

Copyright Filtering Obligations of Algorithmic Recommendation Service Providers

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Abstract: Algorithmic recommendation technology is widely used in various Internet industries. However, with the proliferation of user-generated content, the platform is not only providing personalized recommendation services, but also facing increasingly severe copyright infringement problems. This paper aims to explore the copyright filtering obligations of algorithmic recommendation service providers and analyze their legal responsibilities and practical challenges. Filter obligations derived from the lag of copyright infringement liability, is an important way of copyright infringement relief, combined with the relevant provisions of the copyright law, by exploring the practice of filtering mechanism, put forward the filtering obligation of civil relief, pay attention to "advance prevention + stop infringement", can promote the benign development of algorithm recommended technology and effectively respond to the regulation of the Internet industry.

Keywords: Algorithm Recommendation; Service Provider; Filtering Obligations; Copyright Infringement

1. Introduction

With the development of information technology, algorithm recommendation emerges as a new technology and is widely used in the Internet industry. The development of algorithm recommendation technology has brought great traffic dividend to the Internet platform, but it also leads to a surge in the risk of copyright infringement. Through the sorting of existing data, the academic community for network service providers "neutral status" and whether you need to introduce the copyright filter obligation is discussed, I think, for the court put forward "higher duty of care" and filtering obligation whether the dispute, should

analyze the logic behind the concept, clear the rationality of the filtering obligation and scope. This paper mainly discusses from three aspects, justifies the filtering obligations of algorithm recommendation service providers, and discusses the boundary of filtering obligations and the practice of facilitating filtering obligations.

2. Cause: Relief Lag and Obligation Expansion

Network service providers in the past based on its "technology neutral" status, the judicial practice mainly adopts "notice-delete" rules to determine its tort liability, but with the content recommendation and dissemination, copyright infringement liability faces new challenges, especially in the relief mechanism lag and platform obligation expansion two aspects, the existing legal system in tort and afterwards compensation present a certain lag, different from previous technical ability, platform to master more control content and distribution content power, based on this, should be the obligation of expansion platform [1]. The transformation of technology neutrality of network service providers and the diversity and secrecy of copyright infringement modes lead to the lag of relief and the expansion of obligation, thus introducing the semantics of filtering obligation, which is briefly described below.

2.1 The Lag of Copyright Relief Under the Existing Legal Framework

Existing legal framework cannot cope with the rapid development of technological change, digital and networked content transmission makes the copyright infringement has spread fast, strong concealment, wide range, under the existing legal framework, network service providers need not review to upload content, filtering, which leads to infringement content, incalculable consequences. Although the copyright law system has formed a relatively

complete copyright protection framework, but in the face of the rapid development of new technology still presents a lag, in the past through the administrative litigation or related departments of administrative intervention for relief, however, the algorithm recommended running characteristics of the copyright owner is difficult to find the infringement subject, the infringement of evidence is more difficult, cause irreversible situation [2]. Although the "safe haven rule" in the United States can play a certain role, it does not stipulate that network service providers are directly liable for infringement, and does not require Internet service providers to assume the filtering obligation before all content is uploaded [3].

2.2 Underlying Theory of the Filtering Obligations

"Technology neutral" status to defend, investigate its essence, just assume the content of the role of neutral recommendation and technology recommendation, but the application of algorithm recommendation technology, influence the transmission of recommended content and audience, leading to the change of "technology neutral" status, network service providers become "positive disseminator", which means that network service providers should bear more legal responsibility. In the traditional copyright law, the network service provider does not bear direct tort liability, but a passive role, obviously the characteristics of the algorithm recommended makes its unable to maintain this kind of identity, in the era of algorithm recommendation technology widely used, network service provider if not to upload content review or not take necessary measures to infringing content, may be considered it should assume such filtering obligation, not only limited to the general duty of care, this determination will appear legal liability defined in a fuzzy zone, but further illustrate the network service provider obligations need to expand, and even filtering obligations.

3. Practice: Filtering Mechanism and Practice Dilemma

technology of copyright filtering mechanism is not fully applicable, there are still some difficulties in practice, one of the most prominent is the accuracy of the filtering, algorithm technology deviation and

transparency problems and the problems of excessive filtering, analysis filtering mechanism application dilemma is an important task of introducing filtering obligations, provide technical support for the feasibility and rationality to filtering obligations.

3.1 Copyright Filtering Mechanism of the Algorithm Recommendation Service Provider

The filtering mechanism plays a huge role in avoiding infringement, protecting the legitimate rights and interests of copyright owners, and balancing user experience and copyright protection. The filtering mechanism is not an active filtering mechanism, but a voluntary filtering mechanism [4]. The Digital Single Market Copyright Directive issued in the field of copyright law has introduced a mandatory copyright filtering mechanism. In debating the directive, the US argued that voluntary filtering should be used and that no major adjustments should be made. China's Copyright Law also has a heated debate on this directive. Based on the domestic current situation, the voluntary filtering mechanism of the United States is a more appropriate choice for China [5]. According to the current development of the Internet, the United States and our country has not established a system of Internet management mechanism, Internet companies and network platform cooperation agreement not effective management, and small and medium-sized enterprises are not abundant cost support the mandatory filtering mechanism, algorithm filtering is not perfect, there are still misjudgment, error filtering, error identification, the cost of immeasurable, small and medium-sized enterprises cannot bear the consequences, therefore, China does not have the eu mature Internet operation background, and will increase the burden of small and medium-sized enterprises, is not conducive to the development of the Internet industry and innovation.

3.2 The Practical Challenges and Problems of Copyright Filtering Obligations

Algorithm filtering technology is not fully mature, may lead to users to upload legitimate content is wrongly labeled as infringement, upload content is deleted or shielding, filtering technology is not accurate to identify each

infringement content, for some unauthorized infringement content may because not timely found and processing, lead to platform assume corresponding fault presumption responsibility. With the development of content, the traditional copyright filtering method is difficult to effectively identify dynamic content, and more difficult to detect deeply forged content, leading to loopholes in the supervision of these content. Internet platforms are rich and diverse, and users may upload the same content on different platforms. The supervision of such content by filtering technology is limited, and the complexity of content identification will still lead to the widespread dissemination of infringing content. The use of filtering technology may involve infringing the copyright rights of copyright owners, while the use of filtering technology usually involves cross-regional and even transnational use [6]. Therefore, when using the technology, it should comply with the relevant provisions of national and international copyright laws, and improve the accuracy of the technology and the sense of user experience. Excessive filtering will lead to the ineffective dissemination of legal content, which is not conducive to the development and innovation of the Internet industry. In addition, service providers under algorithm recommendation may face corresponding legal responsibilities when using filtering technology. The change of the "technology neutral" status of service providers makes the traditional rules and principles unable to be applied to the current situation, and the distribution of legal responsibilities is the core content of regulating the Internet environment. In copyright infringement cases, the Internet platform how responsibility, for this problem in some Internet cases, in the algorithm recommended the first case, the court thinks the Internet platform should bear a higher duty of care, but for how to define a higher duty of care is not a specific standard, therefore, this for the introduction of filtering obligations provides a gap [7]. Combined with the current situation of China mentioned above, this filtering obligation is voluntary, and the protection of the rights and interests of the copyright owners is also a difficult problem that needs to be solved. According to the basic principle of the algorithm recommended, the need to build a carrying user data database

began to personalized recommendation to the user, in the process of collecting user data may violate the user's privacy, protect the user's privacy and the balance between the compliance of the platform is a service provider in the implementation of copyright filter. When the legal content uploaded by users is marked as infringing content, there are no relevant provisions on who it appeals to and in which way it can be appealed, resulting in the content that really needs to be spread cannot be spread. However, excessive protection may undermine the enthusiasm of creators. Only in the protection of copyright and promoting innovation can we better promote the development of the Internet industry. As for whether or not the "fair use" of some content should be allowed, the fair use principle is not reflected in the current algorithm recommendation technology.

4. Path: The Coordination of Legal Obligations and Technical Means

At present, China's Copyright Law does not clearly stipulate the copyright filtering obligation under the algorithm recommendation. The European Union has issued the Digital Single Market Copyright Protection Directive, which stipulates mandatory filtering obligations for service providers, and some countries have amended the E-commerce Directive to stipulate the regulatory and filtering obligations for online platforms when uploading content. China's Copyright Law puts forward the responsibility of copyright protection for network platforms. However, the implementation of these regulations is inseparable from the technical support. Internet service providers need to find a balance between the legitimate rights and interests of copyright owners and the rights and interests of users within the legal framework.

4.1 Analyze the Legislative Intention of the Copyright Law

According to the existing legal framework of copyright, different legal systems in different countries. The European Union's Digital Services Act requires service providers to delete the infringing content when they discover it, and to monitor the content uploaded by users. Although the Communication Code Law of the United

States stipulates the exemption clause, it also stipulates its obligation and liability for the infringing content. Germany has amended the Copyright Liability Law to increase copyright filtering obligations, requiring service providers to block or delete unauthorized works before they are uploaded to the platform, but exempting start-ups and small and micro companies, and imposing certain restrictions on filtering obligations. Different countries have taken relevant measures to protect online copyright, which also reflects the shortcomings of current copyright protection. In the process of revising the Copyright Law for the third time, China focused on whether to introduce the filtering obligation, but it was not included in the legal obligation in the end. At present, our country still take lessons from the "haven rules" liability, continued law modelling as one of the applicable mode of the copyright law, the algorithm to recommend the emergence of the new technology, the legal text, the judge when dealing with similar cases often according to fill the loopholes of the legislative purpose of the copyright law, the law revision to keep up with the development of science and technology, and present certain stability, and for the existing legal modification is not overnight. The legislative purpose of the copyright law is to protect the literature, art and scientific works of copyright and their rights, encourage socialist spiritual civilization, material civilization construction of creation and dissemination, promote the development of socialist culture and science, many courts quoted the misunderstanding, think the first half and the second half is the relationship between the direct and indirect purpose, actually otherwise, both should be the relationship between the means and purpose. Although the law does not stipulate the compulsory filtering obligation of service providers under algorithm recommendation, the legal obligation under the legal obligation of "safe haven rule", and technology has also become an important means to fulfill such legal obligations [8]. Although the Copyright Law is formulated for the purpose of copyright protection, it should also encourage the use of advanced technology to reduce the risk of infringement. The legislative purpose of the copyright law has problems in the judicial application, investigate its essence, is still in order to protect innovation, protect the creation

of works, and the use of new technology may affect the basic rights of users, excessive protection against its purpose, therefore, filtering obligations and technical means need to have a balance, jointly promote the development of the Internet industry.

4.2 Coordination of Legal Obligations and Technical Means

The law requires the service provider under the algorithm recommendation to assume a certain amount of copyright protection responsibility. As an important tool to fulfill this responsibility, the technical means should be regulated. In order to prevent the serious consequences caused by this new technology, the law encourages the use of advanced technology, in which content identification technology, AI copyright detection technology and machine learning algorithms have become common advanced technologies. This technology is not without problems in the operation process, and if not regulated, it will lead to excessive filtering, infringement of users' basic rights and other problems. The Copyright Law stipulates that service providers should ensure that their recommendation system does not infringe the legal copyright of others, and fulfill the responsibility of "reasonable review", requiring service providers to provide the specific process of content filtering. After the occurrence of infringement, service providers shall bear the corresponding responsibility. Implement these rules without the technical support, has the copyright content recognition technology can automatically identify the user upload or generated content, prevent the spread of copyright infringement, through artificial intelligence and machine learning model, to intelligent analysis, automatically identify potential infringement content, and filter according to the preset standard, and intelligent algorithm can push authorized content or copyright clear content, avoid automatic recommended suspected of infringement. When the algorithm technology conducts detection and filtering, the service provider should provide a complete set of recording and audit mechanism to facilitate the inspection and evaluation. Based on the dynamics of content creation, the technology should be updated in real time and timely respond to changes in new situations or new laws.

Machine audit may cause excessive filtering and infringement of users' freedom of speech and other basic rights. It is still necessary to establish a manual review mechanism to review complex copyright issues, and improve the accuracy and compliance of filtering. The coordination of law and technology requires the establishment of a cooperation mechanism between the four parties to jointly promote copyright protection and technological innovation. With the emergence of new technologies and new situations, the legal obligations need to be constantly updated, and a regular technical evaluation and legal compliance inspection mechanism should be established [9,10]. Legal obligations and technological development complement each other. The law needs to provide a clear compliance framework to provide theoretical support for the use of technical means, while the use of technology should operate in compliance under the legal framework to jointly promote algorithm recommendation service providers to fulfill copyright filtering obligations, and promote the normal operation and innovation of the Internet industry.

5. Epilogue

In the current era of rapid development of information technology, when all circles call for the balance of technology development and copyright protection, filtering obligation has become the best way to solve the problem of copyright infringement. Although the voluntary filtering mechanism is more conducive to the solution of the problem of copyright infringement, it does not have a theoretical basis at the present stage. The Copyright Law pays attention to copyright protection, and also needs to promote the innovative development of Internet enterprises. In the mode of algorithm recommendation, the filtering obligation of service providers is the

current optimal solution. In the future, as the filtration mechanism matures, it, the legal obligation to introduce it can be gradually realized.

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