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Determination of Copyright Infringement Liability of Online Game Live-Streaming Platforms

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Abstract. With the rapid advancement of digital technology and the widespread use of the internet, the online game live-streaming industry has been expanding continuously. However, in the field of legislative practice, the constitutive elements of infringement on online game live-streaming platforms remain ambiguous. Issues such as traffic manipulation by platforms, unreasonable aspects in infringement defenses, and unclear criteria for determining subjective fault—such as whether algorithmic recommendations constitute "constructive knowledge"—are yet to be clarified. Moreover, the scope of a platform's duty of care is still indistinct, including whether it bears an obligation to implement copyright filtering. These uncertainties have allowed certain parties to exploit legal loopholes and infringe upon the rights of copyright holders with impunity. By clarifying the criteria for determining infringement and legitimate defenses, as well as defining the boundaries of a platform's duty of care and subjective fault, this paper aims to address unresolved problems within the live-streaming industry. Such clarification not only helps to foster a sound and orderly live-streaming ecosystem but also holds significant theoretical and practical value for filling legislative gaps and promoting the healthy development of the industry.

Keywords: online game live-streaming platform, elements of infringement, infringement defense, duty of care

1. Introduction

With the rapid iteration of digital technologies and the deep penetration of the internet, live streaming has evolved into a new form of industrial activity and social interaction, encompassing fields such as education, sports, and gaming. Its advantages of visual presentation combined with high interactivity cater perfectly to public entertainment needs. From influencers initiating live e-commerce campaigns to game streamers gaining popularity through gameplay skills and strategy, live-streaming scenarios have continued to expand, user bases have grown rapidly, and the market has reached immense scale—making live-streaming platforms some of the most dynamic and commercially valuable spaces in the digital era.

However, from the unauthorized re-uploading of music videos to the live broadcasting of sports events and online games, infringement issues have emerged one after another. Due to their vast content scope and rapid dissemination, online game live-streaming platforms have become high-risk areas for infringement disputes, involving issues such as the copyrightability of game visuals,

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attribution of liability, and ownership of rights. In legislative practice, a clear and unified legal framework for determining copyright infringement liability on online game live-streaming platforms has yet to be established. In practice, ambiguities persist: for instance, whether the visual content generated during gameplay falls within the scope of copyright protection, and what specific conditions constitute direct infringement by the platform. Similarly, the application of the doctrine of fair use in infringement defenses remains vague and inconsistent.

Against this backdrop, studying the determination of copyright infringement liability for online game live-streaming platforms holds both theoretical and practical importance. Theoretically, it helps fill legislative gaps by clarifying the classification and attribution of copyrights and the logical framework for infringement determination. Practically, it helps define the obligations and responsibilities of platforms, provides clearer standards for the application of fair use and the "safe harbor" principle, and further refines the identification of liability and infringement defenses. This contributes to the establishment of a clear, rational, and sustainable legal environment for the sound and orderly development of live-streaming platforms in the era of the digital economy.

2. Copyright infringement risks faced by online game live-streaming platforms

An online game live-streaming platform is a digital entertainment platform that transmits, in real time via the internet, the gameplay, operation processes, and interactive content of players for users to watch and engage with online [1]. Streamers broadcast their gameplay live, while viewers can interact with them and other audience members through methods such as tipping and voice connections. The content may also extend to game tutorials and event commentary, forming a pan-entertainment ecosystem centered around gaming.

In the context of copyright law, the legal status of online game live-streaming platforms is rather complex. On the one hand, whether the platform itself enjoys copyright protection over the live-streamed content varies depending on the circumstances. On the other hand, as a network service provider, the platform may constitute joint infringement and therefore bear certain legal obligations and responsibilities. Consequently, online game live-streaming platforms face both direct and indirect infringement risks.

2.1. Direct infringement risks arising from online game live-streaming platforms

When an online game live-streaming platform directly provides infringing content, it may constitute direct infringement. This primarily manifests in the following forms: broadcasting game visuals without authorization; recording, replaying, or rebroadcasting live-streams; and using infringing content for commercial gain. For instance, in the "Fantasy Westward Journey" case, Guangzhou Huaduo Network Technology Co., Ltd. organized streamers to broadcast Fantasy Westward Journey on the YY and Huya platforms without authorization, profiting by taking commissions from the streaming business. In addition, the company rebroadcast and recorded gameplay from ongoing streams without permission from NetEase Games. The court ruled that such acts constituted direct copyright infringement, and the company was ordered to compensate NetEase with 20 million yuan [2].

2.2. Indirect infringement risks arising from online game live-streaming platforms

When an online game live-streaming platform provides services without directly transmitting infringing content, it may still constitute indirect infringement. Such infringement primarily includes

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the following situations: Providing technical support for infringement, such as offering tools for game operation, stable network connections, and other services that facilitate unauthorized broadcasting; Failing to manage infringing content properly, meaning the platform neglects its duty of review and fails to fulfill necessary oversight obligations; Participating in profit distribution, by sharing in the commercial benefits derived from infringing acts; Having subjective fault, such as tolerating or acquiescing to infringing behavior by streamers in order to attract traffic and increase profits. For example, a certain technology company lawfully obtained the rights to live-stream Chinese-language broadcasts of ESL and other e-sports tournaments and streamed them through authorized platforms. However, another company operating an online live-streaming platform broadcast the ESL events without authorization. This act infringed upon the copyright of the e-sports event's audiovisual works. The infringing platform not only failed to prevent such conduct but tacitly allowed it and continued to provide streaming services, thereby drawing substantial traffic and revenue. The court determined that the platform had committed indirect infringement and ordered it to pay 1 million yuan in damages [3].

3. Analysis of the constitutive elements of infringement by online game live-streaming platforms

The visual presentation of online games is composed of continuous dynamic images. When such images demonstrate originality and meet the criteria of an "audiovisual work," they fall under the protection of copyright law [4]. Infringement by online game live-streaming platforms primarily involves two key rights: the right of reproduction and the right of broadcasting. The right of reproduction is violated when a platform records or replays game footage without authorization. The right of broadcasting refers to the public transmission or rebroadcasting of works via wired or wireless means, including re-broadcasting previously transmitted works using amplifying devices or other tools. This differs from the right of network dissemination, which is characterized by interactivity—allowing the public to access a work at a time and place of their choosing. Broadcasting, by contrast, is non-interactive, as the audience can only view content at the times specified by the broadcaster. The determination of direct infringement depends on multiple interrelated factors, which are analyzed as follows.

3.1. Constitutive elements of direct infringement

3.1.1. The game work is protected

Whether a game qualifies for copyright protection and who owns that copyright are key issues in determining infringement. A preliminary question in the discussion of live-streaming rights for online games is whether the dynamic game visuals constitute a work and whether the game provider enjoys copyright protection [5]. Game visuals are continuous dynamic images that qualify as audiovisual works under the Copyright Law. Their design integrates multiple creative elements—such as visual art, music, written scripts, and animated storylines—reflecting the creative intelligence and labor of the game developer. Each of these elements is independently protected under copyright law. For example, large-scale role-playing games (RPGs), competitive games, and simulation games feature character designs and scene layouts that qualify as artistic works. The music, sound effects, and human-computer interactions together form continuous dynamic visuals, which are protected as audiovisual works. By contrast, simple games such as Snake or Tetris, with low degrees of originality, may not qualify for copyright protection.

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3.1.2. Unauthorized live broadcasting

The objective element of infringement—"organizing streamers to broadcast without authorization"—hinges on whether the platform merely provides technical services or actively intervenes in and directs the infringing live broadcast. If a platform signs exclusive agreements or contracts with streamers, regulates their streaming schedules, styles, or content, or even provides professional training, such conduct indicates active participation. Moreover, if a platform manipulates exposure through ranking systems or algorithmic recommendations to promote high-traffic infringing content, it further demonstrates involvement. The key issue in defining "unauthorized" is the absence of direct authorization—that is, the platform has not obtained a live-streaming license or public display rights from the copyright holder. Even if a streamer claims to have authorization, the platform must verify the authenticity and validity of the authorization documents. If it fails to fulfill this review duty and allows defective authorization to persist, the platform still bears infringement liability.

3.2. Constitutive elements of indirect infringement

Under copyright law, online game live-streaming platforms generally function as network service providers, offering infrastructure and tools—such as streaming interfaces and transmission services—to streamers. In such cases, they typically bear indirect infringement liability.

3.2.1. Existence of direct infringement

Indirect infringement presupposes the existence of direct infringement. Without direct infringement, indirect infringement cannot be established. The relationship between the streamer and the platform—whether under a contracted streaming model, platform service model, or content cooperation model—is crucial in determining the platform's liability [6]. In the platform service model, the streamer operates as an independent entity without a direct contractual relationship with the platform. The platform neither controls the content nor decides what is streamed, bearing only pre-review and post-supervision obligations. Thus, streamers are primarily responsible for infringement. However, if the platform learns of infringing conduct and fails to take necessary action, it may still be held liable for indirect infringement.

3.2.2. Service-related conduct by the platform

As noted above, in the service-oriented model of online infringement, a platform's liability may arise not only from the streamer's direct infringement but also from providing convenient services that facilitate infringement. Service-related conduct can be divided into technical and content-related actions. If a network service provider can demonstrate that it only offers automated transmission, temporary data storage, or hyperlinking functions, it may be exempted from direct liability and only bear limited indirect liability. However, if the platform collaborates with others to provide works or recordings, and engages in content selection, editing, modification, or recommendation, it typically constitutes direct infringement.

3.2.3. Existence of subjective fault

According to Article 1197 of the Civil Code of the People's Republic of China, if a network service provider knows or should have known that its users are using the platform to infringe upon others'

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civil rights but fails to take appropriate action, it shall bear corresponding legal responsibility. As early as the 1998 U.S. Digital Millennium Copyright Act (DMCA), the "Red Flag Rule" was introduced: when infringing acts are as obvious as a red flag, a network service provider cannot evade liability by claiming ignorance and must assume appropriate legal obligations [7]. Here, "knowledge" takes two forms: Actual knowledge, where the platform receives valid notice from the rights holder and is aware of the specific infringing activity; Constructive knowledge, where the infringement is so apparent that, under the standard of reasonable care, the platform should have known of the infringement. Therefore, the Red Flag Rule integrates both subjective and objective dimensions: subjectively, the platform bears a duty of care to identify potential infringements; objectively, it incurs liability if it knowingly allows infringement to persist for profit.

3.3. Problems in the constitutive elements of copyright infringement on online game live-streaming platforms

3.3.1. Ambiguity in distinguishing direct and indirect infringement

Although certain distinctions between direct and indirect infringement have already been established, some crucial boundaries remain unclear and merit closer attention. In general, the relationship between the platform and the streamer can be divided into two main types. The first is the contracted-streamer model, in which the platform provides the live-streaming content for the streamer. For instance, the platform may offer content planning services—such as designing the live-stream theme, arranging program flow, or even managing the streamer's public image. In this model, the platform essentially acts as the "employer" behind the streamer. Consequently, when infringement occurs, liability tends to fall under direct infringement on the part of the platform. In contrast, under the platform service model, the platform merely functions as a network service provider, offering training, technical tools, and opportunities for participation in events, without dictating the specific content of the stream. Thus, the distinction between providing content and providing services serves as the core criterion for differentiating direct from indirect infringement. However, ambiguities persist in China's Regulation on the Protection of the Right of Communication through Information Networks. The regulation does not clearly define cases in which a network service provider engages in subtle acts such as verbal encouragement, technical support, reward mechanisms, or other incentives that indirectly promote the dissemination of infringing content. These implicit actions do not directly interfere with the content of live streams, yet they deliberately guide streamers toward infringing behaviors, making it difficult to determine liability. Furthermore, since there is often an economic connection between platforms and streamers —such as revenue sharing, business partnerships, or mutual reinforcement of popularity and traffic —the line between direct and indirect infringement becomes even more blurred. Given the variety of cooperation models, it would be inaccurate to draw definitive conclusions based solely on one type of financial link or cooperative relationship. In the content cooperation model, for example, the streamer and the platform jointly decide on the content and schedule of the live broadcast without forming an employment relationship. Both parties benefit mutually through increased exposure and audience engagement. If the broadcasted content infringes on copyright, both parties should bear joint liability for infringement. Yet, the degree of responsibility for each party and the criteria for measuring it remain unresolved and require further clarification in judicial practice.

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3.3.2. Ambiguity in determining "constructive knowledge"

The assessment of whether a platform should have known about infringing activity is central to determining subjective fault. Although Chinese law allows for the evaluation of such fault based on factors such as the obviousness of the infringement, the platform's technical capabilities and management measures, industry norms, duty of reasonable care, and profit models, these criteria are often difficult to apply in practice. In cases involving unclear distinctions between content provision and service provision, it remains uncertain how to determine whether a platform "should have known" of the infringement. A particularly contentious issue concerns traffic bias and homepage recommendations. Some argue that when a platform intentionally prioritizes highly profitable or popular live streams on its homepage, it indirectly encourages infringing behavior by incentivizing streamers to produce such content. In these cases, the platform's actions may be viewed as participation in infringement. However, in the digital age, most recommendations are now generated through algorithmic personalization, leading to what is commonly known as the "information cocoon" effect. The platform may not deliberately guide users toward specific content; instead, its algorithms automatically recommend streams based on individual user preferences. Since these preferences differ from one user to another, it becomes highly complex to determine whether the platform knew or should have known that a streamer was engaging in infringing behavior. Thus, the challenge lies in distinguishing between intentional traffic manipulation and neutral algorithmic recommendation, a boundary that remains conceptually and legally unsettled in current copyright infringement adjudication.

4. Analysis of defenses against copyright infringement on online game live-streaming platforms

When faced with accusations of copyright infringement, online game live-streaming platforms may adopt reasonable defenses to mitigate or avoid liability. Depending on whether the alleged infringement constitutes direct or indirect infringement, the defenses can be categorized as follows.

4.1. Defenses against direct infringement

When a live-streaming platform is accused of direct infringement, it may defend itself by proving that no infringement has occurred or that the act merely constitutes indirect infringement. On the one hand, the platform can argue that it obtained proper authorization or did not infringe upon specific rights; on the other hand, it may assert that it merely functions as a network service provider without interfering in the content, thereby reducing or eliminating liability.

4.1.1. Defense of fair use

The defense of fair use refers to a situation where, in a copyright dispute, the defendant claims that their use of another's copyrighted work falls within the legally permitted scope of fair use, thus exempting them from liability. In cases involving copyright infringement on online game live-streaming platforms, the key issue lies in determining whether the live-streaming activity meets the statutory conditions of fair use.

According to Article 24 of the Copyright Law of the People's Republic of China, the use of published works for personal study, research, or appreciation, or appropriate citation of published works for the purpose of introducing, commenting on, or explaining a topic, may be done without permission from the copyright holder and without payment of remuneration, provided that the author's name and the title of the work are indicated, the normal use of the work is not affected, and

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the legitimate interests of the copyright holder are not unreasonably harmed. In the Fantasy Westward Journey case, the company Hua argued that the act of live-streaming the game constituted fair use, claiming that live streaming was not for profit but rather a form of free expression and social interaction. Although the court ultimately ruled that the act was profit-driven and thus constituted infringement, the defense of fair use was nevertheless invoked during the proceedings.

4.1.2. Defense based on non-work nature of game images

The platform may also argue that the live-streamed game images do not constitute "works" under the Copyright Law, and therefore, are not subject to copyright protection. From this perspective, the platform may claim that it has not committed infringement. Such a defense can be based on arguments that the game lacks originality, does not qualify as an audiovisual work, or lacks fixity as required by law.

4.2. Defenses against indirect infringement

4.2.1. "Safe harbor" rule defense

Under relevant legal provisions, the application of the "safe harbor" rule depends on several factors, including the subject, conduct, identification, passive role, intent, profit, and removal requirements. Its core obligation lies in the "notice-and-takedown" mechanism: when a network user uses the service to commit infringement, the rights holder may notify the service provider to take necessary measures such as deletion, blocking, or disconnection. Upon receiving such notice, the service provider must promptly act; otherwise, it may bear joint liability for any expanded damages. If the network service provider, after receiving the notice, takes timely and reasonable measures, it may invoke this rule as a defense to avoid liability for infringement [8].

4.2.2. Defense of having fulfilled the duty of care

If a platform knowingly encourages, supports, or fails to curb infringing activities—such as granting extra traffic exposure to infringing content—it constitutes willful misconduct. Likewise, failure to stop infringement after receiving a rights holder's notice, or negligence in situations where infringement is obvious or should reasonably have been known, also indicates subjective fault.

Conversely, if the platform can prove that it exercised reasonable care and had neither knowledge nor reasonable grounds to know of the infringement—for instance, by establishing a comprehensive copyright review mechanism and conducting reasonable inspections of live-stream content—yet was still unable to detect the infringement, it may claim lack of fault and should not bear liability.

4.3. Problems in the application of indirect infringement defenses

Although platforms are bound by various duties of care, under the "safe harbor" principle, their main obligation is to take necessary measures upon notice. Specifically, when a platform knows or should have known that an operator on the platform is infringing intellectual property rights or providing unsafe or unlawful services or products, it must take actions such as deletion, blocking, disconnection, or suspension of transactions and services. However, whether platforms are subject to a pre-screening obligation and whether such an obligation is necessary remain contentious issues. The pre-screening obligation would require online content-sharing service providers to be responsible for the content uploaded to their websites, using filters to detect potentially infringing

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material. Failure to promptly prevent infringement under such a duty could result in liability for the infringing activity itself [9].

5. Suggestions for improving the determination of copyright infringement liability in online game live streaming

In the context of the rapid development of the online game live-streaming industry, the legal practice regarding the definition of platform infringement and the application of defenses remains ambiguous. There is still no unified or explicit judicial standard or normative framework, and the main problems can be summarized along two dimensions.

5.1. Clarifying the constitutive elements of direct and indirect infringement

5.1.1. Defining content and service

At present, no judicial interpretation provides a clear definition of traffic tilting on live-streaming platforms. As discussed above, whether traffic recommendation constitutes "constructive knowledge" depends on whether it falls under the category of content provision or service provision. Traffic recommendation by platforms is generally regarded as a form of network service provision rather than direct content provision. The essence lies in the fact that such recommendations distribute existing content through algorithms rather than creating or uploading new content. From a behavioral perspective, traffic recommendation involves the platform's use of technological tools (such as algorithms) to filter, rank, and deliver user-generated content to audiences. Its purpose is to connect content with users, without engaging in creation, editing, or modification of the content itself. This nature aligns with the typical characteristics of "information storage space services" and "search link services."

5.1.2. Determining subjective fault

However, the determination of whether a platform "should have known" (应知) cannot be made in absolute terms. If a platform is clearly aware that certain content involves infringement, false advertising, or other illegal acts, yet still promotes such content through traffic tilting, it may be deemed to possess subjective fault. Conversely, if traffic tilting is conducted in accordance with normal business rules, user interests, and content quality, and there is no evidence that the platform knew or should have known that the promoted content was illegal, then traffic tilting alone cannot be used as the basis for determining the platform's knowledge of infringement.

5.2. Further clarification of the platform's duty of care

As network service providers, online game live-streaming platforms are often questioned regarding whether they should bear a pre-screening obligation for uploaded content. In practice, such a requirement is generally considered unreasonable.

Due to the massive volume of content uploads, it is practically impossible for platforms to conduct comprehensive and detailed pre-screening of all information. The manpower, resources, and time required would be immense. Furthermore, for highly specialized or complex content—such as information related to law or medicine—platforms often lack the expertise to make accurate determinations. Therefore, the conditions for implementing a pre-screening obligation are not yet sufficient.

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Beyond pre-screening and post-event measures, platforms can supplement and refine related obligations. For instance, platforms should conduct preliminary qualification reviews [10] for content creators such as streamers, enforce real-name registration systems, ensure the legality and compliance of participants, and establish a credit evaluation system in which violations are recorded and included in qualification assessments. Additionally, platforms should improve their complaint and response mechanisms by integrating multiple channels, such as in-app reporting zones, mini-programs, official websites, and social media messaging. Entry points should be clearly visible and easily accessible, lowering the threshold for user complaints. The system should support various submission formats and provide standardized templates. Moreover, by establishing an intelligent pre-processing system and a fully traceable complaint-tracking process, platforms can enhance efficiency and transparency. A well-structured mechanism can thus form a service system characterized by "convenient access, efficient handling, transparent traceability, and continuous improvement." [11]

6. Conclusion

This study has conducted an in-depth examination of the determination of copyright infringement liability on online game live-streaming platforms, systematically reviewing key issues such as the elements of infringement, available defenses, and the platform's duty of care. It analyzes the copyright infringement risks inherent in such platforms and distinguishes between direct and indirect infringement models. For direct infringement, the determination primarily depends on whether the game work is protected and whether the live broadcast was conducted without authorization. For indirect infringement, the determination focuses on whether direct infringement exists, whether the platform's actions are service-oriented, and whether subjective fault is present. Correspondingly, this paper also proposes defense strategies: fair use is typically invoked as a defense for direct infringement, while absence of subjective fault is used as a defense for indirect infringement. However, several problems persist. For example, whether traffic tilting should be classified as content provision or service provision, whether traffic recommendation can serve as a standard for determining "constructive knowledge," how the platform's duty of care affects the judgment of subjective fault, and how platforms can better fulfill their obligations—all remain undefined in current legal frameworks. Therefore, it is recommended that platforms assume obligations such as qualification review of content creators and improvement of complaint and response mechanisms, while clarifying that traffic tilting constitutes a service and should not be regarded as evidence of constructive knowledge. Such measures will help safeguard the legitimate rights and interests of both audiences and platforms, and ultimately foster a healthy and sustainable live-streaming ecosystem.

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