# "Smart Chain Technology" - Regulation Analysis of Smart Contract Platform Based on Blockchain Technology

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**ABSTRACT**

Judicial blockchain at the real level shows a strong application prospect in the field of electronic data through trusted timestamp and one-click generation contracts. From the normative level, the evidence preservation innovation of electronic data is the essence of blockchain certification; from the factual level, the application of blockchain technology mainly solves the presumption of authenticity of electronic evidence. The "participatory" nodal verification under the blockchain consensus mechanism is expected to form a more promising blockchain justice, and the application of blockchain justice is an important part of the modernization of national governance system and governance capacity and the exploration of Chinese-style modernization. The team aims to build a platform integrating electronic evidence traceability and individual contracts, and to contribute a modest contribution to the legal cause of China.

*KEYWORDS: electronic data blockchain judicial storage electronic contract evidence review and judgment*

## 1. Foreword

Since the 18th National Congress of the Communist Party of China emphasized deepening the reform of the rule of law, the legal cause is developing in full swing. Complete and effective evidence is the most critical link in the application of law. Under the wave of the development of big data and artificial intelligence technology, with the development of network technology and the increasing number of mobile Internet users, the proportion of the use of electronic evidence in litigation has also significantly increased. Contract and data storage certificates are gradually shifting to electronic and data-oriented, and blockchain technology has been well applied in this field.[1] "Smart Chain Technology" is composed of five undergraduate students, involving law, economics, information technology and other fields. Under the leadership of the team instructor, we constantly improve the system, gradually realize the implementation of the system, and start the trial operation.

Relying on the blockchain application laboratory and the information security laboratory, the team has realized the preliminary design of the blockchain storage and certification traceability and anti-counterfeiting system. Based on the blockchain certification traceability technology, the team products carry out the visual blockchain traceability technology of one-click intelligent electronic contract generation, electronic evidence storage, and evidence collection and inquiry. The business scope is mainly to solve the whole chain system that the intellectual property rights of enterprises are repeatedly violated in the current judicial practice, the effectiveness of evidence in the court trial and the electronic evidence uploading by other parties. The system establishes cooperation with multiple types of enterprises to provide diversified electronic contracts, but also helps enterprises to build industry-leading low delay, high security and high efficiency commodity traceability certification services and supporting information services, and provides high-quality digital transformation solutions for small and medium-sized manufacturing enterprises as a storage medium. This product focuses on key research and development and

breakthrough in key technologies, and actively cooperates with the court and the notary office for public welfare, to popularize the community residents to the law, and gradually improve the system facilities.[2]

## 2. Smart contract certification platform supported by blockchain technology from the perspective of functionalism

### A. Build a platform with low delay, high safety and high efficiency

The team aims to build a legal service platform based on blockchain technology, making full use of the many features of blockchain technology. For example, immutability, decentralized architecture, and smart contract mechanism provide users with comprehensive legal services, and play a role in electronic data storage, contract management, dispute resolution and other fields.[3] This product in the consensus algorithm, search algorithm, encryption algorithm and other key secret technology on research and development and breakthrough, the information chain form production chain and supply chain, and the block chain technology core password algorithm replaced with PBFT consensus algorithm, agent encryption algorithm, searchable encryption algorithm of new anti-counterfeiting traceability system. In addition, combined with the "clairvoyant" electronic devices of the regulatory center, real information is added to the key nodes such as the alliance chain to ensure the reliability and safety of electronic evidence.

The audience of this platform is small and medium-sized enterprises and individual users. These user groups often have urgent needs for legal protection in the daily operation and life process, but they are faced with many problems such as high litigation costs, complex legal process, and low efficiency of judicial resources.[4] Our platform can provide them with fast, economic and convenient legal services in a more economical and efficient way, effectively helping them to defend their rights and interests and solve legal problems.

### B. Analysis of the existing legal risks of the platform

Blockchain technology is helpful to build a trusted judicial organization, realize the linkage between judicial departments, and is more conducive to people's access to legal services freely, fairly and timely online. The combination of smart contract and blockchain makes it have the advantages of transaction security, low transaction cost and high efficiency.[5] But at the same time, the block chain smart contract inevitably face block chain own technical risk, first in the conclusion of the smart contract, performance of contracting subject civil conduct substantive review, and difficult to determine whether meaning is true, smart contract once concluded is difficult to change, remove or early termination. The second is the regulatory risk of smart contract technology. Due to the characteristics of transnational and regional transmission value, smart contracts can conclude and perform contracts with people in unspecified regions of the world, thus leading to the application of laws and regulations in a certain country or region.[6]

## 3. Diversified expansion and market strategy of the blockchain-based legal service platform

### A. One-stop" legal services

One-click generation of smart contracts is applied to online civil and commercial activities. The smart contract system will automatically save all the parties' offer, commitment, signing, contract performance, breach and demand in the judicial blockchain in real time, and automatically transfer them to the judicial organs for processing when the breach reaches the preset standard. Therefore, with the support of blockchain technology, the wide application of smart contracts can not only help to improve judicial efficiency, but also give full play to the initiative of judicial organs, actively expand judicial functions, let judicial organs actively participate in dispute resolution in a timely manner, and effectively realize it through measures such as multiple mediation before litigation.[7]

### B. The integration of network, membership and customized services

Through the market service positioning of this product, we mainly adopt the following three marketing methods: First, we will use the Internet and social media to release relevant information of the platform through the official website, wechat public account, Weibo and other media channels, introduce the functions and advantages of the platform, to attract users' attention. We can use search engine optimization (SEO), search engine advertising (SEA), social media advertising (SMA) to increase the platform's exposure and click-through rate, and increase user traffic. Establish a membership system, according to the frequency of users using the platform and the consumption amount.[8] Secondly, different membership levels are set to provide different degrees of discounts and services for members. For example, members can enjoy lower deposit fees, more free consultations, faster response speed and so on. We will also encourage users to become members through the points system, preferential activities, lottery and other ways, and increase user stickiness and loyalty.[9]

The team adopts the advantages of the existing contract storage platform obtained by SWOT analysis, such as breaking the formatting contract for customized diversity services, fixed electronic evidence materials, data confirmation rights and the underlying blockchain technology encryption, etc. However, there are problems such as high price, limitations of target customers and lack of innovative services. The team adopts digital marketing and new media marketing, and develops exclusive marketing strategies through customer preference survey, including comprehensive data tracking, improving the amount of enterprise customer acquisition, and carrying out refined marketing.[10]

### C. Market development and technological progress of blockchain technology

The team will continue to improve and optimize the functions and performance of the platform according to the market demand and user feedback, and improve the usability and reliability of the platform. Customized legal service solutions should be developed with the characteristics of different industries and fields to meet diversified user needs. At the same time, focus on the latest development and innovation of blockchain technology, introduce new technologies and new models in time, to maintain the advanced nature and competitiveness of the platform. Secondly, it will adopt a phased market expansion strategy. In the initial stage, it will focus on first-tier cities and developed regions, and with the help of the high degree of marketization, legalization and informatization of these regions, quickly establish the popularity and reputation of the platform.[11] To gradually expand to small and medium-sized cities, which have huge market potential and demand for legal services, which can increase the user scale and market share of the platform. Finally, it will expand to rural and remote areas, and use the advantages of convenience and low cost of the platform to provide better legal services for users in these areas, and promote social equity and the construction of the rule of law.

### 4. Project R & D management and user maintenance

The focus of R & D management is on the development and maintenance of the system. There are four stages in the system development of this project, namely: project filing, software development, functional testing and system launch, daily maintenance and improvement of the system after the launch, which is completed by the software developer and supervised by the person of the software manager.[12] The system maintenance task mainly provides support services to ensure the normal operation of the system, and maintains the software system with the requirements change, including the development and maintenance, daily operation and some temporary work requirements. According to the management needs such as risk control, different management means are adopted, including new functions, function changes, auxiliary operations, routine operations and emergency treatment.

At the same time, the team establishes an effective performance management mechanism, and the performance management of the R & D team can effectively motivate the enthusiasm of the R & D team and improve the work efficiency. The performance management process of R & D management also includes four parts: performance planning, performance guidance, performance evaluation and result application. Performance evaluation indicators usually consider the overall strategy of the enterprise, and conduct regular demand research. Through a series of activities such as repeated communication and communication with customers, and adopting research methods such as discussion method, survey form method and field investigation, we can understand the particularity of cooperative government departments to purchase our business based on the demand of evidence traceability. Focusing on the analysis of the characteristics and structure of customers, the target customers with well-known works for copyright protection are growth customers with commercial value, dig deep into their pain points and needs, and lay the corresponding foundation for the expansion of new technical service business.[13]

### 5. epilogue

In the era of artificial intelligence, the core value of intelligent judicial implementation is to improve judicial efficiency and realize judicial justice. In the face of the booming data science, blockchain technology is considered to be an electronic data technology with "technology verification", which has important positive significance to intelligent justice. The team makes full use of many features of blockchain technology, such as imtamability, decentralized architecture, and smart contract mechanism, to provide users with comprehensive legal services, playing a role in electronic data storage, contract management, dispute resolution and other fields. The realization of blockchain "participatory" justice is not only a self-innovation of the judicial mechanism, but also a new communication mechanism between technology and law.

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