

BLOCKCHAIN IN DIGITAL NOTARY SERVICES

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DOI: <https://doi.org/10.61345/1339-7915.2024.4.6>

Annotation. The purpose of the study is to determine the future application of blockchain technology. Protection of rights, as well as legal interests of citizens and legal entities is the main postulate of notary activity. Only through the prism of this provision should one consider the possible application of blockchain technology in the notary. This includes studying the possibilities of the blockchain for verifying the authenticity of documents, automating registration actions. The relevance of the study is related to the need for modern notaries to meet the requirements of the digital world.

The research is based on the application of an interdisciplinary approach, civil law and information technology, which combines the analysis of legal aspects with modern technological research. To study legislative aspects, methods of comparative analysis and synthesis were used, which includes an analysis of the legislation of Ukraine and other countries. The empirical method consists in researching existing examples of implementation of blockchain projects in EU and US notary offices. Analysis and modeling were carried out taking into account the architecture of blockchain networks, their capabilities in terms of information protection, authentication and legal validity of digital records.

The study found that blockchain technology has significant potential for the notary industry due to its decentralized nature and high level of data protection. It has been established that the implementation of the blockchain allows for the creation of a reliable database for recording notarial actions, ensuring the impossibility of forgery or loss of information.

The results of the study confirmed the possibility of using blockchain for digital recording of documents and automation of notarial procedures, which allows to reduce time costs and the risk of human errors. The experience of countries that have already implemented blockchain in the notary office indicates an increase in the level of trust in notary services and a reduction in bureaucratic procedures. The application of blockchain in the notarial sphere can fundamentally change the mechanisms of notarial actions, increasing security, convenience and speed of service.

The use of decentralized networks ensures the reliability of data, which makes it impossible to forge them and makes procedures transparent. However, for the full implementation of such decisions, it is necessary to create an appropriate regulatory framework, adapt Ukrainian legislation and ensure the training of specialists for work in the conditions of digital notary.

Key words: digital law, digital notary, inheritance rights, blockchain, personal data protection.

1. Introduction.

Global trends in the digitalization of jurisprudence include the use of blockchain. First of all, the blockchain system is associated with the financial sector. However, in addition to its application in the financial market, blockchain technology is gaining momentum in other areas of activity: medical, educational, logistics, electoral processes, as well as in the legal field, in particular in the notary.

The term "blockchain" comes from the English word blockchain or block chain, which means "chain of blocks". Blockchain is a distributed database containing certain information and protected by cryptography.

Blockchain can be compared to the structure of the DNA molecule, consisting of repeating blocks of nucleotides, where each cell contains information about the entire human body. Also in the blockchain system: each block contains information about the entire database.

The first product based on blockchain technology is Bitcoin. Bitcoin is a decentralized digital unit, a numerical function. Bitcoin looks like an electronic file. Bitcoin is a kind of “attempt” to apply blockchain technology. It is through the functioning of Bitcoin that the strengths and weaknesses of the blockchain are revealed. Users and researchers attribute complete anonymity, lack of identity verification, decentralization, transparency, and ease of entry to its strengths. The weak point is the complexity of mining, the large amount of information of the entire chain of blocks, security and the storage system of private keys.

2. Analysis of scientific publications.

Blockchain technology has recently become of interest to the legal and scientific community. I.V. Davydova studied the development prospects of blockchain technology in Ukraine. N.D. Hetmantseva and N.M. Protsk mid new contours of civil law in the era of digital technologies also highlighted technology blockchain R.I. Radeyko studied the specifics of implementing blockchain technology in the field of public relations in Ukraine. A.M. Demchuk and N.O. Chechel explore the concept of blockchain and the scope of its application. Attempts were made to investigate the topic of blockchain by foreign experts such as Jiahao Zhao, Yushu Zhang, Jiajia Jiang, Zhongyun Hua, Yong Xiang, Tharaka Hewa, Mika Ylianttila, Madhusanka Liyanage and ets. But, to date, the issue of using blockchain technology in the notarial process has not been investigated by scientists.

3. The aim of the work.

The purpose of the article is to define the concept and meaning of blockchain in the notarial process. Achieving this goal requires a doctrinal analysis of the content and procedure for creating the goal, blockchain, taking into account the provisions of national civil legislation and legal practice.

4. Review and discussion.

In September 2017, Ukraine launched an electronic state auction using Blockchain technology. The main advantages of the blockchain in the notary are impeccable reliability and complete transparency of the operations carried out. The technology is proposed to be used for simple transactions.

Smart-contracts or intelligent contracts provide guarantees of the execution of the agreement: records of transactions made within the framework of the contract are in the decentralized blockchain registry - all participants of the agreement see any change. A smart contract is a cryptographically protected program code, when executed, the parties can exchange real estate, money, securities, etc. Smart contract execution provides digital protocols without human intervention. However, ensuring the consistency of dynamic data updates in cross-chain interaction remains an unsolved problem that deserves further research [1].

The downside of blockchain is “the lack of possibility to make changes to already concluded contracts in the event of an error being detected, which may lead to incorrect fulfillment of the terms of the agreement or nullify the entire subsequent chain of legally significant actions. It will be possible to solve the problem only by concluding a new contract with the prior consent of all parties and, most likely, canceling the previously concluded one. And this excludes one of the key advantages declared by supporters of the technology - a reduction in the time and material costs of the parties [2].

The existence of blockchain real estate registers will provide an opportunity to enter data on real estate objects, agreements, registration of the transfer of ownership rights, encumbrances and replanning of objects [3].

The implementation of the legislation is also problematic in terms of understanding by the user parties the meaning and significance of the submitted draft contract and verification of the compliance of its content with the valid intentions of the parties and the requirements of the law [4]. The fulfillment of the specified requirements of the legislation is ensured by the notary.

Therefore, Blockchain technology is not capable of verifying the compliance of the expression of the person's valid will, just as the use of this technology will not be effective in case of any complication of the agreement in terms of rights and burdens arising from it, increasing the number of persons participating in it, from the point of view of ensuring the protection of the rights of any third parties who do not directly sign the agreement, which is carried out through the Blockchain system [5, p. 499].

A significant disadvantage of the blockchain as a decentralized storage with simultaneous data storage for all its users from a legal point of view is the lack of confidentiality of the agreement. Notary in accordance with Art. 8 of the Law of Ukraine "On Notaries" guarantees natural and legal persons the secrecy of their notarial actions [6].

Special attention should be paid to the technical security of blockchain registers. Interpol reported in 2015 that blockchain could be used to secure access to banned content. The root of the problem is the possibility of "polluting" the blockchain with information unrelated to transactions. There are many different ways to add arbitrary data to the blockchain." For example, a botnet control mechanism that allows sending malicious software commands [7].

The implementation of blockchain in notarial activity requires significant efforts at both the legislative and technical levels. The only notary system at the moment is actually only an electronic version of paper registers, books, and magazines.

The electronic (digital) notary, the notary of the future, will provide an opportunity to perform notarial functions electronically. Notaries would be able to use technology (such as digital signatures and digital notary seals to validate certificates). The electronic notary seals the certified document with a seal and signature. This notary publicly manages, creates, stores, and distributes digital certification using cryptography and a secure public key.

Keeping an electronic record of the performed duties of a notary is necessary in the case of a digital notary. More importantly, notarial transactions can be carried out remotely using digital technology. One of the most notable achievements in the modernization of notarial services is the integration of digital technologies. Digitization offers many benefits, including simplifying common notarial procedures and increasing efficiency, security and accessibility.

Digital notary solutions use technology to conduct transactions remotely, eliminating the need for in-person presence while maintaining the legality and integrity of papers. The use of blockchain technology, cryptography and electronic signatures are essential to guarantee the authenticity and immutability of digital documents. Notaries can process and store documents in electronic form safely thanks to digital platforms, which minimizes paper work and administrative efforts. Authorized parties can easily access cloud-based systems, which facilitates quick document retrieval and improves stakeholder collaboration. In addition, enhanced authentication capabilities are provided by digital notary solutions that provide real-time signature verification and document protection. Sophisticated encryption techniques protect private data while ensuring compliance with privacy and confidentiality laws.

Notarial operations have undergone a digital revolution that has improved security and streamlined procedures and increased accessibility. Digital technologies have made it possible for notaries to operate online efficiently and securely, including document authentication, certification and verification.

Electronic signatures are the main digital solution used in notarial operations. With the use of electronic signatures, parties can sign documents electronically without the need for personal presence or the use of paper signatures. Modern encryption methods make electronic signatures legal in many countries, guaranteeing their integrity and validity. Blockchain technology is a critical

component of digital notary systems. Blockchain technology offers immutable, decentralized access to a ledger for recording notarial transactions. This reduces the likelihood of fraud and guarantees the traceability and integrity of documents and transactions [8].

New to the rights and interests protection services market is Signatura, a company that combines electronic signature technology with blockchain to offer a digital assurance solution, guaranteeing the authorship and correct date of both documents and procedures. Signatura offers a service that certifies that the contract was signed at a certain time and that it has not been changed. This is complemented by an identity verification service with biometric data and information coming from government agencies. This is a structured system with certain rules for building transaction chains and accessing information [9, p. 39].

Digital signature is not a new technology. But it provides guarantees of protection [10, p.112]. First, it provides complete confidence at the time of signing the document. Secondly, it guarantees that the document cannot be changed in any way [11, p. 35]. The combination of date accuracy and document immutability, in addition to the guarantee of authorship provided by a digital signature, makes it similar to a small “digital notary” [12].

While it doesn't create the same legal implications or obligations, it's a near-perfect solution for storing digital evidence. First, the signing of contracts. Some companies require a certification date on the blockchain to meet compliance requirements [13]. The regulator requires them to respond to customer complaints within a certain time. Blockchain can certify that the case was considered within the required period [14].

Given these new tools, how will the work of a notary public change in the coming years? I am sure that the transformation will be gradual. Notaries will learn digital tools to digitize their work and be more efficient. However, in the long term, many types of certification will no longer require a notary [15].

5. Conclusions.

Notaries will continue to fulfill a role that cannot easily be replaced by technology, such as ensuring that the signer is not coerced. The notary profession will be oriented away from certification to activities with greater added value, such as consulting services. These high-value measures will protect notaries from the advancement of blockchain and electronic signatures. Many notaries still have an anti-technology attitude. But they must consider how to use new tools to increase their value to their customers.

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