

Research on the Application of Cross platform Video Communication in Public Legal Services

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Abstract—Video communication has been widely used in various industries due to its convenience, intuition, authenticity, and intimacy. It is also widely used in the field of public legal services such as remote consultation, remote notarization, remote mediation, and remote testimony. As an important part of the national public service system, public legal services have increasingly played an important role in promoting and enhancing the implementation of the overall rule of law strategy. However, due to cognitive, institutional, and technological reasons, there are still many difficulties in the application of cross system and cross platform video communication in the field of public legal services. In order to ensure the true inclusiveness and equality of public legal services, more in-depth research is needed to connect the cross platform business flow, video flow, and data flow of various works of public legal services from the cognitive, institutional, and technical levels, forming a data chain, service chain, and evidence chain, promoting the content of public legal services to be richer, resources to be more balanced, services to be more convenient, objects to be more extensive, and fields to be more comprehensive. To continuously improve and optimize the public legal service system.

Keywords—cross platform; video communication; public legal services

I. INTRODUCTION

From the overall global situation, the game between major powers is becoming more intense, and the development of major powers relies more on the rule of law to ensure stability and development[1]. The rule of law system requires the new expansion of public legal service methods, channels, and content[2]. Notarization services need to achieve cross regional certification of notarized certificates, production of notarized documents, acceptance and execution of notarized commissions[3]; Legal aid requires cross jurisdictional assistance applications, legal consultation, litigation agency, mediation, and other services; Judicial appraisal requires remote inquiry, appraisal application, and appraisal commission[4]; Legal publicity requires services such as remote promotion and consultation. These services have played an important role in safeguarding citizens' rights, promoting social harmony, and maintaining stability[5].

In addition to being convenient and intuitive, video based public legal services can also make people feel as authentic and intimate as face-to-face communication[6]. People can hear each other's voice and see their facial expressions and body language, which can help them better understand and communicate[7]. In addition, video communication can also cross time and space constraints, allowing people to communicate in real-time no matter where they are[8].

However, public legal services involve multiple business types and platforms[9]. If all platforms can be interconnected within a single ecosystem, achieving cross platform video communication can better improve the quality of public legal services, carry out more service businesses, and provide more technical support for achieving equal, inclusive, high-quality, and sustainable development of public legal services[10].

II. ADVANTAGES AND DIFFICULTIES

The advantages and difficulties of cross platform video communication in the field of public legal services

With the continuous development of information technology and people's pursuit of "Internet plus", video communication technology is widely used in the field of public legal services, making legal services more efficient and convenient.

A. Advantage Analysis

Analyzing the application scenarios, scope, and user groups of video communication in the field of public legal services, it can be found that various business platforms have a strong demand for video communication.

1) *Remote consultation with lawyers*: Lawyers can provide remote legal advice to the parties through video communication, including preliminary case assessment, legal risk warning, Legal opinion and other services. If the client is located in a remote area or needs remote consultation, video communication technology can reduce time and space constraints, and facilitate timely access to lawyer services.

2) *Remote legal aid services*: In remote areas or places with inconvenient transportation, it is difficult for lawyers to provide timely legal aid services to clients. Through video communication technology, legal aid personnel can provide legal aid services to parties remotely. In some rights protection events, this service is particularly important, such as labor disputes, consumer rights protection, and other events.

3) *Remote litigation trial*: In cases involving cross regional and cross-border cases, video communication technology can allow parties to conduct remote hearings in different regions. This type of service can reduce potential travel, accommodation, and other expenses, improve court efficiency and quality.

4) *Legal publicity and education*: Utilizing video communication technology for legal publicity and education, conveying legal knowledge and spirit to the public, enabling more people to understand and master legal knowledge, and improving social awareness of the rule of law. This service can be carried out through various channels such as social media and video websites.

Video communication technology is widely used in the field of public legal services, including notarization, appraisal, judicial appraisal, legal aid, legal publicity, litigation, and other fields. In addition, video communication technology can also expand its functions to provide multi user self-service, full staff moral evaluation, and other services.

Its user base is also very broad, including ordinary citizens, enterprises and institutions, government agencies, lawyers and other legal service institutions. Especially for some remote areas or people with physical disabilities, video communication can shorten the limitations of service scope and service time, providing more convenient and efficient public legal services for these populations.

B. Dilemma analysis

The challenges of cross platform video communication in the field of public legal services include limitations in network communication technology, privacy protection and security issues, information construction and personnel quality issues in judicial organs, and a lack of legal regulations and standards, as shown in Figure 1.

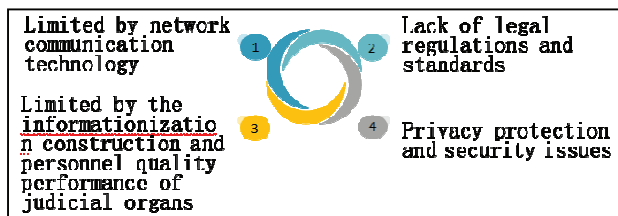


Figure 1. Main challenges in cross platform video communication

1) *Limitations of network communication technology*: Although the current network environment is getting better and better, in some remote areas or areas with weak networks, using cross platform video communication still faces problems such as unstable signals, high latency, and poor image quality, which affects the quality of video communication and user experience. In legal aid work, many people are unable to hire lawyers due to economic reasons, but need to obtain legal aid. At this time, the platforms of lawyers or public legal service institutions are not consistent. Video communication includes social software videos on the internet, as well as video conferencing systems. These two systems are software based platforms and conference hardware based platforms, which are incompatible with each other due to commercial interests. They are also unwilling to be compatible with each other.

2) *Privacy protection and security issues*: In the process of cross platform video communication, if security is not guaranteed, the user information involved may be leaked and exploited by criminals. Therefore, a series of technical measures need to be taken to ensure the information security and privacy protection of users. In some cases of judicial on-site inspections, the situation at the scene needs to be promptly reported to the relevant parties and lawyers. At this time, cross platform video communication can help on-site personnel have real-time audio and video communication with the parties and lawyers. However, the prerequisite for audio and video transmission is to first authenticate personnel's identity information. Identity information authentication may have

different security levels on different platforms, which may lead to privacy information leakage.

3) *Informationization construction and personnel quality issues in judicial organs*: At present, there are still some weak links in the informationization construction of judicial organs, such as certain problems in the quality of IT personnel, hardware equipment, and other aspects of judicial organs in some places. Professional personnel participating in public legal services may not be proficient in relevant technologies, and it is necessary to strengthen training and improve technical capabilities. Many parties may need to consult with a lawyer during legal consultations, but due to geographical distance and other reasons, they are unable to consult with a law firm in person. In this case, cross platform video communication can help parties conduct online consultations. However, due to the limited mastery of information technology by lawyers serving grassroots legal services, and the more complex operation of cross platform video communication, it is difficult to easily achieve video communication.

4) *Lack of legal regulations and standards*: The development of cross platform video communication in the field of public legal services requires more in-depth exploration and research. It may be necessary to establish relevant laws and regulations to regulate the scope of use, technical standards, and security guarantees of cross platform video communication in public legal services. In cross provincial remote litigation cases, if one of the parties is serving a sentence in prison, the prison can provide a remote meeting system to participate in the trial. However, the digital court video system of the court and the remote meeting system of the prison are composed of dedicated networks according to relevant standards of the court system and the prison system, and there is no relevant legal basis or technical specification for the interconnection of the two networks.

Therefore, when promoting the application of cross platform video communication in public legal services, it is necessary to fully consider the aforementioned difficulties, actively study solutions, improve technical and service levels, and continuously promote the modernization process of judicial public services.

III. RESOLVE DIFFICULTIES

A. Building a Basic Network of Optical Network+5G+WIFI to Resolve Cross Network Technical Issues

The combination of optical network, 5G, and WIFI forms a new type of basic network that can provide high-speed, high-quality, and wide coverage connection services, providing more stable and reliable support for cross network technology. At the same time, establish universal cross network technology standards, enhance the stability and adjustment of the network, improve the timeliness and accuracy of data transmission during the process, strengthen data security protection, strengthen network supervision and judgment, and guide and standardize cross network technology by timely monitoring and judgment of the situation of cross network technology in practice, further improving the management mechanism of the network, and improving the quality and security of the network.

B. Introduce cross platform video communication technology standards for public legal services

It is necessary to introduce cross platform video communication technology standards for public legal services to ensure the quality and efficiency of public legal services. Firstly, it is necessary to clarify the legal basis for implementing cross platform video communication technology standards, and then establish a mechanism for formulating technical standards. Then develop cross platform video communication protocol standards and publicly disclose the standard content. At the same time, strengthen the implementation and supervision of standards.

C. Carry out cross platform video communication pilot project

Carry out a cross platform video communication pilot project to verify and accumulate practical experience. Choose regions and institutions with actual demand, such as prisons, courts, legal aid, mediation committees, judicial agencies, law firms, etc. Based on the actual needs of the pilot areas and institutions, determine the pilot scenarios and service scope, such as online legal consultation, legal aid services, court trial live streaming, etc.

Determine which cross platform video communication technology and specific implementation plan to adopt, and develop technical standards applicable to public legal services. According to the pilot plan and technical standards, select appropriate communication platforms and equipment, organize the implementation of pilot projects, and supervise and evaluate the pilot process. After the pilot project is completed, summarize and evaluate the pilot experience, improve and revise based on feedback and issues, and form standards and norms for cross platform video communication technology in public legal services.

D. Promote the application scope of cross platform video communication

Promoting cross platform video communication technology can benefit more people and increase the coverage of public legal services. In addition to individual users and legal institutions, the scope of services can also be expanded to cover other social groups, such as enterprises, community organizations, public service institutions, etc. Through various publicity channels, such as WeChat official account, media reports, forum exchanges, etc., more people can understand the advantages and convenience of cross platform video communication technology, so as to improve the utilization rate. Provide convenience measures for users, such as free use, 24-hour online services, value-added services, etc., to attract more users to use. Explore joint application models, collaborate with other applications such as public transportation, and implement cross platform video communication technology for remote mediation of traffic disputes, providing convenient services in more scenarios.

E. Strengthen cross platform video communication application training

Strengthening cross platform video communication application training is an important measure to improve the quality and efficiency of public legal services. We can adopt different training programs for different user groups. Provide

training to legal practitioners, targeting lawyers, judges, mediators, grassroots legal service personnel, and other legal professionals. Specialized training courses can be conducted to introduce the application methods and precautions of cross platform video communication technology, and improve their technical application capabilities by solving specific cases. Targeting ordinary users, popularization and promotion activities can be carried out, such as online live streaming, short video tutorials, etc., to introduce the basic functions and usage methods of cross platform video communication technology to users and improve their user experience.

F. Provide cross platform video communication technology support

Provide users with technical support and guarantee services, including online services, telephone consultation, video conference, etc., to answer users' questions and improve their technical application capabilities. Establish a cross platform video communication technology team, conduct regular technical seminars and training, follow up on the development of technology and the actual needs of application, improve the team's application level and ensure quality.

Through the implementation of the above measures, the level of cross platform video communication applications in public legal services can be improved, the level of inclusivity and equality in public legal services can be improved, and judicial fairness and rule of law construction can be further promoted.

IV. SUMMARY AND OUTLOOK

Cross platform video communication has both advantages and difficulties in the field of public legal services. Cross platform video communication can conveniently and timely provide lawyer services, legal aid services, trial services, legal publicity and education for parties, and has a wide user base. However, the challenges faced by cross platform video communication include limitations in network communication technology, privacy protection and security issues, information construction and personnel quality issues in judicial organs, and a lack of legal regulations and standards. In order to resolve these difficulties, some measures should be taken, including building a basic network of optical network+5G+WIFI, issuing public legal service cross platform video communication technology standards, conducting cross platform video communication pilot projects, promoting the scope of cross platform video communication applications, strengthening cross platform video communication application training, and providing cross platform video communication technology guarantees. By implementing the above methods, the quality, efficiency, and popularity of public legal services can be improved, thereby promoting judicial fairness and the construction of the rule of law.

Looking ahead, with the continuous development of technology and the expansion of application scenarios, the application of cross platform video communication in the field of public legal services will become increasingly widespread. On the one hand, cross platform video communication technology will gradually become one of the important means

of public legal services, reducing geographical restrictions, improving efficiency, and reducing costs; On the other hand, the demand in the field of public legal services will continue to drive technological innovation and upgrading, achieving the optimization and upgrading of technology and services.

In the future, the digital rule of law society will continue to promote the development of public legal services towards intelligence and efficiency, and provide video communication technology support. For example, services such as remote court hearings and online mediation will be improved to provide better legal services for the parties involved. The digital rule of law society will also help to provide services such as popularizing legal knowledge and legal aid to large-scale groups, and enhance legal publicity and awareness of the rule of law.

The application scope of cross platform video communication technology in public legal services will become increasingly diverse. For example, cross platform video communication technology can be combined with online legal services, remote judicial appraisal, online legal document production, and other services to achieve full business legal services. In addition, combining public legal services with other application scenarios, such as healthcare and education, can provide more comprehensive services and achieve collaborative innovation among industries.

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