How Emerging Technologies Shape the Face of Chinese Courts?

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A. Technology in the Context of Judicial Reform

According to Max Weber, "the modern judge is a vending machine into which the pleadings are inserted together with the fee, and which then disgorges the judgment together with the reasons mechanically derived from the code." [1]Max Weber's conjecture is a metaphor for the vital connotation of intelligence. The key elements of intelligence are people, data and technology. So, how these elements are utilized in the judicial system?

Generally, a significant number of courts are experimenting with the use of internet, artificial intelligence and blockchain for case filling, investigation and evidence obtaining, trials and the initiation of ADR procedures. The so-called smart justice projects are commenced in many countries. China has also made significant progress in this domain. In addition to accelerating the use of the internet technology, the Supreme People's Court of China has demonstrated its ambition to use AI and blockchain to solve problems in the judicial proceedings.[2]

B. Smart Court in China: An Overview

In China, the smart justice is a big project contains smart court, smart judicial administration and smart procuratorate. The smart court is the core of the entire smart justice project. "The Opinions of the Supreme People's Court on Accelerating the Construction of Smart Courts" encourages people's courts around the country to apply AI to provide smarter litigation and legal literacy services to the public, while reducing the burden of non-judicial matters for court staff as much as possible.

The construction of China's smart courts involves more than 3,000 courts, more than 10,000 detached tribunals and more than 4,000 collaborative departments, containing tens of thousands of information systems such as information

infrastructure, application systems, data resources, network security and operation and maintenance, etc. The entire smart court information system is particularly big and complex.

The smart court is a functional service platform for the informatization of the people's courts. The platform integrates several cutting-edge technological capabilities, including face recognition identity verification, multi-way audio and video call functions, voice recognition functions and non-tax fee payment functions. These functions are tailor-made capability packages for courts, and they can be used in a variety of scenarios such as identity verification, online documents accessing, remote mediation, remote proceedings, enforcement, court hearing records and internal things. Through the smart platform, any court can easily access to the capabilities, and quickly get successful experiences from any other courts in China.

C. Examples of Good Practice

1. **Provide Litigation Information and Services**

Peoples' Courts in nine provinces or municipalities, including Beijing, Shanghai and Guangdong, have officially launched artificial intelligence terminals in their litigation service halls. Through these AI terminals, the public can access information about litigation and judicial procedures, as well as basic information about judges or court staff. The AI terminals can also automatically create judicial documents based on the information provided by the parties. More importantly, the AI can provide the parties risk analysis before filing a lawsuit. For example, artificial intelligence machines in courts in Beijing, Shanghai and Jiangsu can assess the possible outcome of litigation for the parties. The results are based on the AI's analysis of more than 7,000 Chinese laws and regulations stored in its system, as well as numerous judicial precedents. At the same time, the AI machine can also suggest alternative dispute resolution options. For example, when an arbitration clause is present, the system will suggest arbitration, in divorce cases, if one of the parties unable to appear in people's court, then the smart system shall advise online mediation.

In addition to parties, as to the service for the court proceeding itself, the new generation of technology[3] is used in the smart proceeding and is deeply integrated with it. These technologies provide effective support for judges'

decision making, and provide accurate portraits of natural persons, legal persons, cases, lawyers and other subjects. They also provide fast, convenient and multi-dimensional search and query services and automatic report services for difficult cases.

2. **Transfer of Case Materials**

Some People's Courts in Shenzhen, Shanghai and Jiangsu have set up artificial intelligence service terminals for parties to scan and submit electronic copies of materials to the court. This initiative can speed up the process of evidence submission and classification of evidence. In addition, digital transmission can also speed up the handover of case materials between different courts, especially in appellate cases where the court of first instance must transfer the case materials to the appellate court.

3. **Evidence Collection and Preservation**

Technically speaking, the blockchain and its extensions can be used to secure electronic data and prevent tampering during the entire cycle of electronic data production, collection, transfer and storage, thus providing an effective means of investigation for relevant organizations. Comparing to traditional investigation methods, blockchain technology is suitable as an important subsidiary way to electronic data collection and preservation. This is because the blockchain's timestamp can be used to mark the time when the electronic data was created, and the signature from the person's private key can be used to verify the party's genuine intent. The traceable characteristics of blockchain can facilitate the collection and identification of electronic data.[4]

In judicial practice, for example, the electronic evidence platform is on the homepage of Court's litigation services website of Zhengzhou Intermediate People's. It is possible to obtain evidence and make preservation on judicial blockchain of the court. This platform providing services such as evidence verification, evidence preservation, e-discovery and blockchain-based public disclosure. The evidence, such as electronic contracts, can be uploaded directly via the webpage, and the abstract of electronic data can be recorded in the blockchain in real time. Furthermore, this judicial blockchain has three tiers (pictured below). The first tier is the client side, which helps parties submit evidence, complaints and other services. The second tier is the server side, which

provides trusted blockchain services such as real-name certification, timestamping and data storage. The third tier is the judicial side, which uses blockchain technology to form a consortium chain of judicial authentication, notaries and the court itself as nodes to form a comprehensive blockchain network of judicial proceedings.[5] In other words, people's court shall be regarded as the key node on the chain, which can solve the contradiction between decentralization and the concentration of judicial authority, and this kind of blockchain is therefore more suitable for electronic evidence preservation.

Secondly, for lawyers, the validity of electronic lawyer investigation orders can be verified through judicial blockchain, a technology that significantly enhances the credibility of investigation orders and the convenience of investigations. For example? in Jilin Province, the entire process of application, approval, issuance, utilization and feedback of an investigation order is processed online. Lawyers firstly apply for an investigation order online, and after the judge approves it, the platform shall create an electronic investigation order and automatically uploads it to the judicial blockchain for storage, while sending it to lawyers in the form of electronic service. Lawyers shall hold the electronic investigation order to target entities to collect evidence. Those entities can scan the QR code on the order, and login to the judicial blockchain platform to verify the order. Then they shall provide the corresponding investigation evidence materials in accordance with the content of the investigation order.[6]

In addition, it should be noted that Article 11 of the "Provisions of the Supreme People's Court on Several Issues Concerning the Trial of Cases by Internet Courts", which came into force in 2018, explicitly recognizes data carriers on the blockchain as evidence in civil proceedings for the first time, but their validity needs to be verified by the courts.

The issue of blockchain evidence has already caused discussion among judges, particularly regarding the use of blockchain-based evidence in cases. For instance, what criteria should courts adopt to read such data? Approaches in judicial practice vary. Currently, there is no consistent approach in people's court as to whether blockchain evidence needs to be submitted as original evidence. In certain recent cases, such as (2019) Jing 0491 Min Chu No. 805 Case and (2020) Jing 04 Min Zhong No. 309 Case, the court's considerations for the determination of blockchain evidence are inconsistent.

4. **Case Management**

People's Courts in Shanghai and Shenzhen are piloting an artificial intelligence-assisted case management system that can analyze and automatically collate similar judicial precedents for judges to refer to. The system is also able to analyze errors in judgments drafted by judges by comparing the evidence in current cases with that in precedent cases. This will help maintain uniformity in judicial decisions. Currently, the system for criminal cases has been put into use, while the system for civil and administrative cases is still being tested in pilot stage.

5. **Online Proceedings**

Chinese courts had already adopted online proceedings in individual cases before 2018. The Supreme People's Court had released the Provisions of the Supreme People's Court on Certain Issues Concerning the Hearing of Cases in Internet Courts. From 1 January 2020 to 31 May 2021, 12.197 million cases were filed online by courts nationwide, with online filing accounting for 28.3% of all cases filed; 6.513 million total online mediation, 6.142,900 successful mediation cases before litigation; 1.288 million online court proceedings 33.833 million electronic service of documents.[7]

Recently, the Supreme Court, some provincial courts and municipal courts have also issued rules on "online proceedings". The Supreme People's Court has issued the Online Litigation Regulations for the People's Court 2021 which stipulates online litigation should follow the five principles, namely fairness and efficiency, legitimate and voluntary principle, protection of rights, principle of safety and reliability. This regulation emphasizes the principles of application of technology, strictly adhere to technology neutrality, to ensure that technology is reliable. [8]Furthermore, in 2021 the Supreme People's Court has issued the Several Regulations on Providing Online Filing Services for Cross-border Litigants, relying on the provision of online filing for cross-border litigants through the China mobile micro court. Based on Tencent's cloud technology, the Micro Court can also be linked to the most used communication tool in China, namely WeChat. Using the micro courts mini programs allows for a dozen functions such as public services, litigation, enforcement and personal case management.[9]

6. **Framework of the Litigation Services Network**

The litigation service network is an important carrier for the court to conduct business and litigation services on the Internet, providing convenient and efficient online litigation services for parties and litigation agents, greatly facilitating the public's litigation, while strengthening the supervision and management of the court's litigation services, enhancing the quality of litigation services and improving the standardization of litigation services. The picture shows the functioning and operation mechanism of a litigation services network.[10]

[1] See Max Weber, On Law in Economy and Society (Edward Shils and Max Rheinstein trans., Harvard University Press 1954).

[2] For example, in 2019, the Supreme People's Court of China approved several documents such as "The Report on the Promotion of China Mobile Micro Courts", "The Report on the Construction of the Smart Court Laboratory", and "The General Idea of Comprehensively Promoting the Construction of Judicial Artificial Intelligence".

[3] Including big data, cloud computing, knowledge mapping, text mining, optical character recognition (OCR), natural language processing (NLP) etc.

[4] See Trusted Blockchain Initiatives, White Paper on Blockchain Preservation of Judicial Evidence (2019).

[5] See Zhengzhou Court Judicial Service Website < http://www.zzfyssfw.gov.cn/zjy/> accessed 09 Nov. 2021; A consortium chain is a blockchain system that is open to a specific set of organizations, and this licensing mechanism then brings a potential hub to the blockchain, and The node access system in a consortium chain means that it already grants a certain level of trust to the nodes.. see also Internet court of Hangzhou < https://blockchain.netcourt.gov.cn/first>accessed 09 Nov. 2021.

[6] See e.g., a pilot project of the Supreme People's Court of China, the Jilin Intermediate People's Court proposed the Trusted Operation Application Scene: Full Process Assurance for Litigation Services (Electronic Lawyer Investigation Order); see also People's Court Daily, Piloting the "judicial chain" and multipions practice of Jilin's smart court construction< http://legal.people.com.cn/n1/2020/1124/c42510-31942250.html>accessed 08 Nov. 2021.

[7] See Chinanews < https://www.chinanews.com/gn/2021/06-17/9501170.shtml>accessed 08 Nov. 2021.

[8] SPC of PRC, Report about Online Litigation Regulation for the People's Court< http://www.court.gov.cn/zixun-xiangqing-317061.html>accessed 08 Nov. 2021.

[9] See e.g., Xinhuanet < http://www.xinhuanet.com/legal/2020-05/07/c_1125953941.htm>accessed 08 Nov. 2021.

[10] Xu Jianfeng et.al., *Introduction to Smart Court System Engineering* (People's Court Press 2021).