



Research Article

BASICS AND IMPORTANCE OF USING ELECTRONIC DIGITAL SIGNATURE TO DRAFT ELECTRONIC CONTRACTS

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ABSTRACT

This article analyzes the basis of international and national legislation for the use of electronic digital signature in concluding contracts between business entities. Also, the ways of electronic digital signature and verification of the counterparty are highlighted and proposals are made to improve the legislation in this area.

KEYWORDS

Electronic document, a business entity, electronic digital signature, validity, authentication, identification, individual characteristics, biometric characteristics, smart card, signature key, fingerprints, hand geometry, and retinal image.

INTRODUCTION

In the world, due to the ongoing coronavirus pandemic COVID-19, an objective need arose for the effective use of an electronic document, which gave a powerful impetus to the development of entrepreneurial activity in a digital world. The current epidemiological situation in the world has significantly accelerated the development of electronic document management in

all spheres of public life. The effective use of electronic digital tools, when concluding and executing a contract in the field of entrepreneurial activity, objectively led to the allocation of a completely new form with a digital attribute of civil legal relations, in particular, contractual legal relations complicated by an electronic element, which are civil legal relations



generated by a contract, an agreement of two or more persons using various electronic means of communication to perform legally significant actions.

When concluding a business contract in electronic form, new, previously unknown to civil law science, methods of identifying (identifying) counterparties are used: registering an account on the server, exchanging e-mails and messages of instant messaging services, using an electronic digital signature, as well as complex identification (use of several methods of identification at the same time).

In the modern digital transformational stage of state development, information technology is an integral part of social and economic progress. Digital ways of transferring information storage using computer technology and the Internet served as the basis for the socio-economic transformation of the state and society. Electronic document management has become not only the main technological means of enhancing entrepreneurial activity, but also a documented information tool for digital civil circulation. Improving the strategic digital legal policy of the state is impossible without the fundamental development of theoretical research in the field of the civil law regime of an electronic document in business. Most importantly, the rapid development of the digital space in the life of society requires adequate, smart, legal regulation of electronic business document management relations, taking into account today's realities.

An agreement drawn up using information systems is equated to an agreement drawn up in writing and signed by the parties, including certified by the seals of the parties. When considering article 107 of the Civil Code of the Republic of Uzbekistan [1], it should be noted that the mandatory requisite for a simple written form of a document reflecting the content of an

entrepreneurial transaction is the signature of a business entity making such a transaction. It should be noted that the most significant requisite of an electronic business document is the signature of a business entity making an electronic business transaction.

An electronic digital signature is one of the types of electronic analogue of a handwritten signature, which is today a means of protecting information, which also provides verification of the authenticity of an electronic business document.

An electronic digital signature allows you to confirm that this signature belongs to a registered owner, and is also an integral part of an electronic business document. However, there is also a fundamentally different approach to the definition of an electronic digital signature, an example of which is the provisions of the Model Law "On Electronic Digital Signature", adopted at the sixteenth plenary meeting of the Inter-Parliamentary Assembly of the CIS Member States on December 9, 2000.

In the world, special attention is being paid to international requirements and recommendations on procedures and rules for electronic document management. The main authorized bodies in this area are the Commission on Enterprise, Business Facilitation and Development within the framework of the UN Conference on Trade and Development, the UN Commission on International Trade Law and the Center for Facilitation of International Trade Procedures within the Economic Commission for Europe, the International Telecommunication Union, which is specialized agency for telecommunications at the United Nations. It should be emphasized that the leading role in the development of electronic document management rules historically belongs to UNCITRAL and the European Council. In the UN ranking

on the level of development of e-government (UNE-Government Survey, Uzbekistan 2020 ranked 87th among 193 states. As noted in the review, the provision of online services in Uzbekistan has improved significantly, despite the restrained development of infrastructure.

To improve the place in international ratings and indices in the Republic of Uzbekistan, strategic state programs "Digital Uzbekistan – 2030" are being implemented. As evidenced by international ratings and indices and world achievements in legal science, the theoretical and methodological legal problems of electronic document management in general, and their use in the field of business in particular, is one of the objects of smart regulation of private law science.

In the context of the formation of digital civil circulation, the use of an electronic digital signature is of great scientific and practical importance.

An electronic digital signature is a necessary and integral attribute of contractual relations with the participation of business entities.

In the UNCITRAL Model Law on Electronic Signatures, an electronic signature means information contained in electronic form attached to or logically associated with a data message that can be used to identify the signatory to the data message and to indicate the signer's approval of the information contained in the information message. International Chamber of Commerce (ICC) in the 1997 Common Customs for Digitally Authenticated International Commerce defined a digital signature as the transformation of a message using an asymmetric cryptosystem in such a way that the person having the verified message "can ascertain: (a) whether the transformation was the result of the use of private key that corresponds to the

signer's public key, and (b) whether the signed message has been modified since transformation" [2].

In accordance with Article 3 of the Law of the Republic of Uzbekistan "On Electronic Digital Signature", with Article 5 of the Law of the Republic of Uzbekistan "On Electronic Document Management", an electronic digital signature is a requisite of an electronic business document designed to fully protect an electronic business document from distortion resulting from the conversion of information using a cryptographic algorithm of the electronic digital signature key and allowing to determine the owner of this signature key certificate, as well as to establish the authenticity of the information in the electronic business document.

In international practice, such terms as "electronic signature", "digital signature" are often used. All this leads to some violation of the integrity of the understanding of legislation, a generalized picture of the regulation of relations when using an electronic (digital) signature, to a confusing and complicated regulation of an electronic (digital) signature in international law. In our opinion, issues related to electronic business documents and various types of signatures are not sufficiently described in the current legislation. In particular, there is no distinction at the legislative level between the concepts of "electronic signature", "digital signature", "electronic digital signature".

There are various opinions in the legal literature on this issue. In particular, S. Burnet and S. Payne believe that an electronic signature "is any sign or procedure implemented by electronic means, that is, performed or accepted by a party with the intent to bind a record with an obligation or certify the authenticity of a record"[3]. According to the above definition, an output signal of a certain complexity



of a biometric device can be considered an electronic signature, namely a computer fingerprint reading system, a simple name entry at the end of a certain electronic message, it should be noted that in accordance with this definition, for any electronic signature, the technology of creating a signature by electronic means is irrelevant. According to N.I. Solovyanenko symbols, codes, passwords, etc. associated with an electronic document. can be considered as an electronic signature if they are "performed or accepted by the parties by mutual agreement and with the express intention of confirming the authenticity of what is written"[4].

According to E.Y. Shishaeva, the terms "electronic digital signature" and "digital signature" should be considered as synonyms. Any of the analogues of a handwritten signature, which will be created using computer technology, will be considered an electronic analogue of a handwritten signature, i.e. electronic signature [5]. When considering this definition, it follows that any data that is processed by computer technology and presented in a certain electronic form can theoretically be considered as an electronic digital signature. There is another point of view, according to E.V. Ilinykh and M.N. Kozlov, it is necessary to distinguish between such related categories as "electronic digital signature", "digital signature" and "analogues of a handwritten signature". Analogues of a handwritten signature, in addition to the EDS, include passwords, PIN codes, a facsimile image, etc.

A digital signature is also a more general concept in relation to an EDS. EDS should be considered such a digital signature, which is created using a system of certificates and certification centers [6].

Based on the analysis of legislation, K.B. Leontiev believes that there are several approaches to the definition of an electronic digital signature in the

world. Firstly, any elements included in an electronic document that are in one way or another related to the sender of this document should be considered as an electronic digital signature. Secondly, an electronic digital signature must meet a number of legally fixed additional requirements, for example, provide the ability to reliably identify the sender of information and be associated with the transmitted data in such a way that when they change, they become invalid. "The third approach defines the EDS as a result of the cryptographic transformation of the original electronic document and puts forward the most detailed requirements for the EDS, in particular, for the technology used"[7].

According to the current legislation, the use of printing in documents by business entities is not mandatory. However, in the current practice, a seal is applied to a document as one of the ways to protect a business document. The legislation regulating the field of electronic document management provides that signing an electronic document with an electronic digital signature is equivalent to a signature with a seal. Since, the seal confirms, if necessary, that the document is actually issued by this legal entity, therefore it serves as a means of individualizing a legal entity in civil circulation. Taking into account the modern digital trend of electronic document management and the optional nature of the use of seals on documents of digital ecosystems by business entities, and if there is an appropriate agreement on electronic document management, it is proposed to unify a special regulatory act regarding the creation of a single data bank of issued and canceled permits for the manufacture of seals, made and destroyed seals.

An electronic document signed with an EDS, in its legal force, corresponds to a written document signed with a handwritten signature, has the main properties of a

written document (including the possibility of providing copies of ED) and provides persons using such documents with the exercise of all rights, like a document on hard copy, including the right to protection"[8].

In addition, EDS: is a requisite of an electronic document, including an electronic contract; designed to identify the owner of the certificate; designed to protect an electronic document from forgery; is intended to establish the fact of the absence of distortions in an electronic document; is the result of a cryptographic transformation [9].

An electronic digital signature is established by law as a determining factor for granting such a document the status of a traditional document in case of compliance with the provisions specified in the Law of the Republic of Uzbekistan "On Electronic Document Management"[10], in Article 3 of the Law of the Republic of Uzbekistan "On Electronic Digital Signature" [11] and a signature key certificate (namely, a document granting the right to use an electronic digital signature as an analogue of a handwritten signature) provides for the use of such a signature in certain respects, namely in civil law transactions.

A service agreement for equipment maintenance was concluded between the customer PE Winter and the contractor JSC Dori. According to clauses 2.2 and 3.4 of the contract, payment for the services rendered is made monthly on the basis of an act and an invoice. For the services rendered by the contractor, the customer was presented with electronic invoices for payment, which were not paid. The contractor applied to the court with a demand to recover from the customer the amount of the principal debt, penalties and the cost of a lawyer's services. The court examined the evidence presented and made a decision on partial satisfaction of the claim, on the recovery of the principal debt and

the cost of the services of a lawyer, on the recovery of the fine was denied. When making a decision, the court took into account that, according to the Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 489 dated August 14, 2020, Appendix No. 2, clause 6.3 of the Regulation "Forms of invoices and their completion, the procedure for submitting and receiving", the buyer within 10 days must take action to accept the invoice by confirming it with an EDS or indicating the reason for rejecting it. However, the defendant did not take the action of rejecting the invoice and recognized by the court as accepted and payable. In this case, the court noted the role of the EDS as one of the most important details of the electronic invoice when it is considered as a basis for further actions of the parties to the contract and recognition of a certain fact [12].

Validity of the EDS key certificate is verified by checking the list of revoked certificates or by generating and sending a request to the EDS Key Registration Center that issued the EDS key certificate. Authentication of the EDS in electronic documents is carried out by the information system or by contacting the EDS Key Registration Center. Before confirming the successful completion of the transaction, e-commerce participants, when concluding an agreement, check the integrity of electronic documents used as part of the conclusion of an agreement.

Checking the validity of the EDS key certificate when generating an EDS at the EDS Key Registration Center should include checking: the validity period and status of the EDS key certificate of the owner of the private key who signed the electronic document; validity period of the EDS public key certificate of the owner of the private key who signed the electronic document; the status of the EDS key certificate (valid, suspended, canceled at the time of EDS formation); the validity



period and status of the EDS key certificate of the authorized person of the EDS Key Registration Center that issued the verified certificate. A positive result of the process of checking the integrity of the electronic document confirms the absence of distortion of information (used as part of the conclusion of the contract) in the electronic document. The procedures for creating and verifying an EDS are a guarantee of the authenticity and validity of contractual obligations, as well as protection against their unilateral change or termination.

The electronic digital signature in the Republic of Uzbekistan is based on cryptographic asymmetric algorithms (using private key and public key). Electronic digital signature is designed for the subsequent identification of the sender of the electronic business document and to identify the presence or absence of in the electronic business document of distortions.

To determine the owners of technical means and users of electronic document management systems, processes such as "authentication" and "identification" are used. It should be noted that terms and processes need to be distinguished, as authentication is a process that checks the identity of a computer or network user and confirms that the user is exactly who he claims to be. Identification identifies a user of a system by the authorization given by the user to access certain system resources. To protect a document in electronic form, the legislation of the Republic provides for the use of an electronic digital signature.

In the conditions of digital reality, various authentication methods are used: real (smart card, signature key, etc.); on the basis of fixation based on information known to the person using it (one-time password or multiple-time password, code word, etc.);

by individual characteristics and biometric characteristics (fingerprints, hand geometry, retinal image, typing style, voice, etc.). E.V. Mikhaylenko noted that reason for the emergence of negative phenomena on the Internet is the ability of users to remain anonymous. It is impossible without harm to the Network and the loss of the meaning of its existence to deprive the users of the Network of anonymity. It is necessary to create an opportunity for non-anonymous exchange of information within the framework of the existing Internet network. Any Internet user should be able to be non-anonymous, and be protected from the actions of persons impersonating him. Any Internet user should be able, if he so desires, to use only the non-anonymous segment of the Web.

In conclusion, one of the important features of the legal personality of participants in contractual relations concluded in electronic communication networks is that in the context of the coronavirus pandemic entrepreneurial contracts are often concluded by means of information and communication digital technologies, online remotely executed without the physical participation of entrepreneurs, who are usually referred to as "electronic agents" (electronic agents) or (digital robot programs). It should be noted that digital assets are used as an electronic way of expressing the persons of their decision (expression of will) at the stage of concluding entrepreneurial contracts through the connection of information and communication technologies. Based on the new digital doctrine of civil law, it can be argued that the conclusion of electronic business contracts, as a rule, is carried out by some alternative digital methods. These methods include:

firstly, the conclusion of business agreements through the exchange of legally significant electronic

messages, i.e. by electronic data interchange, which may be carried out using electronic mail or other digital means of communication. This vital legal the procedure differs significantly from the traditional conclusion of an entrepreneurial agreement "between absent" only in the electronic form of legally significant documents sent and received by business entities;

secondly, so-called completely new mode algorithm is gradually being applied in electronic contractual legal practice, i.e. conclusion of business contracts in digital smart mode (on-line contracts or web contracts).

This new electronic software algorithm and procedure, previously not used in the contractual and legal practice of the Republic of Uzbekistan, will enable the timely and cost-effective conclusion of an entrepreneurial agreement "between those present" in the context of the formation of an intensive development of digital civil circulation.

When considering the civil legal regime of electronic document management in the field of entrepreneurial activity, specific digital features of smart regulation of the circulation of documents in the field of entrepreneurial activity were identified. The results of the study indicate the need to include in the business legislation regulating the field of electronic document management certain unified norms regulating "electronic document management in the field of entrepreneurial activity".

As a result of considering the issue of identifying the parties to an entrepreneurial agreement concluded via the Internet, it was found that when concluding an agreement via the Internet, new, previously unknown to civil law science, methods of identifying (identifying with personal data) active counterparties are used: registration of an account on the server; exchanging emails and instant messaging services; the use of an

electronic digital signature, as well as complex identification (the use of several identification methods at the same time).

The result of the study shows that it is necessary to include into the legislation the concept of a digital offer and acceptance, supplement Article 365 and Article 367 of the Civil Code of the Republic of Uzbekistan with an indication of this, and state part 1 of Article 365 of the Civil Code of the Republic of Uzbekistan in the following wording:

"The contract is recognized as concluded at the moment the person who sent the offer receives its acceptance, including digital one."

In addition, it is necessary to supplement the Civil Code of the Republic of Uzbekistan Subsection 4 of the transaction and representation Chapter 9 of the transaction with the following provision: "When making a transaction in electronic form, it is allowed to use another analogue of a handwritten signature in cases and in the manner prescribed by law, other legal acts or agreement of the parties".

Also, the Law of the Republic of Uzbekistan "On Electronic Digital Signature", the Law of the Republic of Uzbekistan "On Electronic Document Management" must be supplemented with the following rules: "Types of electronic signatures, relations in the field, the use of which is regulated by this law, are a simple electronic signature and an electronic digital signature."

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