

# Study on Internet Service Providers' Duty of Care for Copyright Infringement under Algorithmic Recommendation Technology

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## Abstract

The liability of ISPs under algorithmic recommendation technology is examined from two aspects: whether there is fault (knowingly or recklessly) and whether necessary measures have been taken: firstly, whether the algorithmic recommendation technology has aggravated the duty of care of the ISP; secondly, whether filtering measures should be regarded as “necessary measures” that should be taken by the ISP. First, whether the algorithmic recommendation technology has aggravated the duty of care of the network service provider; second, whether the filtering measures are considered as “necessary measures” that should be taken by the network service provider. Nowadays, when algorithmic recommendation technology is widely used, it is even more urgent for network information service platforms to fulfill their due diligence obligations in accordance with the law, which not only concerns the balance of interests between right holders and platforms, but also involves the issue of how to fairly and reasonably distribute the benefits and risks brought about by the development of science and technology. Currently, under the algorithmic recommendation mode, the process of uploading content by users is separated from the dissemination process, and the role of the platform has changed from a passive “neutral” to an active “participant”, at which time, the platform still adopts an ex post facto “notification and deletion” approach. At this point, it is difficult for the platform to claim that it has fulfilled its responsibility by adopting the behavior of “notification and deletion” after the fact. The platform can use algorithmic technology to realize accurate pushing, but also has the ability to realize copyright filtering and monitoring at a more economical cost to reduce the risk of infringement. According to the principle of balance of interests, the current technical conditions and the development of reality, it should be changed from the passive “notice and deletion” rule to the stage of increasing the main responsibility of the platform, i.e., the platform establishes the rules of intellectual property rights protection, and obtains the authorization based on the principle of the utmost good faith in order to exercise the duty of care of the good administrators.

## Keywords

Algorithmic Recommendation; Network Infringement; Duty of Care; Safe Harbor Rule; Balance of Interests.

## 1. Presentation of the Problem

Algorithmic recommendation technology, is a network service provider through the processing, analysis of user information and historical data in order to draw a “user profile”, so as to carry out targeted content recommendation. This technology is different from the manual editing and recommendation model, which provides Internet users with more personalized content that is more in line with their preferences, and at the same time poses a number of challenges to the protection of copyright and the determination of liability for copyright infringement of Internet

service providers. The first case of algorithmic recommendation in the country, for example, the basic facts of the case are as follows: Beijing Aiqiyi Technology Co., Ltd. (hereinafter referred to as "Aiqiyi") is the operator of the online video platform "Aiqiyi", which is authorized by law to enjoy the exclusive information network dissemination right of the popular film and television work "Yanxi Raiders" (hereinafter referred to as the "Yanxi Drama") in the global scope. During the period when the delayed drama was on air, a large number of short videos uploaded by users appeared on the iOS and Android versions of the "Today's Headlines" mobile application (hereinafter collectively referred to as the Today's Headlines App) operated by Beijing ByteDance Technology Company Limited (hereinafter referred to as "ByteDance"). (hereinafter collectively referred to as "Today's Headlines") operated by ByteDance. Aikiye considered that Byte Company's act of recommending and disseminating the relevant videos to the public by using the information flow recommendation technology was an act of assistance by network users in infringing upon Aikiye's right of information network dissemination of extended dramas, and sued the court to request Byte Company to compensate for the economic loss and expenses for the defense of rights. Byte argued that as a platform providing information storage services, it did not have the subjective intent to participate in the infringing behavior, and was not at fault because it had exercised reasonable care. The case was heard by the Beijing Haidian District People's Court, which ruled that the defendant Byte should compensate the plaintiff Aiqiyi for 1.5 million yuan and 500,000 yuan in reasonable litigation expenses, and rejected Aiqiyi's other claims.

The focus of the case was whether ByteDance should be held jointly liable with the infringing user for the use of algorithmic recommendation technology. The court held that, on the one hand, ByteDance objectively did not directly participate in the uploading and publishing behavior of the users, and at the same time, there was no subjective intentional contact between ByteDance and the users, so ByteDance did not constitute direct infringement. On the other hand, the court judged whether ByteDance constituted indirect infringement from the elements of "whether it knew or should have known" and "whether it took necessary measures". Love Qiyi claimed that ByteDance's "reasonable duty of care" should be appropriate to the algorithmic recommendation technology it used, i.e., ByteDance should have a duty of care that is higher than the general standard, which includes preventing and stopping the uploading of infringing content in advance, discovering the infringing video in time, and taking necessary measures such as deleting and blocking the video after receiving the notification in a timely manner. ByteDance argued that the algorithmic recommendation technology did not recognize the specific content of the video, and that it had already exercised a "reasonable duty of care" by proactively adopting a number of platform management measures, thus denying that it constituted indirect infringement.

In this case, the Court, in its reasoning, did not directly refer to the failure to exercise the "duty of care" as a factor in determining Byte's subjective fault, but only emphasized it as a "matter of concern". The court emphasized that if ByteDance did not have to perform the corresponding duty of care, it would be equivalent to the enjoyment of network services by infringing users, Byte Company to obtain commercial benefits at the same time, so obvious infringement of the adverse consequences caused by the allocation of copyright holders, which is fundamentally contrary to the basic principles of the copyright law, the relevant laws and regulations, and the original intent of the judicial interpretations. Justice in individual cases is the basic unit of justice under the rule of law, and nowadays, when algorithmic recommendation technology is widely used, it is even more urgent for network information service platforms to fulfill their due diligence obligations in accordance with the law, which not only concerns the balance of interests between right holders and platforms, but also involves how to fairly and reasonably distribute the benefits and risks brought about by the development of science and technology. Through in-depth analysis of the first algorithmic recommendation case in China, this article

aims to summarize and conclude the criteria for measuring the “duty of care”, with a view to promoting the legal application of such cases.

## **2. The Dilemma of Determining the “Duty of Care” of Network Service Providers under Algorithmic Recommendation Technology**

In China's traditional legal system, the duty of care of ISPs covers three aspects: the “notice-and-delete rule”, the “red flag principle”, and whether “necessary measures” have been taken to stop infringement. The obligation of care for ISPs in China's traditional legal system covers the “notice-and-delete rule”, the “red flag principle” and whether “necessary measures” have been taken to stop infringement. According to Article 1197 of the Civil Code, if an ISP knows or should know that an Internet user has infringed upon the civil rights and interests of others by utilizing its Internet service, and fails to take the necessary measures, it shall be jointly and severally liable with the Internet user. Meanwhile, in the process of formulating the relevant regulations, China has borrowed the safe harbor rule in the U.S. Digital Millennium Copyright Act, which stipulates the obligation of network service providers to “notify and delete” and the exemption of liability after the fulfillment of the obligation of “notify and delete”, i.e., the network service provider shall be liable for the infringement of the rights and interests of other people upon receipt of the notification of the infringement. That is to say, the network service provider can be exempted from liability if it deletes or blocks the infringing information in a timely manner after receiving the qualified infringement notice from the right holder. Accordingly, China's network service providers of copyright infringement of responsibility for the application of the principle of fault liability, and does not provide for network service providers on the content of the general obligation of prior review. Therefore, to determine the liability of network service providers for copyright infringement, the idea should be to determine the existence of fault (knowingly or should have known) and to determine the failure to take the necessary measures, thus assuming joint and several liability.

The determination of the liability of ISPs under the algorithmic recommendation technology is also examined from the aspects of “whether there is fault” (knowingly or recklessly) and “whether necessary measures are taken”. In addition, the development of the platform makes the relevant copyright infringement behaviors show certain peculiarities. On the one hand, the infringing behaviors in the relevant platform occur continuously and repeatedly, and the infringed person carries out the “notification-deletion” method for individual infringing behaviors one by one, which is inefficient and costly for the remedy of the right; on the other hand, the online platform accurately pushes the relevant content through the algorithmic recommendation and other technologies, which enlarges the scope of the dissemination of the content and attracts a large number of users and improves the platform's performance. On the other hand, through algorithmic recommendation and other technologies, online platforms accurately push relevant content to expand the scope of dissemination of the content, and thus attract a large number of users and increase the number of visits to the platform, thus obtaining considerable economic benefits. These features have given rise to disputes over the duty of care of online platforms, which mainly fall on two levels: first, whether the algorithmic recommendation technology has aggravated the duty of care of online service providers; and second, whether filtering measures are considered “necessary measures” that should be taken by online service providers.

### **2.1. The Dilemma of Determining “Should Know”: The Impact of Algorithmic Recommendations on the Duty of Care of Network Service Providers**

Algorithmic recommendation is a way of presenting information that network platforms push personalized information for users according to their specific situation in order to meet their needs. This algorithm-based personalized recommendation is different from the manual

sorting and editing in the past. In today's Internet business model, the release of content through algorithmic recommendations in the information distribution market has long been the main means of Internet platforms. The principle of attribution of tort liability for network service providers is the principle of fault, therefore, when discussing the impact of algorithmic recommendation technology on the liability of the platform, the core lies in whether it will lead to the platform having fault. It is worth noting that the use of algorithmic recommendation technology does not mean that the platform necessarily belongs to the "knowingly or ought to know", because this process does not have the platform's editorial intervention recommendation, does not belong to the legal provisions of the situation of ought to know. Algorithmic recommendation should not result in an excessive duty of care on the part of the platform, as it is neither economical nor realistic, and is extremely unfavorable to the development of the industry as a whole. There is also the view that if the algorithm wants to recommend content, it must first identify the content, so its exposure to the content is inevitable and specific. Meanwhile, in the judgment of this case, the court held that the information streaming recommendation service provider should bear a higher duty of care than the information storage space service provider, because the information streaming recommendation has the risk of increasing the efficiency of infringing dissemination, expanding the scope of infringing dissemination, and aggravating the consequences of infringing dissemination, while at the same time, it brings more benefits such as more traffic flow and competitive advantage in the market for the short video platform.

This paper argues that the key to this issue lies in the impact of algorithmic recommendation technology on the determination of "should know" of network service providers. Should know, refers to the specific should know rather than generalized should know, network platform only general knowledge of the existence of infringing content within its platform does not constitute the copyright law sense of should know. At the same time, the content of knowledge includes two aspects: one is to be able to reasonably recognize that the work in question is disseminated in its storage space, and the other is to be able to reasonably recognize that the network user provides the work in question without the permission of the right holder. The prerequisite for reasonable awareness is that the platform has the opportunity to access and recognize the relevant information. In this case, the collaborative filtering mechanism adopted by today's headline app is divided into four stages: preliminary examination (technical identification and manual review), cold start, weighted recommendation and manual review. In these four stages, the manual part of the preliminary review and review is the opportunity for the platform to access the content. At the preliminary review stage, platforms should not be required to have a clear understanding of infringing content, as this is actually a requirement for platforms to fulfill certain prior censorship obligations, which is not in line with the current law. As for the review stage, the situation may be different, because the amount of content that the platform needs to review is relatively limited, and it no longer needs to face a huge amount of information. Therefore, if the information under review has significant infringing features, the platform should be able to reasonably recognize this.

## **2.2. The Dilemma of Recognizing "Necessary Measures": Necessary Measures to be Taken by Network Service Platforms**

When an online service platform "knows or should know", it should take the necessary measures to prevent the infringement from expanding, and whether the "necessary measures" include filtering measures is another focus issue. In judicial practice, effective filtering of infringing content is mainly carried out through behavioral injunctions. According to the data, between June 2021 and February 2022, there were at least 10 injunctions filed by right holders in response to requests for injunctions requiring the relevant online platforms to take effective measures to filter and block infringing videos uploaded and distributed by users. Specifically,

four of these decisions<sup>12</sup> dismissed the applications. In the rejected rulings, the courts did not directly deny the need for the relevant online platforms (mainly short video platforms) to implement content filtering measures, but on the contrary, considering that the platforms had actively removed the links to the relevant infringing videos and promised to take the initiative in reviewing and filtering the videos to curb infringing behaviors, the courts considered that there was no need to take behavioral preservation measures, and thus rejected the injunction applications of the right holders. However, the decision also revealed the court's concern and conservative attitude towards filtering measures: First, improper implementation or expansion of the scope of behavioral preservation measures may affect the respondent's normal business activities, and may even restrict the public's free access to and enjoyment of cultural products; second, in the event that the parties hold different positions and are unable to unify their views, for the secondary video with the nature of narration, introduction, and commentary, the court held the following opinions Secondly, if the two parties hold different positions and cannot reach a unified view on whether a short video with narration, introduction and commentary constitutes infringement, the parties and the court need to invest a lot of energy in judging one by one, which not only aggravates the operational pressure of enterprises, but also adversely affects the benign and sustainable development of the short video industry; thirdly, the fragmented narrative content presented by the short video cannot be shared with the user as a coherent infringing work through splicing, and thus is insufficient to replace the dissemination of the infringing work.

The remaining six rulings<sup>13</sup> all supported the injunction applications filed by the right holders, requiring the short video platforms to immediately implement effective measures to filter and block the infringing short videos uploaded by users. The reasons for supporting these applications include: first, the right holders have a stable rights base; second, the works in question are usually in the hot air and have a strong timeliness.

Second, the works in question are usually in the hot air and have a high timeliness, and the relevant platforms have a large number of users and a wide coverage, so once infringed upon, the videos will be disseminated within a short period of time; third, the network service platforms have the ability to implement effective means to control the occurrence of infringing content; fourth, the implementation of filtering measures will not affect the normal business activities of the network platforms, and the users' freedom of expression can be protected by means of user complaint mechanisms and manual review to prevent wrongful convictions.

Accordingly, the conditions under which the court should adopt filtering measures for short video platforms are summarized as follows: first, on the premise that the right holder takes the initiative to make a request, and the right holder should send infringement notices and warning letters to the short video platforms for several times before filing an application for injunction to the court; second, it is limited to certain popular works only, and the work must be in the period of popular broadcasting at the time when the injunction is made.

Second, it is limited to certain popular works, and, at the time of the injunction, the work must be in or close to the period of popularity; Third, there must be a large number of infringing videos on the platform that are widely disseminated, and their titles usually contain the full name of the relevant work or keywords, and their infringing nature is very obvious; Fourth, the target of the injunction is a short-video platform that has a certain scale of commercial operation, mainly the head of short-video industry enterprises. It should also be noted that the court did not require the platform to implement filtering measures to completely exclude the infringing videos, as long as the content is not easily found on the platform.

In this paper, we believe that in the case of "knowingly or should know", the filtering measures should be the necessary measures to be taken by the algorithmic recommendation network platform. The reasons are as follows: First, in the case where the platform is recognized as "should have known", it is no longer necessary to require the right holder to send a notice of

infringement; second, in the context of the continuous development and maturity of science and technology, hash value, video fingerprinting and other identification technologies have been widely used, and the filtering measures are practicably feasible and effective in curbing the results of infringement.<sup>14</sup> Moreover, as mentioned above, the filtering measures should be taken by algorithmic recommendation network platforms. Moreover, as mentioned above, from the current practice, may constitute fair use of the second short video works of very few, these platforms through the user complaint and manual review can effectively avoid the occurrence of misjudgment. Of course, filtering measures should define the criteria and scope of “filtering”. On the one hand, platforms should filter infringing information with obvious infringing attributes that can be easily detected and localized; on the other hand, platform filtering measures should achieve the effect of effectively stopping and preventing obvious infringement, and it is not required to achieve “zero infringing short videos” in terms of the result, and a small amount of non-obviously infringing information can be allowed to exist. On the other hand, platform filtering measures should achieve the effect of effectively stopping and preventing obvious infringement. Finally, there are no restrictions on the specific methods of “filtering”, but they should be technically feasible and reasonably affordable. For example, keyword filtering should be supplemented by manual screening in specific cases, and the scope of keywords should be clear and can be determined by mutual agreement between the right holder and the short video platform.

### **3. Impact of Algorithmic Recommendation Technology on the Ability of Online Service Providers to Prevent Infringement and Remedy Rights**

By analyzing the business operation mode of the algorithmic recommendation service platform and the technical principles it adopts, the impact of the algorithmic recommendation technology on the platform's ability to prevent infringement and remedy rights can be judged, so as to further assess the feasibility of the technology leading to the platform assuming a “higher duty of care”.

#### **3.1. Impact of Algorithmic Recommendation Technology on the Ability of Network Service Platforms to Review Information Content**

In judicial practice, network service providers using algorithmic recommendation technology often use “technology neutrality” as a defense to infringement liability. China's traditional network infringement legislation does not specify whether the censorship obligation is imposed on network service providers. However, with the changes in the traditional content distribution model, the view that ISPs do not have a duty to censor has been gradually challenged. A valid decision held that “Aqiyi, as a well-known movie, TV and entertainment video provider website, provides movie and TV works as its important business, and its professional ability to review movie and TV works makes it liable for the duty of review.”<sup>16</sup> As algorithmic recommendation platforms have become more and more popular, they have become more and more popular and more popular. “With the continuous improvement of the professional ability of the algorithmic recommendation platform, the “censorship inability” caused by the “technical inability” has gradually been solved. Some domestic platforms have begun to build tools such as content fingerprinting, visual AI technology, and blockchain technology to strengthen the detection and identification of information content, thereby reducing the occurrence of infringement. At the same time, some platforms have begun to build a comprehensive network infringement comprehensive governance recommendation system, establish audit and monitoring mechanisms and standards for different copyrighted content, and invest a large number of manpower in screening and auditing content. In addition, some platforms have established blacklist databases and user account reputation rating systems to combat infringement behaviors such as handling and plagiarism. For example, the platforms

concerned have independently developed a copyright protection system, the “Spirit Stone System”. These network service platforms based on algorithmic recommendation technology are often powerful, with standardized management processes, huge user scale, and relying on their professional technical teams and rich experience in Internet operation, which obviously enhance their intervention and control ability on recommended content. Therefore, the progress of algorithmic technology provides the basis for platforms to impose more stringent review obligations.

### **3.2. Impact of Algorithmic Recommendation Technology on the Ability of Network Service Platforms to Intervene in and Control Information Content**

The basic operation principle of algorithmic recommendation technology is to match network users and information content by judging three elements: content characteristics, personal characteristics and scene characteristics. In the execution process, the algorithmic recommendation service platform will first identify and screen all kinds of information content, and the content that passes the audit will get the initial traffic; then, the recommendation algorithm will process the explicit and implicit actions made by the users when browsing and feedback them to the platform; the platform, after receiving these data, will conduct the drawing of the user's profile and analyze his/her preferences; then, the information content that the user is interested in and conforms to his/her preferences will be superimposed and repeatedly analyzed; the information content that meets the user's preferences will be added to and analyzed by the platform. Subsequently, the information content that is of interest to the user and meets his/her preferences will be overlaid and recommended several times, so as to achieve the effect of accurate push. Among them, explicit actions are mainly manifested by users actively clicking on the options of “like” or “not interested” displayed in the information content, or evaluating, reporting or complaining about the pushed content; implicit actions are manifested by users clicking on the recommended information content, staying in a certain video, or not clicking on a certain video, or not clicking on a certain video. Implicit actions are manifested by whether users click on the recommended information content or not, or how long they stay on a certain video. The core design logic of both explicit and implicit feedback is based on the technical standards of indexing, labeling and similarity. This gives platforms the “autonomy” to control the distribution of information content during the operation of their algorithms, and also gives them the ability to intervene and control information content. In the ByteDance infringement case, the court relied on the principle of algorithmic recommendation to affirm that algorithmic recommendation service platforms have the ability to monitor infringement on the basis of the click-through rate of the work and the dynamics of the comments when pushing the video. In the user comments, including a large number of “love Qiyi VIP white buy” “I in the headlines almost finished the Yanxi Raiders” and other obvious proof of infringement of expression. However, ByteDance failed to fulfill the corresponding duty of care to stop it in advance, and thus the platform was found to be subjectively at fault.

It is worth noting that the judgment of whether an algorithmic recommendation service platform can intervene in the information content is based on the judgment of the operation principle of the algorithm, therefore, it is necessary to require the platform to undertake the corresponding algorithmic transparency obligations. Algorithm transparency means that the algorithm user discloses and publicizes a series of information about how the algorithm is deployed, works and used.

Algorithm transparency refers to the disclosure of a series of information about how the algorithm is deployed, works, and used by the algorithm user, and the language should be easy to understand for the public. As an important strategy to regulate the behavior of algorithm service platforms and prevent the erosion of the legitimate rights and interests of algorithm

users, the requirement of algorithm transparency has already been stipulated in the Provisions on the Administration of Algorithm Recommendation for Internet Information Services, which stipulates that algorithm recommendation service platforms have the obligation to enhance the transparency and interpretability of algorithms.

### **3.3. Impact of Algorithmic Recommendation Technology on the Ability of Network Service Platforms to Stop Infringement Behavior**

Regarding the content and form of the notice, Article 1195 of the Civil Code stipulates the basic elements of a “qualified notice”, which should include prima facie evidence of infringement as well as the real identity information of the right holder. Article 14 of the Regulations on the Dissemination of Information Networks details the standard of “qualified notification”, stipulating that the notification shall include the name, contact information and address of the right holder; the name and network address of the infringing work for which deletion or unlinking is requested; and the preliminary evidence of infringement. These provisions indicate that ISPs may not take necessary measures in response to the “unqualified notification”, and will be exempted from liability accordingly. It is worth noting that this does not mean that the online platform is not liable under any circumstances, but rather that the online service provider is not considered to be subjectively at fault in the “appropriate scenario”. In this case, for example, between July 26, 2018 and August 24, 2018, Aqiyi sent 27 emails to ByteDance with the title of “Early Warning Letter of Yanxi Raiders”. Although ByteDance recognized the authenticity of the emails, it did not consider them to be valid notifications under the law.

ByteDance recognized the authenticity of the email, but did not consider it to be a valid notice under the law. The court held that the right holder had been repeatedly and continuously warned and informed, and it was impossible for ByteDance to be unaware of the details of the infringement of the rights of Yanxi Raiders by the platform. Therefore, even if there are some formal defects in the “notice”, the court will not deny that the network service provider should have the duty of anticipation.

The court will not deny that the network service provider should have the obligation to foresee. In other words, the notice of fitness for purpose is only a formal requirement and does not materially change the outcome of the determination of liability.

Reasonable and necessary measures should also be taken “in time” after receiving the notice. The term “timely” refers to the reasonable time for an ISP to take appropriate measures after receiving a competent notice from the infringer and within a reasonable time to take appropriate measures, taking into account the nature of the network service provided by the ISP, the manner and accuracy of the effective notice, the type of infringed rights and interests, and the degree of infringement. In general, the network service is not subject to any infringement of the rights and interests of the user. Generally, the network service provider can, in accordance with its own platform operation and management rules, analyze the user's complaints and the number of complaints and other factors, and implement a series of punitive measures within the platform, such as deduction of points and banning, function closure, removal of offending content, and account banning. For online platforms that use advanced algorithmic recommendation technology, the standard of necessary measures to deal with these situations is relatively higher. In this case, ByteDance began to take proactive copyright management measures on August 16, 2018, including systematic keyword screening, manual verification to prevent accidental deletion, and manual simulation of users using the Today's Headline App to conduct a review through keyword searches and refreshing of the information flow. The Court held that the measures taken by ByteDance were in line with its information management capabilities and had met the requirement of effectiveness. In addition, “reasonable period” is an important factor in judging “timeliness”. If the algorithmic recommendation service platform fails to take measures such as blocking, deleting or blocking

the account within a reasonable period of time, it can be recognized as failing to exercise reasonable care. In judicial practice, the specific period of “reasonable period” should be analyzed in light of the platform scale and business model of the network service provider, and it is generally believed that it should not exceed tens of days.

#### **4. Improvement of the “Duty of Care” of Network Service Providers in the Dispute of Algorithmic Recommendation for Copyright Infringement**

Traditional network service providers play the role of “intermediary”, due to “technical inability” to effectively identify and control copyright infringing content, based on which the platform only needs to undertake the “notification and deletion” obligation afterwards. The platform only needs to undertake the obligation of “notification and deletion” after the fact. Currently, under the algorithmic recommendation mode, the process of uploading content by users is separated from the dissemination process, and the role of the platform has changed from a passive “neutralizer” to an active “participant”, especially in the combination of algorithmic recommendation and commercial advertisement under the precise recommendation, and the platform profits more directly from the recommended content. Especially in the combination of algorithmic recommendation and commercial advertisement, the platform profits more directly from the recommended content. As a content distribution platform, it fails to take reasonable measures to stop infringing information because it has not fulfilled its obligation as a “good steward”. The platform's push behavior and the user's uploading behavior together caused the infringement, according to the theory of cause of damage, together constitute “multiple causes and one effect” of joint infringement. At this time, the platform still took the “notification and deletion” behavior after the incident, claiming that it had fulfilled its responsibility, but it is difficult to be established. The platform can use algorithmic technology to realize accurate pushing, but also has the ability to realize copyright filtering and monitoring at a more economical cost to reduce the risk of infringement. According to the principle of balance of interests, the current technical conditions and the development of reality, we should change from the passive “Notice and Delete” rule to the stage of increasing the main responsibility of the platform, i.e., the platform establishes the rules of intellectual property protection, and obtains the authorization based on the principle of the utmost good faith in order to exercise the duty of care of the good administrators.

##### **4.1. The Standard of Duty of Care: “Good Administrator”.**

The duty of care of a good administrator refers to the duty of care that the perpetrator should have to match his professional thinking and cognitive ability that participants of a specific occupation or a specific social activity usually have. Specifically for copyright infringement in the Internet environment, the duty of care is based on the platform's “foreseeing ability” and “foreseeing scope”, and is perfected from the management of content and users, time and other dimensions, such as the extent of “care”, combined with the platform's “foreseeing ability” and “foreseeing scope”. The scope of the duty of care is based on the platform's “ability to foresee” and “scope of foreseeability”, and the platform should improve the scope of “care” from multiple dimensions, such as management of content and users, time, etc., and strengthen the platform's copyright governance by taking into account the differences in the content pushed by the platform, as well as its own technological and management capabilities.

It is difficult to establish the platform to exempt the infringement consequences arising from the dissemination process of the platform on the grounds of technological neutrality. As the controller and participant of online infringement risks, it is necessary and capable of assuming the duty of care to proactively prevent such infringement. Currently, for major sports events, popular films and TV dramas and other time-sensitive content, as well as the “black and white list” issued by the State Copyright Administration on a regular basis, platforms have already

had the practice of individually reviewing whether such special works have been authorized by the right holders, in order to fulfill the duty of care of the good administrators to curb the occurrence of infringing acts to the greatest extent possible. The platform has already practiced individual review of whether such special works have been authorized by the right holders in order to fulfill its duty of care as a good administrator and to curb infringement to the maximum extent.

#### **4.2. Ex Ante: Preventive Obligations of Good Stewards of Online Service Providers**

Improving the platform's obligations based on whether or not it has received notifications from right holders can promote the platform's assumption of responsibility for copyright protection. As a controller and participant in the risk of copyright infringement, the platform is necessary and capable of assuming the multiple obligations of precaution, timely suppression, and assistance after the fact. The platform's preventive obligation includes two meanings: first, to obtain copyright authorization under the principle of utmost good faith. The second is to fulfill content screening. Although Article 17 of the EU Copyright Directive does not mandate online content service providers to fulfill the general filtering obligation, in order to fulfill this provision ISPs have to use filtering technology, and this provision is therefore controversial. However, in addition to the controversial mandatory filtering obligation, the value orientation behind Article 17 deserves more attention, i.e., it encourages online service providers to cooperate with right holders to obtain authorization, and the provision sets out the following three conditions that need to be met in order to be exempted from liability when online content sharing platforms fail to obtain authorization: first, the platforms must make their best efforts to obtain authorization, i.e., the platforms need to take the initiative to contact the copyright holders and actively negotiate to do their best to Second, when the copyright owner provides "relevant and necessary information" about the work or other content, the platform should make its best efforts to ensure that the work or content will not be uploaded or disseminated by other users, i.e., the obligation of "authorization and screening out" beforehand. Third, the platform shall take necessary measures in a timely manner after receiving a "sufficiently substantial notice" from the right holder, and in addition, it shall also do its best to prevent the infringing content from being uploaded again, i.e., the obligation of "notification and necessary measures" after the fact. It can be seen that the promotion of cooperation between OSPs and right holders is not only one of the purposes of the "safe harbor rule" in the original DMCA, but also a behavior advocated by the current EU Copyright Directive.

#### **4.3. Ex Post Facto: The Obligation of Good Stewardship for ISPs to Stop**

For works that are recognized as suspected infringers, the frequency of matching will be reduced to minimize the chances of their appearing in front of ordinary users. When the infringing behavior like "red flags" flying or platform after receiving the effective notice issued by the right holder, should take the initiative to delete, block similar infringing information and other necessary measures. However, in judicial practice, the determination of necessary measures needs to satisfy both formal and substantive elements, which means that the platform not only needs to take necessary measures in a timely manner in accordance with the user's infringing behavior as well as the nature of the services provided by the platform, technology and information management capabilities, but also requires that the necessary measures be taken to achieve the effect of stopping and preventing obvious infringement. Under the implementation of algorithmic recommendation technology, the same kind of infringing content may be repeatedly recommended, and the platform's mere adoption of necessary measures such as deletion, blocking, and disconnection to prevent infringing behaviors is not sufficient to prove that the measures taken by the platform will not expand the damages. In this case, even if the platform deletes the recommended infringing content in a timely manner, if the

same infringing content is still recommended afterwards, the platform may still be held jointly and severally liable because the measures taken by the platform have not reached the level of “necessity”. When the platform receives a notice of infringement, it can be deemed to have taken effective measures to stop the infringement by adopting the premise that it is technically feasible to do so and performing the obligation to stop the infringement to the best of its ability.

#### **4.4. Ex Post Facto: Obligation of Good Administrators of Network Service Providers to Assist**

When rights holders are defending their rights, they often face difficulties in obtaining evidence and high costs of defending their rights, but the amount of compensation awarded is relatively low. However, under the algorithmic recommendation, the rights holders rely on the cooperation of the platform to obtain evidence, and the platform's technological superiority can effectively help the rights holders to obtain evidence, cooperate with the provision of information on infringers, and assist in defending their rights. Platforms such as Sina Weibo and Tencent have set penalties in their service agreements or rules of user behavior, such as blocking the user's number, which can effectively stop the expansion of infringing behaviors and avoid subsequent disputes under certain circumstances. For infringing users, deletion is the only measure that can be taken when the infringement is minor, but a key monitoring list is set up for repeated or massive infringement, and punitive measures such as account blocking are taken when necessary.

### **5. Summary**

The efficiency of information distribution on online platforms has been significantly improved by algorithmic recommendation technology. However, this does not mean that the legal status of service providers has changed, and they are still subject to the “safe harbor” principle under copyright law as a whole. Nevertheless, the conditions under which these platforms can enter the “safe harbor” should be adjusted in due course. It should be noted that the behavior of algorithmic recommendation has a certain degree of subjectivity, and objectively brings economic benefits to Internet platforms. Given that the platform has the ability to regulate the algorithmic recommendation, strengthening the management of the platform recommendation mechanism, both in line with the expectations of social justice, but also to maximize the benefits. Therefore, it is necessary to broaden the scope of “should know” for the infringement liability of network service providers, and the effective necessary measures must be able to stop the dissemination of infringing content uploaded by users to the extent possible. The definition of “should know” and necessary measures should take into account the specific scale and context of the platforms set up by the ISPs, so as to avoid a one-size-fits-all and over-exaggerated approach, and should not replace the law's requirement for the capacity of universal platforms with the technical capacity of individual platforms.

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