

# *Advantages and Practical Dilemmas of the Application of Blockchain Depository Technology in Digital Music Infringement Cases*

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**Abstract:** With the continuous improvement of blockchain depository technology, its application advantages in digital music infringement cases in China are becoming more and more prominent. Blockchain depository technology in digital music infringement cases has the application advantages of effectively proving the focus facts, reducing the cost of proof for plaintiffs, and improving the efficiency of court trials. Nonetheless, blockchain deposit technology still exists in specific practice, such as the problem of data authenticity before entering the chain, the problem of judging the originality of digital music, and the problem of judges' professional level being difficult to adapt to. Based on this, the optimisation path of blockchain deposit technology in digital music infringement cases can be fully utilised by compressing the entry time, increasing the number of times of entry, exploring the mode of "blockchain technology + expert appraisal", and perfecting the relevant rules of evidence.

## 1. Introduction

Since the 21st century, with the rapid development of Internet technology and the iterative updating of communication equipment, more and more consumers have logged on to third-party online platforms via the Internet to purchase digital albums to support their favourite singers. The accessible 2020 China Music Industry Development General Report shows that back in 2019, the scale of China's digital music industry reached 66.4 billion yuan, up 8.4% year-on-year; the scale of digital music users exceeded 607 million, up 9.2% year-on-year, and the penetration rate of online music users reached 71.1%. While the digital music market shows great potential, digital music infringement cases are increasing day by day. A large amount of evidence in such cases is presented in the form of electronic data. Typically, in digital music infringement cases, plaintiffs claim evidence of infringement by defendants, such as infringing videos that maliciously distort digital music and screenshots of copyrighted digital music. Compared with traditional physical evidence, electronic data suffers from deficiencies such as low trial efficiency, high cost of evidence collection, and difficulty in proving the facts of the case. Coupled with the general lack of evidential capacity of the plaintiff parties and the low quality of the electronic data submitted to the court, this has led to a generally low rate of admissibility of evidence by judges in litigation[1], and difficulties for the plaintiff parties to defend their rights.

Blockchain deposit technology, as a new type of computer application technology, is a chained data structure that combines electronic data in chronological order by means of blocks connected together and shaped by cryptography and other technologies into a storage characteristic that cannot be tampered with or forged. In essence, its main role is to store information. Distinguished from the storage of traditional databases, in the blockchain world, there is no information access rights mastered in a company or institution, anyone can set up a server for the nodes on the blockchain, write the information that needs to be stored into the blockchain, and at the same time can also read the information from the blockchain<sup>[1]</sup>. In 2018, the court for the first time recognised the legal effect of the electronic data after the blockchain technology deposit in the case of *Huatai v. Dao Tong Company Dispute over the Right to Disseminate Information on the Internet*, which provides a new way to solve the problem of digital music infringement with insufficient ability to prove the electronic data. It is the blockchain deposit technology with the characteristics of non-tampering, traceability and decentralisation that can make up for the shortcomings of electronic data's insufficient proving ability in digital music infringement cases, making the combination of blockchain and judicial practice one of the hotspots of digital music infringement. Coupled with the fact that in 2020, the Supreme People's Court issued the *Opinions on Strengthening the Protection of Copyright and Copyright-Related Rights*, which clearly stipulates that "parties are allowed to preserve, fix and submit evidence through blockchain and other means." Blockchain deposit technology has been able to bring its unique advantages into play in digital music infringement cases and has been gradually promoted in related litigation. However, with the continuous improvement of blockchain depository technology, its application in digital music infringement cases continues to produce new dilemmas. For this reason, the author takes the advantages of the application of blockchain deposit technology in digital music infringement cases as the entry point, clarifies the basic principles of the application of blockchain deposit technology, affirms the value of the application of blockchain deposit technology in digital music infringement cases, and aims to promote the advantages of its application in digital music infringement cases. In addition, through the analysis of relevant application cases, the application dilemma of blockchain deposit technology in digital music infringement cases is found, and optimisation paths are proposed to address the dilemma, so as to put forward theoretical suggestions for the continued application of blockchain deposit technology in relevant cases[2].

## **2. Advantages of the Application of Blockchain Depository Technology in Digital Music Infringement Cases**

The author found that as of 21 December 2023, after entering the keywords "music" and "blockchain", there were 349 relevant legal documents, and the author found that the judges usually focus on two main issues when hearing such cases: first, whether the plaintiff is a digital music copyright owner; and second, whether the defendant has infringing facts. This kind of case usually focuses on two main issues: first, whether the plaintiff is a digital music copyright owner; second, whether the defendant has infringing facts. Compared with traditional physical evidence, blockchain deposit technology is supported by blockchain technology and cryptography technology, which has the characteristics of tampering, traceability and decentralisation, and can give full play to its evidentiary advantages in digital music infringement cases, which can help the judge to hear the above facts, and make the hearing of the case fast, efficient, scientific and credible[3].

### **2.1. Blockchain Depository Technology Effectively Proves the Facts in Focus in Digital Music Infringement Cases**

How can blockchain deposit technology ensure the authenticity of these two focal facts? This is inseparable from the three technologies related to blockchain technology, the first is the hash value

into the chain technology, with the traditional data storage method is different, blockchain deposit technology is not to write electronic data into the general media (U disk storage, network disk storage), it is through the hash algorithm will be the hash value of the electronic data deposited into the blockchain. Hash algorithm is an irreversible cryptographic mapping from data plaintext to data ciphertext can be achieved. Any electronic data file will result in a fixed-length, unique hash value after the hash operation. Next is the trusted timestamp technology. Trusted timestamp refers to give the chain data to a variety of authoritative timestamp agency issued by the electronic credentials with legal effect, its existence ensures that the data into the chain at a particular moment has been the objective existence. The combination of the hash value into the chain and the trusted timestamp indicates that once the hash value of the electronic data that needs to be deposited into the blockchain is generated at moment 1, if the hash value calculated again at a subsequent moment 2 remains unchanged, then it indicates that the content of the electronic data has not been tampered with from moment 1 to moment 2. If these two technologies give the blockchain deposit technology unique data fingerprint, then the last is the chain storage structure technology guarantees that the data fingerprint can not be tampered with, difficult to forge. Chain storage structure is a data structure that stores data changes that have occurred over a period of time in units and connects the blocks into a chain in chronological order using cryptographic technology. Since the latter block contains the data information stored in the former block, if you want to modify the data in one of the blocks, you need to modify all the blocks in the chain and leave a trace of the modification[4] . As the saying goes, "one hair affects the whole body", with the increasing number of blocks on the chain, the difficulty of modifying the data on the blockchain will also increase. Therefore, the chain storage structure creates the characteristics of blockchain deposit technology, which is untamperable and difficult to be forged.

For the specific use of blockchain deposit technology in digital music infringement cases, we take the first case in Sichuan Province where the court adopted blockchain deposit technology to confirm the evidence of ownership of digital music works as an example. In this case, the plaintiff claimed that the defendant infringed its right to disseminate music information network, and produced two blockchain deposited electronic data. One of them is the Blockchain Certificate of Deposit of Digital Music obtained by the Plaintiff on the Music Bee platform, which proves that the Plaintiff is the copyright owner of the digital music. The second is a screenshot of the video related to the Plaintiff's deposit through the blockchain system of the judicial alliance chain legalXchain, which shows that without the Plaintiff's permission, the Defendant provided services such as downloading and auditioning of the digital music of the songs on the independently operated music platform, which infringed the Plaintiff's right to disseminate information on the network as the copyright owner of the songs. The Plaintiff submitted the above two electronic data to the blockchain depository platform for evidence preservation, and the preservation platform obtained information such as the hash value, file name, file number, deposit target URL, deposit target IP, deposit server IP, etc., after entering the chain, and affixed a credible time stamp. During the trial, the court logged into the blockchain deposit platform and verified that the hash value was consistent and there were no traces of modification of the data on the chain according to the original electronic data voucher number submitted by the plaintiff. Therefore, in the absence of evidence to the contrary, the court determined the authenticity, completeness and time of deposit of the electronic data submitted by the plaintiff, thus determining the authenticity of the disputed facts of the case as proved by the electronic data.

## **2.2. Blockchain Depository Technology Reduces Plaintiffs' Costs of Proof in Digital Music Infringement Cases**

The essence of blockchain deposit technology is the new deposit mechanism of "blockchain

technology + electronic data". Its generation, submission, testing, proof and a series of application processes can be completed online, which greatly reduces the plaintiff's cost of proof[5].

Firstly, the cost of copyright registration for digital music is high. According to the Copyright Law of the People's Republic of China, the copyright of works adopts the "self-executing doctrine", i.e., works obtain protection automatically, and the registration procedure is not a necessary step for obtaining copyright, and works are subject to a voluntary registration system, which does not affect whether works are registered or not and does not affect authors or other copyright holders' access to copyrights in accordance with the law. However, in practice, due to the numerous disputes over the originality of digital music, most musicians tend to obtain proof of the originality of digital music through copyright registration. If a dispute arises over the copyright of digital music created by musicians, they have to pay the copyright registration fee and obtain a certificate of copyright in order to gain an advantage in proving their case in court. This is a huge cost for original musicians who create music for a living. Through the third-party blockchain deposit platform, the plaintiff only needs to upload the music-related data to the platform to obtain the blockchain deposit certificate after completing the creation of the music, and then he or she can prove that he or she is the copyright owner of the digital music in the litigation.

Secondly, the copyright registration of digital music takes a long time. Digital music copyright owners can apply for copyright registration to the work registration authorities and work processing agencies. While the right holder applies for copyright registration, it generally needs to go through the steps of filling out the registration form, acceptance by the registration organisation, examination of the registration information, issuance of electronic certificate and publicity of the registration information, and it takes a long time to complete the registration<sup>[4]</sup>. The dissemination of digital music in the Internet era can be said to be a race against time, consuming too much time cost in copyright registration is a small loss. Therefore, the plaintiffs can save time by uploading their original music works to the music copyright protection platform based on blockchain deposit technology[6].

Finally, the specialisation of the digital music copyright registration authorities affects the cost of proof for plaintiffs. When digital music copyright holders register with the copyright registration authorities, they often face the examination of originality by the staff of the authorities. However, in practice, the staff only conducts formal examination of digital music, and is unable to conduct substantive examination of musical works due to the limitation of their professional level. Once involved in a copyright dispute, although it has passed the examination of the registration authority, it cannot meet the originality standard in the litigation, and the plaintiff often needs to bear a higher cost of proof. However, if blockchain certificate technology is used in litigation to prove that the plaintiff is the copyright owner of digital music, the court only needs to verify whether the hash value of the blockchain certificate technology is the same or not according to the original certificate number of the electronic data submitted by the plaintiff, so that the attribution of copyright can be proved in the absence of evidence to the contrary.

### **2.3. Blockchain Depository Technology Improves Court Trial Efficiency in Digital Music Infringement Cases**

The author searched the relevant judgement on the referee instrument website and found that before the blockchain deposit technology was created, for the electronic data deposit problem in digital music infringement cases, the court often used the offline supervision and deposit mode of the notary public. Among them, take the two cases in 2018 and 2019 as an example, in the link where the plaintiff needs to produce evidence of the defendant's infringement facts, the plaintiff's proxy, under the supervision of two notaries, logs on to the infringement website to play and download the

songs involved one by one, and burns the video files obtained from the above notarisation process into a disc, and the notary authority issues a Notary Public Certificate to carry out the preservation of electronic data, and the Court of Justice Preservation of the authenticity of the relevant evidence to be certified. Such a deposit link, so that the trial of the evidence to determine the link faces many difficulties. First of all, the plaintiff submitted electronic data, although notarised by the notary public, but it flows, transferred over a number of space, there is a time lag, so that the electronic data is facing the risk of being copied, modified. Once the distortion of electronic evidence submitted to the court, the judge needs to spend a lot of time to audit its authenticity, which will undoubtedly make the case trial efficiency greatly reduced[7].

Blockchain deposit technology, with its unique mechanism, can help courts improve the efficiency of trials involving digital music infringement cases. Firstly, the evidence deposit link, blockchain evidence deposit technology in the evidence deposit link, often the plaintiff's own evidence deposit, the evidence deposit link is relatively simple. For example, if the plaintiff needs to obtain evidence of the defendant's infringement of its right to disseminate information network, it only needs to save the screenshot of the corresponding infringing webpage and upload it to the blockchain evidence deposit platform. This saves the plaintiff a lot of time in accessing the evidence and allows the court to quickly proceed with the trial of the case. Similarly, in the process of demonstrating evidence, blockchain deposit technology can also help the judge to improve the efficiency of the case trial. Compared with the "physical evidence + electronic data" mode, the blockchain deposit technology only needs the judge to log in the blockchain deposit platform, access to the certificate number submitted by the plaintiff to verify that the uploaded electronic data before and after the hash value is consistent with the facts of the case can be proved authenticity. This "one-click" online evidence identification mode can make the court's trial efficiency effectively enhanced[8].

### **3. Practical Dilemmas of Blockchain Depository Technology in Digital Music Infringement Cases**

In cases involving digital music infringement, blockchain deposit technology makes up for the shortcomings of electronic data in the application of the case, however, misunderstandings about blockchain deposit technology also exist. For blockchain deposit technology many people are superstitious about its technology, believing that based on cryptography and other technical support, blockchain deposit technology has irrefutable authenticity. When applying blockchain deposit technology, many people over exaggerate the effectiveness of "blockchain deposit technology + electronic data", believing that it can be used without strict evidence review, but blockchain deposit technology in digital music infringement cases, like other science and technology, there is a practical dilemma.

#### **3.1. Difficulty of blockchain deposit technology in guaranteeing the authenticity of electronic data prior to its entry into the chain**

Article 16 of the Online Litigation Rules of the People's Court provides that "the electronic data submitted as evidence by the parties is stored through blockchain technology" , indicating that blockchain technology intervenes after the electronic data has been generated. This raises a question: can blockchain deposit technology guarantee that the data after uploading and the data before uploading are true and consistent within the time difference? Blockchain deposit technology can only guarantee that electronic data will not be tampered with when it becomes a blockchain deposit technology, but it still faces the risk of being tampered with before it becomes a blockchain deposit technology<sup>[6]</sup> . Taking the case of digital music information network transmission right infringement as an example, the plaintiff obtains the screenshots and videos related to the defendant's infringement

of its information network transmission right, and calculates the hash value of the files before entering the chain, and the court calculates and verifies the hash value of the files submitted by the plaintiff again in the trial process, and if the value is consistent, it can prove that the files are complete, and the blockchain depository technology can only guarantee that the facts of the case can prove the authenticity of the case. However, as long as the plaintiff makes artificial modifications to the relevant screenshots and videos before entering the chain, and then calculates the hash value of the modified files and uploads the modified files onto the chain, the files obtained by the judge during the trial of the case will be the modified files, and even if the hash value before and after the trial is the same, the blockchain depository technology will be reduced to a tool of endorsement of the authenticity of the tampered files, and it will not be able to prove the authenticity of the facts of the infringement. In short, blockchain deposit technology is not infallible. From the technical dimension, the verification technology of hash value and the anti-tampering characteristics of chain storage structure are realised through blockchain technology to self-restrain the evidence and exclude the invasion of illegal data modification system, rather than the natural authenticity of the original electronic data<sup>[7]</sup>. Therefore, as to whether the evidence has been modified before the electronic data is entered into the chain, and how to prove the authenticity of the electronic data before it is entered into the chain, this is a problem that cannot be avoided by applying blockchain deposit technology in the litigation.

### **3.2. Difficulty in determining the originality of musical works by blockchain deposit technology**

In judicial practice, infringement cases of digital music plagiarism and plagiarism are also a major challenge for the courts. The characteristics of digital music, such as electronic data, easy dissemination and easy accessibility, have led to numerous acts of plagiarism against digital music lyrics and music copyright holders. As we all know, a musical work consists of lyrics and music, and when it comes to plagiarism of lyrics, since most of the lyrics are written in the national language, judges do not need to go through a lot of trouble in determining the plagiarism of lyrics in a trial. Lyrics plagiarism is a literary work infringement, and the relevant infringement standard can be referred to the literary work plagiarism case. Generally speaking, digital music plagiarism and infringement issues often focus on composition plagiarism, but when it comes to how to recognise digital music composition plagiarism, there is no relevant legal standard in China. In practice, for song composition plagiarism, judges are limited by the fact that they are not trained in music, and it is difficult for them to distinguish whether similar songs constitute plagiarism from music theory by means of "free evidence". Therefore, the court usually commissions professional appraisal institutions, such as the China Music Copyright Association and the Copyright Appraisal Committee of the China Copyright Research Society, to make judgements.

Blockchain deposit technology is only blockchain technology-enabled electronic data, when encountering the need to prove the authenticity of the facts of the case can only be verified mechanically through the algorithm. Therefore, when it comes to cases that require judges to make "free evidence" judgement, blockchain deposit technology is difficult to play its advantages. Therefore, on the issue of judging the originality of digital music, the application of blockchain deposit technology still needs to be further improved[9].

### **3.3. Blockchain depository technology places greater demands on the professionalism of judges**

In recent years, along with the continuous updating of information technology, the manifestations of judicial evidence have become increasingly diversified. The birth of blockchain deposit technology represents the innovation of electronic data storage mode, which greatly changes the mode of proof and demonstration of evidence in the trial. On the one hand, it provides a strong technical backing for the judgement of the facts of the case; on the other hand, because blockchain deposit technology itself

is inextricably linked to mathematics, cryptography, algorithmic economic models and other disciplines, which involve obscure and difficult-to-understand relevant knowledge, how to manage blockchain deposit technology in a trial poses a new challenge to the professionalism of judges.

Article 17 of the Online Litigation Rules of the People's Courts sets out the criteria for the People's Courts to review the authenticity of blockchain deposit technology. As blockchain technology is highly specialised and the national technical standards and industry guidelines applicable to blockchain depository technology are not yet perfect, it is difficult for judges to identify whether the blockchain technology standards of third-party depository platforms are in line with the regulations of the relevant state departments. Meanwhile, in digital music infringement cases, judges need to review the qualification of the blockchain deposit technology, identify the authenticity of the blockchain deposit technology, and judge the probative power of the blockchain deposit technology, and on the other hand, they need to judge the originality of the music in cases such as the originality of digital music, which puts forward a higher requirement for the judge's professional level. In addition, through the relevant scholars in the Internet Court survey results show that 80.89% of the judges are optimistic about the prospect of the application of blockchain deposit technology, that blockchain technology evidentialisation is conducive to promoting electronic data deposits, and enhancing the quality of the trial. However, the optimism of the prospect does not represent the rational cognition, even for the Internet Court which has built a judicial blockchain platform, only 24.02% of the judges are more knowledgeable about blockchain technology, and the rate of other courts' knowledge of blockchain deposit technology is even less than 3%<sup>[8]</sup>. This further reflects that the knowledge related to blockchain deposit technology remains in unfamiliar territory among the judge community.

#### **4. The Optimisation Path of the Practical Dilemma of Blockchain Deposit Technology in Digital Music Infringement Cases**

In the field of digital music protection, we must affirm that blockchain deposit technology has the advantages of low cost of access to evidence, not easy to be tampered with, and improving the efficiency of factual determination of the case, which can make up for the many defects of electronic data in the trial process. Technology is a double-edged sword; the application of blockchain deposit technology in digital music infringement cases poses many risks and has caused significant confusion in the judge's trial work. Therefore, how to adopt an effective response strategy to control the risks of the application of blockchain deposit technology, so that it can give full play to its maximum advantage in digital music infringement cases, is a problem we need to think about.

##### **4.1. Reduction of the time cycle for the entry of electronic data into the chain and increase in the number of times blockchain deposit technology is entered into the chain**

It is not difficult to see from the provisions of Article 18 of the Online Litigation Rules of the People's Courts that the answer given by the legislator to the question of how to guarantee the truthfulness of the electronic data before entering the chain is "self-evidence of the parties + court review". Judging from the effect of the current practice, this model is difficult to meet the judicial needs of blockchain deposit technology. The reason is that the core problem that cannot guarantee the authenticity of the electronic data before the blockchain deposit technology is that the parties have a longer and more frequent access to the data before it is deposited than the court. The People's Court Online Litigation Rules, Article 18, the review of the authenticity of the pre-entry electronic evidence is still more by the parties themselves, which will inevitably produce a supervisory behaviour for the party who is eager to obtain a favourable judgment in the litigation. The court's review is more reflected in the review of the authenticity of electronic data after the entry into the chain, and in time,

it is still impossible to solve the problem of the authenticity of electronic data before the entry into the chain.

How to protect the authenticity of electronic data before entering the chain in digital music infringement cases? The author suggests that, for the issue of authenticity of electronic data before entering into the chain, starting from the source of the problem, since the parties' access to electronic data before entering into the chain is longer and more frequent than that of the court, the time cycle of entering into the chain can be shortened, and the number of times of entering into the chain can be increased. The first is to shorten the time cycle of electronic data entering the chain, and compressing the time of electronic data entering the chain to a reasonable time can guarantee the authenticity of electronic data before entering the chain to the greatest extent. The so-called "reasonable time" refers to a period of time that is in line with business practices and does not provide opportunities for counterfeiting. For example, when the court accepts a digital music infringement case, it can notify the parties to immediately calculate the hash value of the electronic data in their possession and enter it into the chain. Secondly, to increase the number of times that electronic data are chained, i.e., to increase the number of times that electronic data are chained to the same proof of facts in the same case. For example, in the trial, the court may require the parties to enter the chain several times from the filing stage to the trial stage, and manually verify the hash value entered into the chain, and compare whether there are data inconsistencies before and after the trial. For the facts to be proved in the case, multiple data entry can largely reduce the situation of blockchain hash data falsification.

#### **4.2. Guaranteeing judges' judgement on the originality of digital music through the "blockchain deposit technology + expert appraisal" model**

With regard to the judgement on the originality of the tune part of digital music, there is no clear legal standard in China. In practice, courts usually draw on extra-territorial legal experience to judge originality. Firstly, whether there is substantial similarity between the two pieces of music, secondly, whether the party being sued for plagiarism has access to the original work, and lastly, whether there is originality between the similar segments of the two pieces of music<sup>[10]</sup>. How can blockchain technology be used to judge the originality of music in digital music cases? The judge's judgement on the originality of a musical work can be guaranteed by the mode of "blockchain deposit technology + expert appraisal". First of all, blockchain deposit technology, many original music will be uploaded to the blockchain existence platform, such as the music bee platform, to prove that they are the original musicians of digital music. Such platforms are nationally recognised one-stop service platforms for music copyright protection based on blockchain technology, which can provide evidence recognised by the court in the trial, and the judge can determine the fact of originality through the blockchain deposit technology provided by such music platforms. Secondly, when the judge encounters similar clips that are difficult to determine the originality part, the judge can comprehensively determine the facts of the case by adopting expert advice and appraisal conclusions, combined with the blockchain deposit technology[10]. In summary, when the judge is faced with the inability of the blockchain deposit technology to judge the original copyright owner of digital music, the judge can effectively solve this problem by adopting the form of "technical assistance + appraisal opinion".

#### **4.3. Establishing comprehensive rules for the application of blockchain depository technology to help judges use blockchain depository technology legally and reasonably in trials**

Judges are unable to adapt to the technological changes brought about by blockchain depository technology during the trial process, and the fundamental reason for this is the judges' own weak accumulation of knowledge about blockchain technology<sup>[11]</sup>. However, "three feet of ice is not a day's



cold", blockchain deposit technology in judicial practice is less research information, the relevant legal theory has not yet formed a system, coupled with the fact that most of the judges' knowledge background is humanities and sociology, it is difficult for them to adapt to the interdisciplinary challenges involved in blockchain deposit technology for a time, which results in the trial process, the judges are not able to flexibly face the complexity of blockchain technology. Judges are not able to flexibly face the complexity issues brought by blockchain technology. In digital music infringement cases, in order to help judges apply the development of blockchain deposit technology, the state should establish uniform and perfect rules and standards for the application of blockchain deposit technology, and help judges legally and reasonably use blockchain deposit technology in trials[11].

From the viewpoint of the existing laws and regulations on blockchain deposit technology, for example, the Online Litigation Rules of the People's Courts and other laws and regulations are mainly from the perspective of principle to illustrate the effectiveness of the blockchain deposit technology, authenticity review, audit rules and other issues, but in the specific technical standards, the application of the rules and so on, seldom involved. For the specific application of blockchain deposit technology in digital music cases, the Supreme People's Court has rarely published relevant guiding cases. In view of this situation, the author believes that in order to solve the problem of applying blockchain deposit technology by judges in digital music infringement cases, the principle of gradual progress should be followed. Firstly, the guidance document on blockchain deposit technology issued by the state should start from the fundamental issues of blockchain technology, mainly explaining the basic concept of blockchain, the basic principles of blockchain technology, etc., so as to help judges understand the relevant knowledge of blockchain technology in an easy-to-understand manner. Secondly, for blockchain deposit technology, the Supreme People's Court and relevant judicial departments should delve into the specific application of blockchain deposit technology, and the relevant regulations promulgated should provide detailed guidance on the scope of cases to which blockchain deposit technology applies, the qualification verification standards of access evidence platforms, the authenticity review process, and other specific issues, so as to solve the problem of judges' application of the prevalence of blockchain deposit technology in the trial. Finally, on the basis of the previous two, for the application of blockchain deposit technology in digital music infringement, the Supreme Court and relevant judicial departments should, based on the cases that have already occurred, promulgate relevant judicial interpretations, guiding cases, etc., on the integrity, authenticity, security and other special issues of electronic data such as infringing screenshots, audio-video recordings, etc., so as to further assist the judges in the digital music infringement cases in their Application of blockchain deposit technology.

## 5. Conclusion

Undoubtedly, blockchain deposit technology has obvious technical advantages in digital music infringement cases. The State Intellectual Property Office issued the Approval Reply on the Effectiveness of Blockchain Electronic Evidence in Patent Infringement Dispute Administrative Adjudication Cases in relation to the Petition on the Effectiveness of Blockchain Electronic Evidence in Patent Administrative Adjudication Cases of the Zhejiang Provincial Intellectual Property Office, which quoted Article 11 of the Provisions of the Supreme People's Court on a Number of Issues Concerning the Trial of Cases by the Internet Courts and further affirmed the positive role played by the blockchain deposit technology in the adjudication of intellectual property rights cases. The positive role played by blockchain deposit technology in the trial of intellectual property cases. However, the immaturity of the development of blockchain deposit technology, the lack of in-depth research on evidence theory, and the imperfection of the national rules on the use of blockchain

deposit technology may create evidence risks in the trial of cases. For the use of blockchain deposit technology in the judiciary, the author believes that a prudent attitude should be maintained. On the one hand, actively embrace the judicial convenience brought by the emerging technology, and play a positive role in proving the blockchain deposit technology in judicial cases; on the other hand, be alert to the technical risks brought by the combination of science and technology and judicial application, and continue to explore and solve the practical problems, so as to realise the benign interaction between science and technology and law.

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