

# On the Use of Blockchain Technologies in the Judicial System of the Russian Federation

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## ABSTRACT

This article describes the possibilities and prospects for the use of information technologies in the judicial system, reveals the principles of "blockchain" technology, and justifies the possibility of using this technology in assessing the reliability of evidence presented in the form of electronic documents. So, after the "General euphoria" on the topic of blockchain, it became clear that the technology is imperfect and requires further development, especially in the judicial system of the Russian Federation. It should be noted that only major players have resources for it in Russia so far. There is a request for blockchain in areas where there is no single registry or it does not cause trust. The difficulty is that building a more or less secure system requires a lot of validation nodes, otherwise "it is difficult to expect effective use of the blockchain", and this is the most expensive part. It is proposed to create a unified information blockchain platform for legal proceedings.

**Keywords:** *legal proceedings, "blockchain", evidence provided in the form of electronic documents, unified information platform*

## 1. INTRODUCTION

Digital technologies, while rapidly entering into our lives, penetrate deeply into all spheres of modern society activity. In turn, the state pays more and more attention to the development of information technologies in all areas of the economy and public administration. The most striking examples of the state active participation in the information technologies development are the publication of the President of the Russian Federation Decree dated 09.05.2017 No. 203 "On the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030" and Order of the Government of the Russian Federation dated 28.07.2017 No. 1632-r who approved the program "Digital Economy of the Russian Federation".

The judicial system of the Russian Federation, representing a state power institution of, is one of the goals of informatization. For example, as one of the most important goals of the Strategy for the Development of the Information Society in the Russian Federation, the development of free, sustainable and safe interaction of citizens and organizations, government bodies of the Russian Federation, which is of great importance for the judiciary, is defined. The information space creature is taking into account the needs of citizens and society in obtaining high-quality and reliable information, as well as the development of the information and communication infrastructure of the state, it's including into the Russian Federation judicial system, become priority among the national interests in the development of the information society.

## 2. MATERIAL AND METHODS

Undoubtedly, in the framework of informatization of the judiciary, special attention is paid to the development of the digital environment and institutions of power through the application of the methods provided for by the Federal Target Program "Development of the Russian Judicial System for 2013-2020", as well as the through information technologies envisaged by the program "Digital Economy of Russia Federation".

As a part of the Russian legal proceedings digitalization, in pursuance of the corresponding target program, examples of the introduction of information technologies in the activities of court secretariats, pre-trial procedures and processes, as well as directly into the judicial process, are increasingly being manifested.

Thus, almost everywhere the courts use information retrieval systems of legal information, websites of judicial authorities, as well as audio and video logging systems for court sessions, which increase the judicial system openness and accessibility for both the proceedings participants and other persons.

## 3. RESULT AND DISCUSSION

The use of videoconferencing systems in court proceedings was ensured, which made possible to conduct outdoor meetings and its parties and third parties participation in the trial without calling them to the court. It includes cases out of visual observation possibility or

witnesses of criminal offenses distorted voice, for example, ensuring their safety and, thereby, an objective review of the case.

The systems of automated cases distribution between judges, electronic document management with cryptographic information protection and electronic signatures are increasingly finding their application in the courts. The conditions for the electronic interaction of information systems of the courts of general jurisdiction, the prosecution authorities and the Ministry of Internal Affairs of the Russian Federation, the Federal Penitentiary Service and other departments are creating.

The listed measures for informatization of justice actually transfer the interaction of the parties to the process, including the enforcement of court decisions, to a different, more effective level.

For example, mentioned in the paragraph 7 of Art. 4 APC of the Russian Federation, the possibility of filing statements of claim, petitions, complaints, representations and other documents in the form of an electronic document, by filling out a form posted on the court's official website on the Internet, allowing citizens, including those with disabilities, without the use of intermediaries apply to the judiciary at various stages of the process.

In turn, recorded in the paragraph 3 of Art. 121 APC of the Russian Federation notice of persons participating in the process by e-mail and other means of communication, paragraph 5 of Art. 15 APC RF - the preparation of judicial acts in the form of electronic documents signed by judges with enhanced electronic signatures, paragraph 1 of article 122 APC RF - sending a copy of the judicial act to the parties to the process, as well as Art. 177 of the Arbitration Procedure Code of the Russian Federation - the placement of a court decision on the court's official website allows not only to ensure the participation of the parties in the process, but also to get acquainted with court decisions as soon as possible, which allows participants in the process to exercise the right to review these decisions without violating the procedural deadlines for appealing them.

Another of the advantages of electronic proceedings in the arbitration process is provided for in paragraph 3 of Art. 319 APC of the Russian Federation the possibility of sending a writ of execution in the form of an electronic document signed by a judge, reinforced by a qualified electronic signature, which allows you to immediately deliver court decisions to the addressees for their execution by the defendant or the competent authorities.

Thus, the digitalization of legal proceedings is not only another tool that ensures full compliance with the rights and obligations of the parties in the judicial process, but a condition conducive to the inevitability of justice, expressed in the timely implementation of court decisions. It should be noted that this approach is systematic in the proceedings of the Russian Federation and similar rules are provided for in the Russian Administrative Procedure Code, Civilian Procedure Code and Criminal Procedure Code.

Returning to the issue of further digitalization of the Russian justice system, within the framework of the Digital Economy of the Russian Federation program, it should be noted that one of the most promising for the application of end-to-end information technologies in the judicial system is the technology of distributed registry systems - "blockchain".

The essence of the technology of "blockchain" is that taken together database of any data placed simultaneously on several computers of its users (distributed registry), each user of this database stores has its complete copy. After making new information or changing existing information into the database by one of the users of the blockchain network, all components of the distributed registry are simultaneously synchronized with copies of the database of all users, thereby making corresponding changes to all copies of all users of the specified database. Moreover, the "blockchain" technology provides methods for the conversion of data by encryption and "hashing" methods. It includes recording the entered information in a distributed registry at the form of a block of encrypted information. Also it includes the information about previous records, as well as a cryptographically generated key containing information about the decryption of records, which reliably protects the transmitted data from unauthorized reading, destruction, falsification or compromise by unauthorized persons.

A specific feature of the blockchain technology is that making changes to the database (registry) is final and irreversible: transaction information is sealed in a virtual block, which, after registering the action, is synchronized with all copies of the registry. In this case, the blocks are sequentially lined up in a chain. Thus, the blockchain technology reliably saves the registry from the loss of information, fakes and fraudulent actions due to the fact that making changes is possible only in that part that the user of the registry owns, and also ensures complete transparency of operations in the registry and traceability of the entire chain of blocks from the moment of creation. The shelf life of data in the blockchain registry is unlimited, so, the information can be stored virtually forever [11, p. 148].

Taking into account the above properties, the distributing registry technology can be used as a method of ensuring the reliability of information generated both in the judicial document circulation and in the exchange of procedural and other documents between the direct participants in the judicial process, executive bodies, prosecutors, public and other organizations and associations, including the most problematic issue in the exchange of electronic documents - the presentation of evidence in electronic form in criminal, civil trial or arbitration.

Based on the essence of paragraph 1 of Art. 75 of the Arbitration Procedure Code of the Russian Federation, any electronic documents, including digital, written, graphic records, subject to the possibility of establishing their reliability, can be recognized as written evidence of value to the case. Moreover, according to the provisions of Article 89 of the Arbitration Procedure Code of the Russian Federation, documents that may include materials for photo and video shooting, audio and video recordings, and other storage media are allowed as evidence if they contain information about circumstances relevant to the proper consideration of the case.

Based on judicial practice, such evidence of electronic information carriers as in electronic form such as [12] are already recognized as evidence today:

- electronic evidence - documents obtained by electronic or other communications, including using the Internet (log files of servers, providers, search engines, electronic messages, SMS and MMS messages);

- electronic documents signed by electronic signature in the manner prescribed by the legislation of the Russian Federation;
- audio, photo and video records on electronic media (audiovisual document, film document, photo document, etc.).

But the list is not exhaustive. For example, three-dimensional scanning and modeling of material evidence seems to be promising for use in criminal trials. The various methods used by this technology make it possible to digitize various physical features and material properties of evidence generated or acquired in interaction with other objects in the commission of a crime, clothed in a procedural form and possessing properties of relevance, that is, they are in the necessary causal connection with the circumstances, subject to proof [9, p. 31]. During the trial, for the purpose of a detailed study of material evidence, using specialized software, it is possible to electronically create complete digital three-dimensional models of objects that are material evidence containing information about the necessary properties and characteristics of the original (dimensions, proportions, internal structure, color, material, density, etc.). Moreover, a three-dimensional scanning of the situation of the scene, followed by the creation of a three-dimensional model of the scene, allows not only to exclude the human factor in the collection of material evidence, but also to form a single material model of the scene, which in turn is a derivative of material evidence [8, p. 706].

In view of the foregoing, the evidence presented in electronic form allows not just significantly reduce financial and time costs in legal proceedings, but moreover, subsequently, to radically change the entire justice system, including by ensuring the full management and storage of procedural documents, the entire court case in electronic form on "cloud" servers, the use of the above evidence in the conduct of legal proceedings through "artificial intelligence". So, the analysis carried out by scientists shows that there are all prerequisites for the introduction of electronic criminal cases in the activities of crime investigation bodies of the Ministry of Internal Affairs of Russia and preliminary investigation bodies in particular [13, p. 44]. Meanwhile, when using evidence presented in electronic form in the trial, the above information will be evidence provided that the authenticity is confirmed.

At the same time, the burden of assessing the reliability of electronic evidence still is on the judges.

Undoubtedly, judges representing expertise in the field of substantive and procedural rights do not always have to obtain at their disposal special decisions in the field of high technologies. Decisions will be made on the admissibility of any evidence presented in electronic form, taking into account the opinions of the experts involved. In turn, due to the low competence of the expert, his carelessness or other risks, including corruption, the reliability of the information provided in electronic form may not be confirmed, which will not allow judges to make appropriate decisions on the use of this evidence in the process.

To solve the problem, it is quite possible to apply the technology of "blockchain". So, if you unite all parties to the litigation, judicial, advocate, expert communities, divisions of internal affairs bodies, investigative bodies, prosecution authorities, notaries, public associations and other interested organizations on a single blockchain

platform, it is possible to provide a single digital space not only for reliable, timely, economically feasible exchange of procedural and other documents, information with evidence and regulatory framework, as well as ensuring the reliability of the information that is accessed on the blockchain network, its guaranteed safety, accessibility for process participants and security from outside interference, while being controlled by each of the participants in the digital space. This digital space based on the "blockchain" technology, being a huge base of knowledge confirmed by experts, will significantly optimize the decision-making process by judges in simple cases, thereby reducing the burden on the judicial body, as well as more widely use such "cross-cutting" technology in legal proceedings as "artificial intelligence".

Undoubtedly, at the initial stage of introducing blockchain technology, due to the sufficient legal regulation of the use of this technology in the Russian legal proceedings, when exchanging information expressed in electronic form and containing evidence, and other information relevant to the judicial process, it is quite acceptable to involve experts in the field of informatization, which would give an expert opinion on a specific evidence. But in the future, with a detailed legal regulation of these processes, one can come to a situation where there will be no need to confirm the information obtained by this method [10].

At the same time, the information space built on the technology of "blockchain" allows you to comply with the requirements to ensure the safety of personal data, process participants, as well as information constituting various types of secrets. For example, scientists and specialists identify several types of distributed data registry [14, p. 515]:

1. Open blockchain - in which there are no restrictions on the number of users, the records they create and data operations. Closed blockchain – in which access to data and operations with them is limited to a certain circle of anonymous users..
2. Exclusive blockchain - in which the placement and processing of information is carried out by a specific list of entities with verified identities.

#### **4. CONCLUSION**

At the same time, in an exclusive distributed registry, restrictions may vary on the degree of openness for users (access only to their records, only the creation of blocks of records, etc.).

Thus, when using, for example, an exclusive blockchain, it is possible for various participants in the process to obtain various rights to familiarize themselves with and use certain electronic documents and other materials of the court case, depending on their role in the court process.

Accordingly, the presence of various types of blockchain allows a more flexible approach to the use of this technology in legal proceedings, for example, when it is necessary to restrict access to case materials or directly to the judicial process in connection with the presence of evidence constituting a secret investigation, state, commercial, medical or other secret protected by law.

Thus, the "blockchain" technology has great prospects for use in legal proceedings, and its use will not only significantly reduce significantly facilitate the process of

providing electronic evidence in court and strengthen the quality control of the conduct and consideration of court cases, reducing document flow in legal proceedings while increasing the level of interaction ships with other organizations and associations, increasing the level of publicity in the courts without losing the confidentiality of the investigation data, but also subsequently changing the trial itself by sending it along the path of unification and optimization of the judicial process.

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