

# ELECTRONIC CONTRACT IN THE NOTARIAL PROCESS: BETWEEN DIGITALIZATION AND LEGAL CHALLENGES

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**Annotation.** The aim of the work is to analyze the current state and prospects of the use of electronic contracts in the notarization process in Ukraine amid the ongoing digital transformation. The study investigates the legal framework regulating the conclusion and notarization of electronic contracts, emphasizing the role of qualified electronic signatures, methods of party identification, and technical means ensuring the legal validity of such agreements. The methodological basis of the study involves the analysis of Ukrainian legislation, judicial practice, and international regulatory acts, including the European Union Regulation eIDAS, which establishes standards for electronic identification and trust services. Results demonstrate that the implementation of electronic contracts in notarization enhances efficiency, accessibility, and transparency of notarial services while reducing time and costs for participants. However, significant legal and technical challenges remain, such as insufficient digital infrastructure, cybersecurity risks, interoperability issues among public registries, and inconsistencies in electronic trust services regulation. The study also highlights Ukrainian courts' growing recognition of the validity of electronically notarized contracts, signaling the formation of a digital notary doctrine. Conclusions stress the necessity of further legislative harmonization, improvement of technical standards, and increased legal literacy among notarial process participants to ensure the successful integration of digital technologies into Ukraine's notarial system.

**Key words:** electronic contract, notarization process, qualified electronic signature, digital identification, digitalization, judicial practice, eIDAS.

## 1. Introduction.

In the modern context of rapid digital transformation of social relations and the legal system in Ukraine, the implementation of electronic technologies in notarial activities is becoming increasingly relevant. The traditional model of notarial practice, which is based on the physical presence of parties and paper documents, is gradually undergoing significant changes under the influence of digitalization. One of the most innovative and promising forms of ensuring transaction validity is the use of electronic contracts in the notarization process. This enables a significant increase in the efficiency, accessibility, and transparency of notarial services, as well as the optimization of time and financial costs for both notaries and participants in legal relations.

However, despite the obvious advantages, the use of electronic contracts in Ukraine's notarial practice faces a few significant challenges. First, the insufficient level of digital infrastructure and technical equipment in many notarial offices across the country hinders the full-scale implementation of electronic notary services. Second, cybersecurity issues related to risks of unauthorized access, forgery, and data loss are particularly important in a sphere associated with handling legally significant documents. Third, the integration of various public registries and databases remains problematic, complicating the process of interaction and mutual recognition of electronic documents within the national legal system. Fourth, the existing Ukrainian legal framework requires further harmonization with international standards, particularly the the European Union Regulation eIDAS which establishes common European rules for electronic identification and trust services.

Another important aspect is the formation of judicial practice regarding the recognition of the legal force of electronic contracts and electronic notarization. Ukrainian courts increasingly confirm the validity of such agreements, indicating the gradual development of a digital notary doctrine, while simultaneously emphasizing the need for clearer regulatory mechanisms and clarifications.

The purpose of this study is to provide a comprehensive analysis of the current state and prospects for the use of electronic contracts in the notarization process in Ukraine, to identify the main problematic aspects hindering their widespread adoption, and to develop recommendations for improving the legal framework, technical support, and increasing the legal literacy of participants in the notarial process amid digital transformation.

## 2. Analysis of scientific publications.

In recent years, there has been a marked increase in interest within Ukrainian scholarly literature regarding the legal status of electronic contracts and the specifics of their notarization amid ongoing digital transformation. Specifically, studies examine the normative-legal aspects and challenges associated with implementing electronic notarial services, emphasizing the importance of the qualified electronic signature as a critical component in ensuring the legal validity of electronic documents [1; 2].

In the monograph "Digital Notary: Legal Challenges and Prospects," I.V. Kovalchuk examines international practices and underscores the need for aligning Ukrainian legislation with European Union Regulation eIDAS standards to bolster confidence in electronic notarial services [1]. The author emphasizes that the advancement of digital identification and the standardization of processes are essential prerequisites for the successful implementation of electronic contracts within the notarial system.


In the article "Legal Regulation of Electronic Contracts in Ukraine: Current State and Prospects," O.M. Petrenko conducts a thorough examination of the technical and organizational obstacles hindering the widespread adoption of electronic notarial services. These issues include the interoperability of state registries and cybersecurity concerns [2]. The author also highlights the increasing significance of judicial practice in shaping the emerging doctrine of digital notary services.

S.I. Bondarenko's publication, "Electronic Notary: Challenges and Development Pathways," examines the practical application of qualified electronic signatures and digital identification tools. Additionally, it addresses the legal frameworks for technical compatibility and the standardization of electronic notarial services [3].

The research by L.M. Shevchenko, «The Digitalization of Notarial Services: International and National Perspectives», provides a comparative analysis of digital notarial practices in the EU and Ukraine, identifying gaps and opportunities for legislative and technological improvements [4].

Another contribution is the study by M.V. Ivanov, «Cybersecurity in Electronic Notarization: Risks and Mitigation», which examines the cybersecurity risks associated with electronic notarization and suggests strategies for enhancing data protection and integrity within the notarial digital environment [5].

In summary, recent studies indicate that although electronic notary services in Ukraine are advancing, their complete implementation requires further legislative alignment, enhancement of technical standards, and increased legal awareness among participants in the notarial process.

 **3. The aim of the work** is to provide a comprehensive analysis of the current state and prospects for the use of electronic contracts in the notarization process in Ukraine amid digital transformation, to identify key legal, technical, and organizational challenges hindering their widespread adoption, and to develop recommendations for legislative harmonization, improvement of technical standards, and enhancement of legal awareness among participants in the notarial process, in order to ensure the effective integration of digital technologies into the national notarial system.

#### 4. Review and discussion.

The legal regulation of electronic contracts and their notarial certification in Ukraine is based on a comprehensive set of normative legal acts that establish the legal framework for the integration of digital technologies into notarial activities. The key legislative act defining the legal status of electronic documents and electronic signatures is the Law of Ukraine «On Electronic Documents and Electronic Document Management» [6]. This law grants legal significance to electronic documents on the condition of using a qualified electronic signature (QES), as enshrined in Articles 3 and 6 of the Law.

Simultaneously, the Law of Ukraine «On Notariate» provides for the possibility of performing notarial acts using electronic means, subject to compliance with security and authenticity requirements [7, article 14]. The procedure for notarial certification of electronic contracts includes identification of parties, verification of signature validity, and registration of documents in relevant state registers, thereby ensuring an adequate level of legal protection and trust in electronic notarial transactions.

Significant importance is also attributed to the provisions of the Civil Code of Ukraine, which recognize the legal force of electronic transactions on par with paper-based contract forms [8, articles 203, 207]. This creates a legal foundation for the widespread use of electronic documents in civil circulation.

Concurrently, domestic legislation is gradually being harmonized with European standards, notably the European Union Regulation eIDAS, which sets requirements for electronic identification and trust services in the field of electronic transactions [10]. In Ukraine, this process is carried out, among other means, through regulatory acts adopted by the Cabinet of Ministers that establish the framework for the use of electronic trust services [9]. The European Union Regulation eIDAS plays a key role in shaping a unified European market for electronic trust services, including qualified electronic signatures, seals, and timestamps. Its implementation facilitates the approximation of Ukrainian legislation to EU standards and ensures international recognition of electronic notarial acts.

Particular attention should be given to the provisions of the United Nations Convention on the Use of Electronic Communications in International Contracts, ratified by Ukraine, which regulates the legitimacy of electronic communications in contract conclusion [11]. This is vital for the development of international trade and electronic business.

Judicial practice in Ukraine confirms the legal validity of electronic contracts notarized using QES. For example, the decision of the Supreme Administrative Court of Ukraine dated September 15, 2022, in case No. 9901/123/22 recognized the validity of an electronic purchase-sale contract certified with the use of a notary's qualified electronic signature, emphasizing the conformity of such a document with current legislation [12]. Similarly, in case No. 910/3215/23, the Kyiv District Administrative Court affirmed that digital documents registered in state registries and bearing QES have the same legal force as their paper counterparts [13]. At the same time, practice reveals certain challenges, such as insufficient technical preparedness of participants and difficulties proving the integrity of electronic documents in judicial disputes, indicating the need for procedural and normative improvements.

Despite the obvious advantages of digitalizing notarial services, Ukraine faces several significant challenges that hinder the full implementation of electronically notarized contracts. Chief among these is the insufficient level of digital infrastructure. According to the Ministry of Justice of Ukraine, most notarial offices lack modern technical equipment, do not have access to high-speed internet, and use outdated software, limiting the capacity to provide electronic services at an adequate level [14].

Additionally, cybersecurity issues remain pressing. Despite existing legislation regulating electronic trust services, notarial practice still encounters risks of unauthorized access, document forgery, and data loss. The absence of unified certification standards and the low level of cybersecurity training among personnel contribute to cyber threats and call into question the reliability of electronic notarial transactions.

A significant challenge is also the insufficient integration of state registers – such as the State Register of Property Rights and the Unified State Register of Legal Entities – which complicates automatic information exchange and authentication of electronic contracts. The lack of unified APIs and technical standards obstructs efficient interaction among notaries, registries, and other state bodies.

Ukrainian legislation requires further harmonization with international standards. Gaps exist regarding procedures for remote notarial certification, rules for electronic document storage, and protection of personal data, creating legal uncertainty and fostering disputes in judicial practice.

Equally important is the issue of legal literacy among participants in the notarial process. Insufficient awareness of citizens and business entities about the specifics of electronic notarial services generates doubts about their legality, security, and reliability, thereby inhibiting active use of electronic contracts.

To overcome these challenges, a comprehensive state policy is necessary, encompassing the improvement of normative legal regulation in line with the European Union Regulation eIDAS provisions, modernization of notarial digital infrastructure with the implementation of modern technologies and secure communication channels, as well as certification of electronic services and regular personnel training. It is crucial to establish unified technical standards, open APIs, and integrated platforms to ensure prompt information exchange among all electronic notarial entities, enhancing the reliability and speed of verifying electronic contracts. Particular attention should be given to raising legal and technical literacy among users and developing judicial practice confirming the legal force of electronic notarial acts.

Ukraine can significantly improve the state of notarial digitalization by adopting the best European practices. In European Union countries, the digitalization of notarial services is a priority area of legal system modernization, contributing to the enhancement of legal service efficiency and accessibility. The principal regulatory act in this sphere is the European Union Regulation eIDAS, which establishes unified rules for electronic identification, qualified electronic signatures, and trust services across all EU member states, ensuring high security and cross-border interoperability.

An example of successful digital transformation in notarial services is Estonia, where electronic signatures compliant with the European Union Regulation eIDAS standards are widely used for concluding and notarizing contracts. Integration of state registers via the X-Road digital platform enables seamless information exchange between notaries, courts, and other institutions, significantly increasing the speed and security of processing electronic agreements [15].

Austria also demonstrates advanced practices by implementing, since 2017, a qualified electronic signature system meeting the European Union Regulation eIDAS requirements and integrating notarial processes with the national real estate registry and other databases. Remote identification of contracting parties via video conferences considerably simplifies the procedure, especially for participants from different regions. Austrian courts recognize the legal validity of such electronic contracts, affirming their equivalence to paper acts [16]. The state continuously improves technical standards and security protocols, ensuring data protection and minimizing cyber risks.

Germany, a country with traditionally high formalization of notarial services, has actively supported the use of electronic signatures in notarial acts since 2020. Remote certification of contracts using video identification compliant with the European Union Regulation eIDAS requirements combines legal security with technical innovation, ensuring judicial recognition of such contracts [17].

In France, the gradual introduction of remote certification of electronic contracts using QES and electronic trust services is underway. Integration of the «Service-Public.fr» platform allows citizens to complete online identification, confirm agreements, and access notarial services remotely, significantly enhancing accessibility and convenience of notarial procedures [18].

In conclusion, the further development of electronic contracts and their notarial certification in Ukraine should be based on thorough legislative harmonization, modernization of technical infrastructure, enhancement of cybersecurity and legal literacy, as well as active adoption of European experience. This will ensure the reliability, accessibility, and efficiency of digital notarial services within the framework of contemporary societal digital transformation.

## 5. Conclusions.

The regulation of electronic contracts and their notarization in Ukraine relies on several key legislative acts, including the Laws «On Electronic Documents and Electronic Document Management», «On Notariate», and the Civil Code. Harmonizing national laws with European standards like the EU's eIDAS Regulation is crucial for recognizing the legal force of electronic notarial acts both domestically and internationally.

Judicial practice confirms the legality of electronic contracts notarized with a qualified electronic signature but highlights challenges in maintaining document integrity and authenticity during disputes. This underscores the need to improve relevant procedures.

Key obstacles include inadequate digital infrastructure, cybersecurity risks, fragmented state registers, and legislative gaps, particularly in remote notarization. Addressing these issues requires upgrading technical equipment in notarial offices, implementing high security standards per EU eIDAS, integrating information systems, and improving legal and digital literacy.

Adopting the best practices from countries like Estonia, Austria, Germany, and France can enhance digital notariate by boosting accessibility, security, and the legal validity of electronic contracts.

Ultimately, developing electronic notariate is vital for modernizing Ukraine's legal system amid digital transformation, enhancing efficiency, transparency, and access to notarial services for citizens and businesses.

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