical replication rather than transformative. It certainly cannot be exempt by the fair use doctrine.

The conclusion can be drawn based on the above reasons that the ownership of temporary copy ought to be one of the reproduction rights since it has all the characteristics of traditional copy.

II. FOREIGN LEGISLATIONS ON TEMPORARY COPIES

Faced with a new phenomenon, theoretical research is still in its infancy. There are plenty issues, especially whether temporary copy should fall within the scope of the right of reproduction. In some states, as copyright law literally includes all kinds of “copy”, temporary copy naturally should be a member of it. What are needed are a few extra limitations and exceptions to copyright such as the fair use doctrine. Some states veto the idea considering the ownership of temporary copy as a property right, while international conventions tend to approve it. In 1967, Berne Convention for the Protection of Literary and Artistic Works, Stockholm Act Article 9(1) initially stated right of reproduction as “the exclusive right of authorizing the reproduction of these works, in any manner or form.” Subsequently, in WIPO-Guide to the Berne Convention, the words “in any manner or form” were interpreted as “all methods of reproduction … and all other processes known or yet to be discovered”.

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A. European Union

In Europe, Council Directive 91/250/EEC firstly mentioned both the “permanent or temporary reproduction”. In the following InfoSoc Directive (2001/29/EEC) Article 2, “member states shall provide for the exclusive right to authorize or prohibit direct or indirect, temporary or permanent reproduction by any means and in any form, in whole or in part”. EU, however, made some regulations ascertaining the boundary, as Article 5(1) reads:

Temporary acts of reproduction referred to in Article 2, which are transient or incidental [and] an integral and essential part of a technological process and whose sole purpose is to enable: (a) A transmission in a network between third parties by an intermediary, or (b) a lawful use of a work or other subject-matter to be made, and which have no independent economic significance, shall be exempted from the reproduction right provided for in Article 2.

Evidently, in principle EU has recognized temporary copy as an act of reproduction. In the meantime, EU advocates putting temporary copy in the chapter of limitations and exceptions to justify incidental copies (also known as technical copies) of copyrighted works, encouraging the protection of licit right of owners, as well supporting appropriate fair use.

B. United States

As a nation applying common law, US initially sought to resolve the temporary copy issue by judicial precedence. Successively by Apple Computer, Inc. v. Formula Int’l Inc. (1984), Vault Corp. v. Quaid Software Ltd. (1988), MAI System Corp. v. Peak Computer, Inc. (1993), state courts have confirmed the idea that loading software into computers’ RAM is an act of reproduction, namely, including temporary copy. In the 90s of the last century, in order to address various types of copyright issues, a panel called Information Infrastructure Task Force was founded, who, after two years of research, released an important report entitled Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights (as known as the NII White Paper). A work is fixed “when its embodiment in copy or phonorecord ... is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration”, the report

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Because of the conflicts of various stakeholders, however, the US congress vetoed the report.

Although Digital Millennium Copyright Act (DMCA) did not specify that the right of production includes acts of temporary copy, it to a certain extent acknowledged the concept. While developing WCT and WPPT, from the basic proposal submitted to the Committee, US insisted that subject to the provision of the Berne Convention, the right of reproduction should contain temporary copy.\(^7\)

From the above reports and regulations, it can be seen that US has been intending to include temporary copies within the scope of traditional copyright law and then impose limitations on the exploitation of the reproduction right, which is claiming the reproduction right for temporary copies without prejudicing the economic value enjoyed by the claimant. The NII White Paper also points out that it has been long cleared under US law that the placement of copyrighted material into a computer’s memory is a reproduction of that material (because the work in memory then may be, in the law’s terms, “perceived, reproduced, or communicated with the aid of a machine or device”)\(^8\), which means if temporary copy has economic value, it should obtain copyright protection. If not, incidental copies, another call for such kind of temporary copy, “do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder.”\(^9\)

C. Australia

Australia has long opposed the right of reproduction could regulate temporary copies. In its report entitled Copyright Reform and the Digital Agenda: Proposed Transmission Right, Right of Making Available and Enforcement Measures (1997), Australian legislature clearly refuted to extend copyright protection to incidental copies. Afterwards, Copyright Act was amended in accordance with the US-Australia Free Trade Agreement, which includes recognizing temporary copies stored in computer memory as reproductions falling within the copyright owner’s exclusive rights. There

\(^8\) WIPO, Doc. CRNR/DC/4, 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 (1996), Article 7.
are also various exceptions for temporary copies made in the ordinary course of use or communication of digital copies of works.

In summary, whether temporary copies should be included in copyright protection varies in different countries or regions. The approaches above are adopted to their respective national legislations, all having their rationale and advisability.

III. RECOMMENDATIONS ON THE REVISION OF COPYRIGHT LAW

The Copyright Law of PRC, though, has not illustrated the boundaries of temporary copies, it has acknowledged temporary copies fall within the scope of the reproduction right in judicial practices. That being the case, it is suggested that China could witness the improvements in its copyright law soon.

A. Toutiao.com Case

In June, 2014, Guangzhou Daily and Sohu, an Internet giant, sued Toutiao, a popular news app, for copyright infringement and unfair competition. Like Flipboard, Toutiao offers customized news content aggregation based on users’ personal interests.

Toutiao’s CEO replied that the app, which is more like Google, merely provided news searching and linking to original pages. That was saying Toutiao was protected under Safe Harbor Principle. If this respond would stand, Toutiao should not be liable for compensation when it disconnects the link to news content after receiving the notification from the news owner.

However, Safe Harbor Principle is not working for this case. For it to work, the linking service that Toutiao thought it delivered should not reformat original pages. Toutiao not only optimized original pages, but also delivered an optimized page without ad, which could not be simply defined as a linking service. But is it the reformatting a sort of copyright infringement?

In fact, the court has dealt with such a problem before. In Xuanting vs. Baidu (2010), Baidu runs the search service website—www.baidu.com. Baidu search services it provided have offered users numerous links to copyrighted works of Xuanting Entertainment. Moreover, for the readability of PC web pages on mobile phone screens, Baidu would convert the web pages into WAP pages on its secondary domain wap.baidu.com. This convert process unavoidably involves temporary copies of copyrighted works, just as the court stated—the format conversion alleged by the defendant Baidu technically requires copying the content of a WEB page
onto the memory of Baidu’s server or hard disk before being processed and converted into a WAP page.

In China, Copyright Law has not made any regulation of temporary copy. We, nevertheless, could use juridical practices in the EU as a reference. Article 2 of InfoSoc Directive has put temporary reproduction within the scope. Article 5 made exceptions and limitations when temporary reproduction is transient or incidental and an integral and essential part of a technological process and whose sole purpose is to enable: A transmission in a network between third parties by an intermediary, or a lawful use. Baidu’s real-time transcoding satisfies the conditions.

Regarding the first condition, real-time transcoding is transient. In Infopaq International A/S v. Danske Dagblades Forening, the European Court of Justice found that an act can be held to be transient within the meaning of the Article 5 of InfoSoc Directive only if its duration is limited to what is necessary for the proper completion of the technological process in question, it has been understood that the process must be automated so that it deletes that act automatically, without human intervention, once its function of enabling the completion of such a process has come to an end. During the transcoding, once the converted content is delivered to users, it will be erased from Baidu’s server automatically.

Second, real-time transcoding is incidental. In Public Relations Consultants Association Ltd (PRCA) v. the Newspaper Licensing Agency Limited and Others (NLA), the European Court of Justice decide that an act can be held to be incidental as long as it does not exist independently of nor have an independent purpose out of the technical process. Transcoding is a necessary process for users to read the pages efficiently without character transformation.

Third, real-time transcoding is an integral and essential part of the technological process. In PRCA v. NLA, the court interpreted that the condition of fair use is fulfilled when the act is a necessary element of the technological process and therefore without which that technological process would not be possible.

Real-time transcoding has no independent economic value as well. The value of real-time transcoding lies in its function, which is rendering a readable page on a mobile phone’s screen. After delivering the page to the phone, servers will automatically delete the origin. Once another user accesses the same page, real-time transcoding will be triggered again. The content transcoded from the same page, in other words, is not able to be reread by other users, making the whole process reliable to a certain user’s act of browsing.
Despite its name, in China temporary copy has not been recognized in the legal sense as an act of reproduction yet. Even in Europe, the recognition is not without limitations. It concludes that the service provided by Toutiao should not be considered as an infringement of copyright.

This should have settled the case. However, a report quote that Zhang Yimin, the founder of Toutiao, said Toutiao would transcode and store the data on its servers beforehand in case the heavy traffic brought by Toutiao might crush the media’s servers. This subtle change means a huge difference. When users click the title, they will obtain the content from Toutiao’s servers rather than the origin’s. Such an act, which concerns the unauthorized copy and distribution of copyrighted works through the Internet, is undoubtedly a violation against Copyright Law.

Since it stores the data that should be generated when necessary and erased later, Toutiao will face a trial like Baidu’s. In Xuanting v. Baidu, the final decision made by the court indicated that Baidu Company directly placed complete contents of appeal-involved works on its server and provided the works through the way where users can obtain novels by clicking on novel search, was a behavior of copying and uploading works. Additionally, it had the works transmitted through the Internet; therefore, it constituted direct infringement.

Prof. Zhang Ping from the Peking University added that most current transcoding is based on the web pages. The voice recognition technology has enabled the transition between voice and words. The commercial exploitation of transcribed words will probably lead to more copyright disputes. As can be seen from the above, an infringement act involves multiple rights of the owner, which increases the complexity of the cases. Nevertheless, the provisions on reproduction right and temporary copies under PRC Copyright Law lag far behind judicial practice. Reproduction right does not give so much room for sentence as information network transmission right does. Therefore, it is strictly necessary to consider taking temporary copies within the scope of reproduction right for future consideration.

B. Flexible Legal Model of Limitations

The dispute of temporary copies has already emerged back in the 1990s. China has been very cautious about the definition of temporary copy. Regarding the scope, in 1996 Diplomatic Conference, not only did the Chinese delegation propose an alternative definition of reproduction right as “... direct and indirect reproduction of their works, which is permanent”,

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but they voted against the statement.

While China was drafting the Regulation on the Protection of the Right to Communicate Works to the Public over Information Networks, a focus for debate remains on the position of temporary copies.

After the regulation had been issued in a press conference, a legislative affair officer of the State Council replied, “it has been suggested that the regulation should clarify the lawful scope of temporary copies. After a careful study, the State Council believes that even if prohibiting temporary copies were legally possible, it would not be virtually operational. There has been intense dispute about setting a limit on temporary copies. A fair number of developing countries, include China, explicitly oppose the prohibition of temporary copies. The Internet treaty does not provide for the prohibition because of the dispute, and as authorization legislation, it is not appropriate to do either.” It can be seen that the confirmation of “temporary copy” as an act of reproduction, in our current copyright legislation, we cannot find the basis.

However, with the rapid development of Internet technology and digital publishing technology in recent years, digital communication has become the most important way to spread. This makes the access to works more convenient. At the same time, the conflict of interest caused by temporary copies is becoming more and more prominent. Especially in the IT industry, Alibaba, Tencent, Baidu and other Chinese companies are in rapid development and the value of IP output is also growing fast. When overseas companies begin to copy Chinese products, national protectionism policy could adversely affect copyright owners in China. To resolve the temporary copy issue is one of the urgent topics while drafting the new copyright law, concerning the prosperity of the copyright industry in the future.

The Berne Convention did not contain the provisions of temporary reproduction in the draft treaty because international treaties regulating copyright set the minimum standards of protection that the contracting parties should take into account when adopting legislation.\textsuperscript{11} The supporting parties, such as US and EU, have included temporary reproduction into their respective national legislations. The deletion of “whether permanent or temporary” in the draft treaty could lead to problems in the future, and to solve those potential problems, the Berne Convention introduced a tree-step test.

\textsuperscript{11} Notes on Article 7, Draft Treaty, 7.17. It seems that the countries of the Berne Union, having freedom of interpretation with respect to Article 9(1) ... This leaves only the second option: Designing a limitations clause that makes it possible to avoid any problematic and unintended effects.
Article 22 of the Copyright Law of China provides an exhaustive list of limitations to the right of reproduction. The list consists of 12 limitations, which is unlikely to cover all the circumstances. To compensate for the inadequacies of such a “closed” restrictive legislative structure, in our judicial practice, there is flexible interpretation of the Article 22. However, such interpretation has the tendency to expand the scope and then was criticized for arbitrary power of decision. In view of the above problems in judicial practice, revising copyright law is also exploring a reasonable adoption of the international three-step test.

Some scholars point out the legislative models of limitations and exceptions mainly include: Open and closed, and advocate those two models have their own philosophy and historical backgrounds. In the overall trend, more and more countries seem to increase the legal flexibility to limitations and exceptions, which shows that US fair use doctrine (a more flexible copyright limitation) is getting recognized. Based on the present situation, the Copyright Law of China should not remain “closed”, but the wording of legislation should be carefully designed to balance legal certainty and flexibility. As compared to the fully compliance with the three-step test, a Chinese Version of “fair dealing” standards seems to be more desirable.

Article 107 of the US Copyright Act provides four factors that the courts are expected to consider in destemming whether a particular use of a copyrighted work is fair. Some concerns have been raised regarding the conflict between the open clause law approach and the three-step test. It has been asserted that the fair use and fair dealing systems did not qualify as “certain special cases”.12 Martin Senftleben believes that the open clauses allow the courts to determine “certain special cases” of permissible unauthorized use in the light of the individual circumstances of a given case. With every court decision, a further “special case” becomes particularized and thus “certain” in the sense of the three-step test.13

There is a growing consensus on the issue about the consistency of fair use and fair dealing with the three-step test. The fair dealing model in common law jurisdictions adopted by Taiwan, copyright limitations not only enumerate specific situations in Articles 44-63 of the Copyright Act, but also contain a general guiding provision, Article 65(2), which is applicable to circumstances listed in Article 44-63. The same four factors in

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the US fair use doctrine are included in Article 65(2) to determine fairness from the listed situations and other possible circumstances. The Taiwanese legislative model may enlighten Mainland China in reforming its copyright law on limitations and exceptions by importing means that are both rigid and elastic.

CONCLUSION

In the digital age, acts of reproduction have the characteristics of high frequency, uncertainty and objectivity. Traditional copyright law, which was structured around the right of reproduction, has not been able to apply to temporary copies. Copyright law secures to the copyright owner the exclusive rights to provide an incentive for the creation and distribution of copyrighted works. Digital technology, an accelerator to the distribution, brings economic benefits for copyright and becomes a new tool to allocate profits. The extension of the right of reproduction concerns the split of profits among owners, users and distributors. From foreign legislative experience, including temporary copies within the scope of the right of reproduction is justified and in line with the requirements of international treaties. Furthermore, the protection should be subject to the fair use doctrine. The direct incorporation of the three-step test in the Copyright Law of China appears to be problematic in the digital environment. In comparison, the fair use and fair dealing systems seem to be more suitable for the reconstruction of limitations and exceptions to copyright, and at the same time comply with obligations under international treaties.

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14 The four factors are as follows: (1) The purpose and nature of the use, including whether the use is for commercial purpose or nonprofit education; (2) the nature of the work; (3) the amount and substantiality of the portion of the work used in relation to the entire work; and (4) the influence of the use on the potential market and the current value of the work. See Taiwanese Copyright Act, Article 65(2).