

Exploration Of Legal Protection Of Short Video Copyright In The Perspective Of Blockchain Technology

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Abstract: The copyright protection of short videos is faced with dual dilemmas on the legal and practical fronts with the constant progress of science and technology and the vigorous development of the short video industry. Blockchain is an innovative application mode of distributed data storage, peer-to-point transmission, consensus mechanism, encryption algorithm and other computer technologies in the Internet era, While time stamp, consensus mechanism, distributed storage and other blockchain technologies have certain advantages in the copyright protection of short video, Also faced with the lack of effective exchange of information among various platforms, Unable to accurately determine whether it constitutes a copyright infringement, The security and stability of blockchain technology need to be improved, From promoting the interconnection and interconnection construction of intellectual property digital service platform, Increase policy support for blockchain technology-related industries, Put forward the corresponding countermeasures to optimize the supervision system of the short video industry, Help the sustainable and healthy development of the short video industry.

Keywords: Blockchain Technology; Short Video; Copyright

Introduction

The State Council issued the Plan for the
Development of the Digital Economy

during the 14th Five-Year Period on
January 12, 2022, which included
blockchain technology, one of the key

underlying supporting technologies in the era of the digital economy, in the category of strategic forward-looking technologies and emphasized its important role in promoting digital industrialization, improving and perfecting the governance system of the digital economy and strengthening the security system of the digital economy.

I. Status quo of short video copyright protection

The copyright protection of short videos is facing severe challenges. In the dispute between short video platforms Douyin and Huopai, the court ruled for the first time that the involved short video was a work protected by the Copyright Law of China, which marked the first time that short videos were recognized as works under the protection of the Copyright Law of China.

On the night of April 9, 2021, 73 film and television companies, industry associations and video websites jointly issued a statement, calling on short video platforms and massive creators and operators of public accounts to respect original works, protect copyright and not conduct infringement behaviors such as

editing, splitting, reposting and disseminating relevant film and television works without authorization. This was undoubtedly the clarion call for safeguarding the copyright of short videos.

(1) Legal dilemma of short video copyright recognition

According to Article 17 of the Copyright Law revised in 2020 (hereinafter referred to as the Copyright Law (2020)), the copyright of a cinematographic work or a TV drama shall be enjoyed by the producer, but the scriptwriter, director, cameraman, lyricist, composer and other authors shall enjoy the right of authorship and shall be entitled to remuneration in accordance with the contracts concluded with the producer. The ownership of the copyright in audiovisual works other than those prescribed in the preceding paragraph shall be agreed upon by the parties concerned; where there is no agreement or the agreement is unclear, the copyright shall be enjoyed by the producer, but the author shall enjoy the right of authorship and the right to remuneration.

Accordingly, the premise of copyright protection of short videos is based on

whether the short videos are "works" protected by the Copyright Law (2020) and whether they are authorized. Although the Copyright Law (2020) has defined what can be counted as "works", there are various forms of short videos, which may belong to different forms of works stipulated by the Copyright Law (2020) and thus enjoy different rights. For example, short videos that are simply recorded and have no originality may constitute video products; if the short videos are based on the editing of others' videos, pictures, etc. and are original in the selection or composing of the contents of the videos or pictures, etc., they may constitute compilation works. At present, there are no specific stipulations on the standards of originality of works, which often gives rise to disputes over the nature of the involved short videos in copyright infringement cases.

(2) Practical dilemma of short video copyright protection

Similarity can be easily found in a lot of short videos in China's short video market and the copyright infringement of such short videos is usually recognized as

direct infringement. When a short video went viral on the internet, a large number of similar videos will pop up soon after. For example, before Li Ziqi became popular, there were not many video bloggers or videos of similar styles in the market. However, after she became a hit, a huge number of creators began to imitate the style. As the cost of making internet short videos is low and is outweighed by the cost of safeguarding the infringed copyright, many who own the copyright find it hard to defend their rights.

For works created by individuals, individuals are both creators and authors and the ownership can be clearly and directly identified. However, in practice, it is difficult to identify the ownership of short videos created by companies because short videos, unlike movies or TV dramas that can fully and completely display relevant subjects such as authors and creators at the beginning and end of the works, are in general merely watermarked with the account. In practice, even for short videos created by companies, the signature watermark of the account and the short videos generally belong to the influencers.

For example, the account of Li Ziqi is a personal account, but in fact, Li Ziqi's videos were created by a team of Hangzhou Weinian Brand Management Co., Ltd.

But in reality, there is no information about the identity of the production company, or even worse, no information about the company at all. The inability to quickly and accurately identify the ownership of works is bound to impose a substantial impact on safeguarding the copyright of and commercially using short videos as the values of short videos are on a rising track.

II. Advantages of blockchain technology in short video copyright protection

As a brand-new technical concept and approach, blockchain was included in the category of new infrastructure by the National Development and Reform Commission in April 2020, constructed China's information technology platform with artificial intelligence and cloud computing, etc., and empowered more traditional industries. In January 2022, it was included in the Plan for Development of the Digital Economy during the 14th

Five-Year period. According to the definition of China Blockchain Technology and Application Development White Paper (2016), blockchain is an innovative application mode of computer technologies such as distributed data storage, peer-to-peer transmission, consensus mechanism and encryption algorithm in the internet era.^[1]

Applying blockchain technology in short video copyright protection has the following advantages:

1. Timestamp

The timestamp is the data generated using digital signature technology and the signature object includes information such as original document information, signature parameters and signature time. The timestamp system is used to generate and manage timestamps and digitally sign the signature object to generate timestamps, which can prove that the original document exists before the time of signature.^[2] In the system of blockchain, whenever a data block is operated, a timestamp will be generated accordingly. For rights confirmation, the earliest registrant owns the copyright. Even authors who prefer to

remain anonymous can use timestamps to confirm copyright ownership. [3] This is of great help for solving copyright disputes, providing evidence and pursuing accountability.

2. Consensus mechanism

A consensus mechanism means that all nodes can directly reach a consensus to determine the validity of a record and the consensus mechanisms currently adopted include proof of work, proof of stake and delegated proof of stake. [4]

3. Digital signature

A digital signature is a string of numbers that can only be generated by the sender of a message and cannot be forged by others. The string of numbers is also effective proof of the authenticity of the information sent by the sender. [5] The sender verifies the content to be sent through hash algorithm and get a hash value, and then encrypts the hash value with a private key and gets a digital signature. Then the two are bundled and sent. The receiver has to first decrypt the digital signature with a public key after receiving the information, decrypt the hash value, and then compare the decrypted hash

value with the verified hash value using hash algorithm to see if they are consistent, so as to verify whether the information is from the sender or whether it is forged and thereby protect copyright. [6]

4. Distributed storage

The distributed network formed by blockchain is characterized by decentralization, so that the same data content are equally, openly and transparently stored in each node, The database constructed by blockchain technology is global in scope, where all copyright transactions are concluded and all data are complete and clear. [7]

III. Challenges and countermeasures of applying blockchain technology to short video copyright protection

(1) Challenges of blockchain technology in short video copyright protection

1. Lack of effective information interconnection between platforms

Currently, there are various blockchain platforms in the area of digital copyright services and there are no unified standards. The data are relatively independent between platforms and there is

no interconnection. As a result, it cannot be ruled out that lawbreakers can take advantage of information impassability between different platforms and maliciously register the same work on different platforms by different authors, which can lead to chaos in copyright registration and confirmation and give lawbreakers an opportunity to exploit the situation.

2. Inability to accurately determine copyright infringement

As mentioned above, blockchain technology uses a hash algorithm to give each work a unique hash value and has it registered, which provides convenience for confirming the copyright of works but brings great risk to the identification of new works. If someone compiles, photographs, translates, adapts or simply modifies the work of others and registers it in his or her name on blockchain platforms, a unique hash value will also be generated. If the blockchain system determines that the registered content is a new work that has nothing to do with the original work and registers the registrant as the author, the rights of the copyright owner of the original

work are infringed.^[8] Accordingly, after an infringement dispute arises, the effectiveness of the electronic evidence retained in the blockchain system is obviously insufficient. It is still necessary for judicial institutions to conduct a comprehensive examination and analysis of the content and form of the work before making a judgment on whether the work is original or not.^[9]

3. Improvement needed for the security and stability of blockchain technology

At present, the lack of computing power of blockchain, code loopholes in smart contracts and imperfect verification technology will bring security risks to transactions of short video platforms.^[10] For example, transactions undertaken in the name of community activities, through which users are lured to make investments, can easily become overt illegal fundraising or disguised pyramid selling because it is difficult to identify these transaction activities through verification technology, thus putting forward higher requirements for the prevention of blockchain security loopholes.^[11]

(2) Countermeasures and suggestions for applying blockchain technology to short video copyright protection

1. Promote interconnection between digital service platforms of intellectual property rights

Thanks to the characteristics of non-tampering, traceability, autonomy and decentralization, blockchain technology can provide technical support for innovative copyright protection solutions. With the construction of interconnected digital service platforms of intellectual property rights that have combined the advantages of blockchain technology in short video copyright protection with administration and justice and have unified standards, no matter which blockchain platform authors register with, a unique digital DNA of the work is generated and registered in time according to the copyright content characteristics of the short video, enabling other blockchain platforms to query the copyright registration information of the work. Obtaining evidence of short video infringement, automatically scraping data

of websites with lots of infringement and automatically obtaining evidence of infringement of short video content that bears a certain degree of similarity can, in case of infringement, quickly provide relevant evidence, such as scraping pages of infringing websites as evidence.

2. Enhance policy support for blockchain technology-related industries

The distribution and chain structure of blockchain technology put forward demanding requirements for hardware, thus the development of blockchain technology requires a tremendous amount of investment in research and development as well as a certain reserve of talent. Making the government one of the initiators of blockchain can provide policy support and improve the credibility of blockchain. It is suggested that, through policy guidance, schools should bear the responsibility to cultivate blockchain technology professionals and set up corresponding courses to improve students' understanding of blockchain technology.

3. Optimize the regulatory system of the short video industry

First, the behavior of different

platforms should be legally regulated to prevent the spread of prohibited content and reduce illegal transactions. Second, the government should supervise the entirety of blockchain, including adopting licensing supervision over technical personnel (code developers) of platforms and supervising the contract behavior of platforms. Third, to

establish a good guidance system, the market should implement incentive and punishment mechanisms through which law-abiding platforms are commended while those violating laws and regulations are subject to severe punishment.

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